

#### **4. APPENDICES**

**APPENDIX A. Site Location and Site Layout Plan. DFLA.**





### LEGEND AND SCHEDULE OF MATERIALS

- SITE BOUNDARY
- PROPOSED SELECTED ROAD SURFACE TO ENGINEER'S DETAIL
- PROPOSED SELECTED NATURAL STONE PAVING - TYPE 1A
- PROPOSED SELECTED NATURAL STONE PAVING - TYPE 1B
- PROPOSED SELECTED NATURAL STONE PAVING - TYPE 1C
- PROPOSED SELECTED NATURAL STONE PAVING - TYPE 2A
- PROPOSED SELECTED NATURAL STONE PAVING - TYPE 2B
- PROPOSED SELECTED NATURAL STONE PAVING - TYPE 3
- EXISTING GRANITE KERBSTONES RETAINED, PROTECTED AND RELAID
- PROPOSED SELECTED NATURAL STONE KERB / CHANNEL
- PROPOSED DRY PLAZA FOUNTAIN
- PROPOSED AREA FOR OUTDOOR DINING (TABLE NUMBERS AND ARRANGEMENT SHOWN INDICATIVE ONLY)
- PROPOSED PUBLIC SEATING
- PROPOSED AUTOMATED RETRACTABLE BOLLARD
- PROPOSED LITTER BIN
- PROPOSED BIKE STAND
- PROPOSED ELECTRIC BIKE STAND
- PROPOSED CARGO BIKE PARKING
- PROPOSED TRAFFIC LIGHT
- PROPOSED POTENTIAL LOCATION FOR ART/PLAY FEATURE
- PROPOSED POTENTIAL LOCATION FOR BIRD PATH
- PROPOSED EXTENT OF TREE PIT BELOW HARD LANDSCAPE
- EXISTING LEVEL RETAINED
- PROPOSED TREE
- PROPOSED SPECIMEN TREE
- PROPOSED GROUNDCOVER PLANTING
- PROPOSED PLANTING IN BIORETENTION AREA
- PROPOSED HEDGE PLANTING

### SCHEDULE OF PROPOSED TREE PLANTING:

**TREES ON WEST SIDE OF THE STREET:**

TREE REF.	QUANTITY	SPECIES:
Al	9	<i>Amelanchier lamarckii</i> 3 x tr., wrb. 2m h., 2.5m spread, multistem, min. 5 stems
Bp	2	<i>Betula pubescens</i> 3 x tr., wrb., 3m h., 14-16 cm g., clear stem min. 1.8m

**TREES IN BIORETENTION AREAS:**

TREE REF.	QUANTITY	SPECIES:
Al	12	<i>Amelanchier lamarckii</i> 3 x tr., wrb. 2m h., 2.5m spread, multistem, min. 5 stems
Bp	12	<i>Betula pubescens</i> 3 x tr., wrb., 3m h., 14-16 cm g., clear stem min. 1.8m
Cm	10	<i>Crataegus monogyna</i> 3 x tr., wrb. 2m h., multistem, min. 5 stems

**SPECIMEN TREES AT EACH END OF STREET:**

TREE REF.	QUANTITY	SPECIES:
Po	1	<i>Platanus orientalis</i> 'Minaret' 5 x tr., wrb., 25-30cm g., 5-6m h., clear stem min. 2.5m
Ps	1	<i>Pinus sylvestris</i> 5 x tr., wrb., 30-35cm g., 5-6m h., clear stem min. 2.5m

**HEDGE PLANTING, TYPICALLY:**

*Ilex aquifolium*, 900-1200mm h.

**GROUNDCOVER AND HERBACEOUS MIX, TYPICALLY:**

*Euonymus europaeus* 2 ltr cg.  
*Dryopteris affinis* 2 ltr cg.  
*Geranium* spp. 2 ltr cg.  
*Luzula sylvatica* 2 ltr cg.  
*Echinacea purpurea* 2 ltr cg.  
*Armeria maritima* 2 ltr cg.  
*Achillea millefolium* 2 ltr cg.  
*Verbascum bomb*, 'Gainsborough' 2 ltr cg.

**PLANTING IN BIORETENTION AREAS, TYPICALLY:**

*Viburnum opulus* cg., 1.2m h., multistem, min 3 stems

*Luzula sylvatica* 2 ltr cg.  
*Luzula nivea* 2 ltr cg.  
*Iris pseudacorus* 2 ltr cg.  
*Astilbe* spp 2 ltr cg.  
*Juncus effusus* 2 ltr cg.  
*Molinia caerulea* 2 ltr cg.

**BULB PLANTING, TYPICALLY:**

*Hyacinthoides* spp. 2 ltr cg.  
*Narcissus* spp. 2 ltr cg.

**Abbreviations:**

xtr. number of transplants in nursery  
h. height  
s. spread  
wrb. wire root-balled  
cm g. girth of tree in centimeters measured 1m above ground  
2 ltr cg. plants supplied in 2 litre volume containers

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**NOTES:**

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PROJECT NO	SCALE	SHEET SIZE	DRAWN BY	CHECKED BY	1st ISSUE
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**PROJECT:** PUBLIC REALM IMPROVEMENTS FOR A PEDESTRIANISED NEW STREET

**DRAWING:** PUBLIC REALM PLAN

**ISSUE STATUS:** PRE-PLANNING

**DRAWING NO.:** Fc.03-DR-2001

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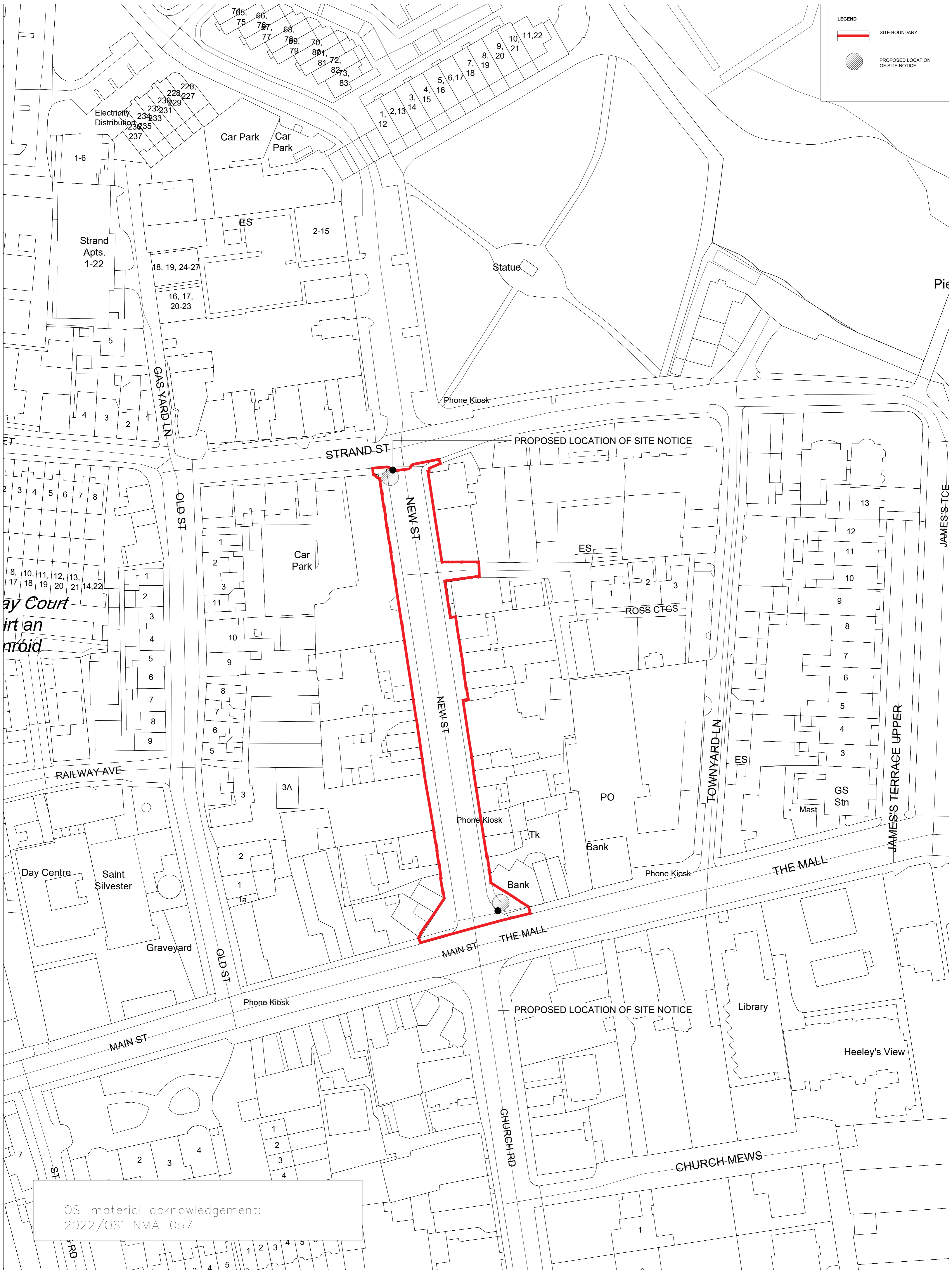




**LEGEND**

— SITE BOUNDARY

● PROPOSED LOCATION OF SITE NOTICE

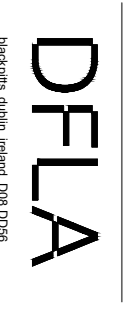


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**APPENDIX B. Archaeological Assessment by Archaeology Plan.**



# Archaeological Assessment at New Street, Malahide

WALSH & GIACOMETTI

20/10/2022



# archaeology plan

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HERITAGE SOLUTIONS

## SITE NAME

Archaeological assessment at New Street, Malahide, Co. Dublin

## CLIENT

Fingal County Council

## PLANNING

Pre-planning

## PROJECT REF

22-15

## REPORT AUTHORS

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## DATE

20/10/2022

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# Section 1 Introduction

## b summary

The results of an archaeological assessment at New Street, Malahide, County Dublin are presented in this report. The assessment outlines an examination of the archaeological, historical and cartographic background of the study area and surrounding environment. It also details the findings of a site inspection.

For the purpose of this assessment the study area has been separated into three distinct zones of archaeological potential. The first zone comprises New Street, a north-south running single carriageway with a row of commercial properties running either side along its length. It ends at a junction with Strand Street in the north and at the Diamond in the south. The second zone includes a panhandle running east and a small

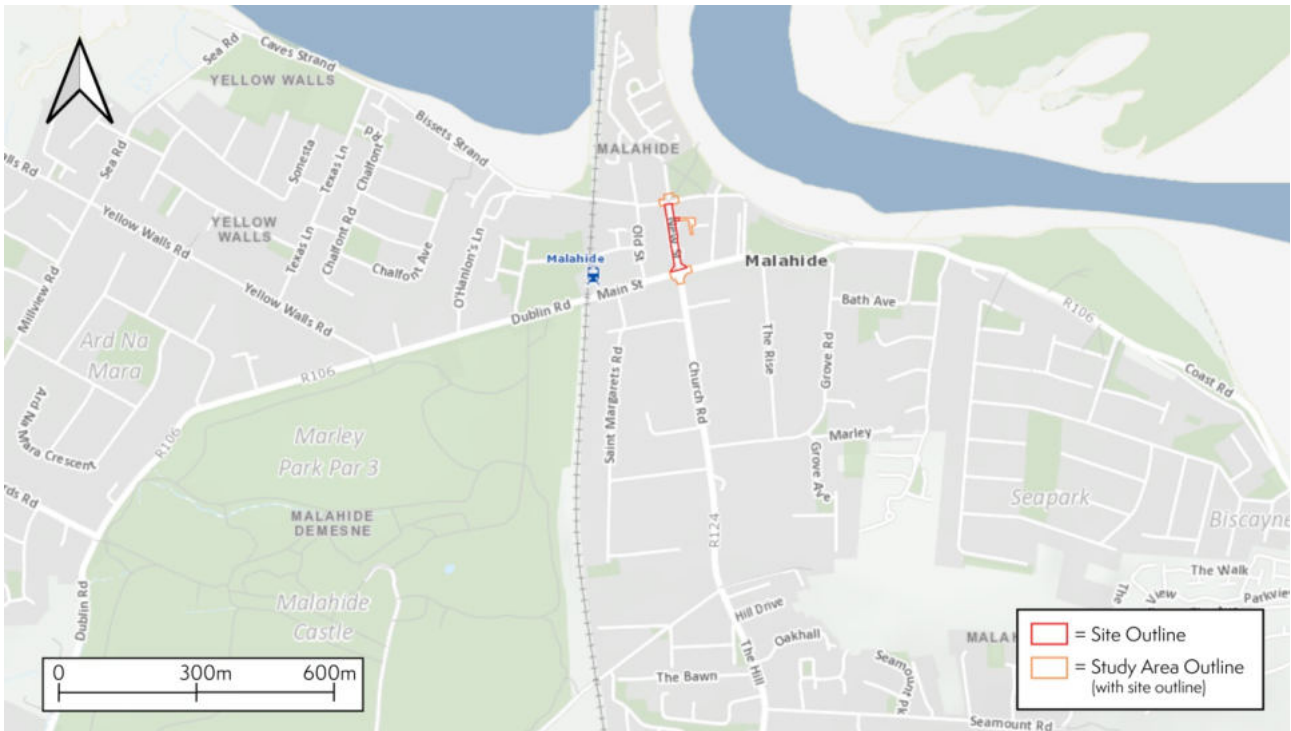
area known as Ross Cottages. The last zone is the Diamond, which forms the junction between New Street, the Mall, Main Street and Church Street. These Study Area zones are distinct from the site boundary, as shown in the image below.

## Study area location

The study area is located at the centre of Malahide village, north County Dublin. It is contained between an existing intersection referred to as 'the diamond' on the R106 to the south, and Strand Road to the north. The road is approximately 150m in length and 14m in width, with 1.7m wide footpaths in the west and 1.2m wide in the east. The road takes up an area of 2,224m<sup>2</sup>.

The location of the study area in Malahide





The study area in the wider landscape

## Methodology

For the purposes of this assessment a number of cartographic, documentary and illustrative resources were employed. As a foundation for the assessment the files in the Records of Monuments and Places (RMP), excavations.ie and the topographical files for the study area were examined. Additionally, a number of features dating to the industrial period are discussed using the records at the National Inventory of Architectural Heritage (NIAH). The Record of Protected Structures (RPS), separate from the NIAH files, was also examined. Features within the study area that form part of one or both of these records are discussed in this report.

### *Cartography*

Online cartographic resources, such as HeritageMaps.ie or the Historic Environment Viewer provide an overlay of the 1837 edition (6-inch) and the 1913 edition (25-inch) Ordnance Survey maps. These were consulted as a way to track the development and expansion of Malahide town in the nineteenth and early twentieth centuries. John Rocque's 1760 map, which depicts Malahide, is the earliest map that

was identified as depicting the street layout of the town. The street layout was also analysed in a chart of the Bay of Dublin and Sea Coast by Bernard Scale, dated to 1765.

A number of cartographic sources were not used in this assessment either due to an overlap of information, a lack of accurate representation of Malahide, or a lack of access to the resource.

This includes:

- Taylor and Skinner's 1778 map of the roads of Ireland
- William Duncan's 1821 map (although the environs map of 1853 is nearly identical)
- Griffith's valuation map (the text is shown in this report but the map was not of a high enough quality)
- Ordnance Survey maps outside of the 1843 and 1913 editions, due to access

### *Illustrative evidence*

A number of photographs, postcards and illustrations are used throughout this report. These have been collected primarily through online resources and the ACA document published in 2009. Additionally, photographs



provided by the Malahide Historical Society on malahideheritage.ie and through their Facebook page have been used. These offer a glimpse into the visual history of the town that is missing in cartographic and literary resources. The catalogue at the National Library of Ireland was also used to gain access to historic photography and illustrations.

### *Documentary evidence*

In researching this report a series of commonly used documentary resources were made use of. This includes Samuel Lewis (1837) and John D'Alton's (1838) descriptions of Malahide town as it was during their time. D'Alton also offers some information into the history of Malahide village, although this is primarily done through the perspective of the Talbots. A number of articles detailing the development of Malahide were accessed through JSTOR, including the Dublin Historical Record. The listings of Griffith's Valuation records (1847-1864) were

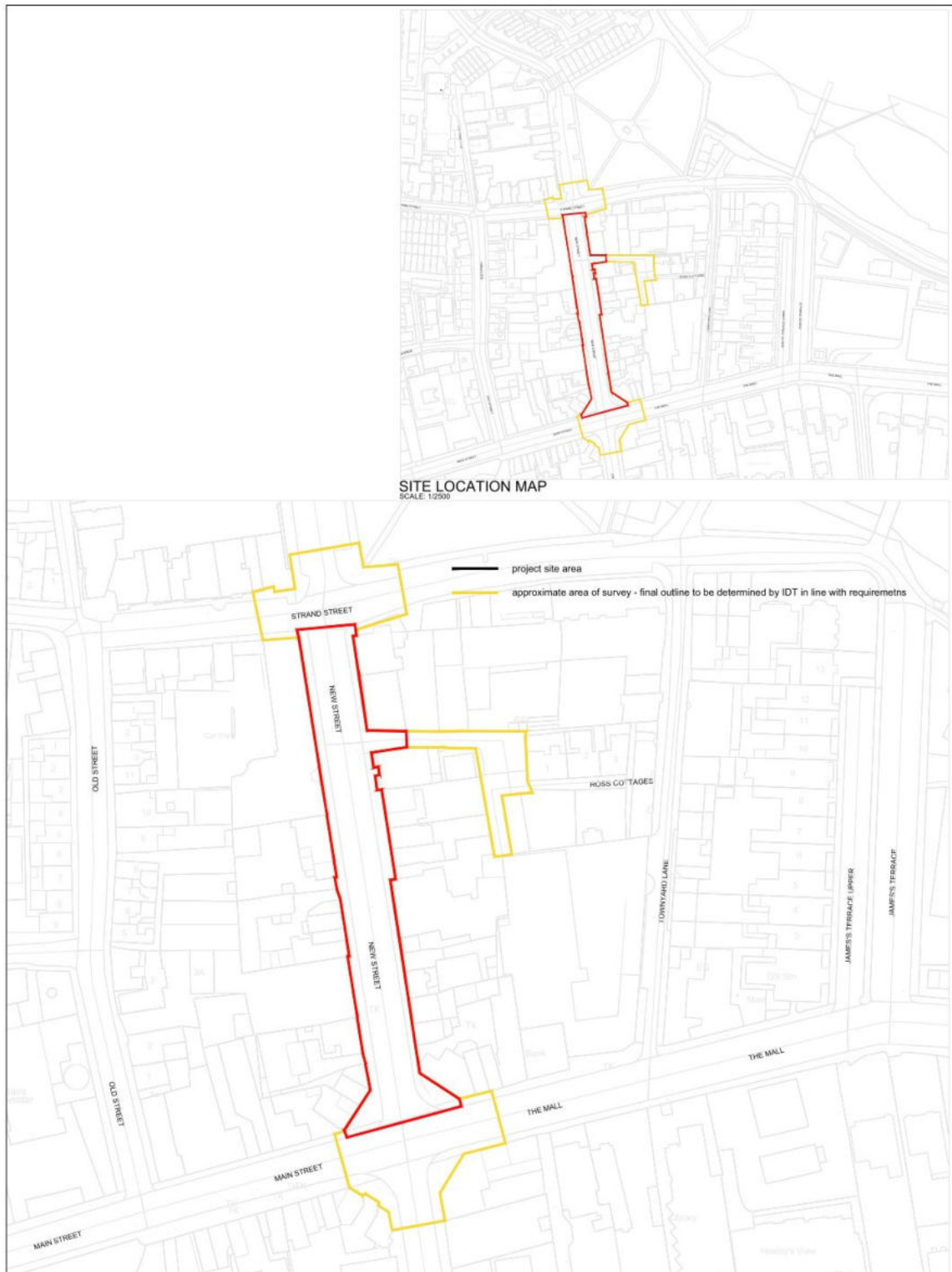
also used in order to identify the occupants of Ross Cottages. Census records dating to 1901 and 1911 were employed to identify the occupants and owners of shops, private dwellings and public houses.

A number of resources were not usable due to a lack of mentioning Malahide, or the information they provided was not relevant to this report. This includes Ball's (1920) A History of County Dublin Vol. 6, Southern Fingal, which did not mention Malahide in great detail. Thom's directories were also not useful as they did not afford any relevant information.

The Diamond at Malahide, early 20th century



The extent of the site at New Street (red line). Note that the extent of the site is smaller than the Study Area examined in this report



# Section 2 Archaeological Background

## Recorded monuments

The Record of Monuments and Places (RMP) was founded under the National Monuments Act 1994 Amendment. Features, structures, sites or objects listed within the records are known as Recorded Monuments. A set of maps which accompany the RMP files outline zones of archaeological potential surrounding listed monuments. The RMP files are one of the primary repositories of information on the archaeological record.

The Record of Monuments and Places (RMP) comprise the following elements: (i) Letter or letters indicating county (DU=Dublin); (ii) A three digit number indicating the relevant ordnance survey six inch sheet number (e.g. 010); (iii) A three to six digit number indicating the

dedicated number of the individual site or monument. The Archive Unit of the National Monuments Section of the Department of Housing holds a file for every site listed on the RMP.

There are no recorded monuments within the study area along New Street or at the Diamond. Three records are of particular importance to the study area as they are located on a parallel street to the west, Old Street.

### *Ritual site - holy well DU012-023001-*

This holy well is located 80m west of the study area, on the corner of Old Street and Railway Avenue (formerly Fountain Lane, after the well). The well is traditionally called ‘Sunday’s Well’, or St Sylvester’s Well. It is adjacent to St Sylvester’s Church in the north and is widely accessible to

The RMP files near the study area







Photograph of St Sylvester's Holy Well c.1948 (from McLoughlin 2009)

RMP	Feature	Townland	Distance
DU012-023001-	Ritua site - holy well	Malahide	90m
DU012-023003-	Earthwork	Malahide	100m
DU012-023002-	Church	Malahide	100m
DU012-030----	Malahide Castle	Malahide Demesne	950m
DU012-031001-	Malahide Castle church & grounds	Malahide Demesne	950m

The RMP files in the vicinity and wider landscape of the study area

the public. A modern stone plaque placed during refurbishment in 2001 dates the well to AD 430. Old Street, formerly Chapel Street, was originally the centre of Malahide and the well would have been a vital source of water for the village's inhabitants (malahideheritage.ie 2020). The well would have originally been open at the top, with the water being accessed through a bucket and rope (ibid.).

D'Alton (1838, 186) describes the feature as 'a well of clear and wholesome water, dedicated to

the Blessed Virgin, and covered with an arched enclosure, within which her statue was formerly set'. The dedication of the well has resulted in a number of debates as to the source of its eponym. D'Alton (1838) states that it was dedicated to the Blessed Virgin. O'Reilly (1910, 153) refers to it as named after Sylvester, a disciple of St Patrick. Alternate theories suggest it is named after either St Sylvester I or St Sylvester II, with the latter being more common among the French, due to his Norman origins (malahideheritage.ie 2020).



St Sylvester's holy well in the present day

### *Earthwork DU012-023003-*

According to Flanagan (1984, 112) a mound once existed on the site of St Sylvester's Church. An extension constructed in 2010 saw a series of test excavations taking place on site (10E0426). A small pit/drainage gully with a silty fill dating to the medieval period was identified. Excavations the following year (11E0326) discovered medieval structural remains, ditches, pits, and eighteenth or nineteenth century masonry walls. Ceramic found during the excavation demonstrated a degree of occupancy in the near vicinity during the thirteenth or fourteenth centuries. An interpretation of inhabitation at the site of the earthwork should take account of the holy well to the north. The well demonstrates that the area was occupied from at least the fifth century AD. No extant remains of the earthwork are present today.

### *Church DU012-023002-*

Flanagan (1984, 112) states that an early church stood in the earthwork (DU012-023003) which predates St Sylvester's Church, constructed in 1845. As discussed above, test excavations on

the site of the later church revealed a number of medieval features dating to the thirteenth or fourteenth centuries. The identification of medieval structural remains (11E0326) further suggests that the early church may survive as subsurface foundation remains.

## Features in the wider landscape

The historic and cartographic background provided in section 3 establishes a strong dichotomy between the village of Malahide and the construction of Malahide Castle to the southwest. The wealth and prosperity of the Talbots residing in the castle was not present in the poor farming village at Malahide. An examination of the castle, then, is required as it affords the polar opposite link of how the wider landscape developed under the sway and influence of the Talbot family.

### *Malahide Castle DU012-030----*

Malahide Castle is a detached three-storey over basement medieval mansion dating to c.1450.





A Malahide Castle print - published by Newman & Co. (1838-1880)

The castle has gone through a number of renovations throughout its history (in approximately 1650, 1770, 1825, 1975, and 1990) (NI-AH 2005). It is built on a rise that oversees the surrounding landscape. It was originally constructed from wood, later to be replaced by a stone fortress (malahidecastleandgardens.ie 2022). The castle on its exterior is of Georgian Gothic style. The ground floor of the late medieval core of the castle is entered through a Gothic doorway, with entrance to the upper floors being a spiral staircase. Ornamentation in the castle includes corbel heads of Edward IV, sixteenth century carved panelling, and a Fleming carving over the fireplace of the Assumption of the Virgin, among others. The history of the castle and Malahide in general will be provided in section 3.

#### ***Malahide Castle church DU012-031001-***

A church and surrounding graveyard/grounds

are located 30m east of Malahide Castle. D'Alton (1838) describes the church as 'the venerable remains of [an] ancient chapel, the entrance to which is guarded by two magnificent sycamores'. The church contains a chancel and nave, with a sacristy on the southeastern corner. The side walls of the nave have stepped battlements and the entire structure is formed of coursed, well mortared limestone masonry. The church contains a number of RMP files including two architectural fragments (DU012-031004 & DU012-031005) and two Sheela-na-gigs (DU012-031002 & DU012-031003). The church is also surrounded by a graveyard on all sides (DU012-031006). The graveyard is primarily occupied by burials dating to the eighteenth, nineteenth and mid-twentieth centuries. The interior of the church has been used for internment and contains an altar tomb dedicated to Maud Plunkett (c. 1494).

## Previous excavations

No listed excavations have taken place on New Street. A number of excavations have been conducted in the region surrounding the study area. The primary source of information on licensed excavations in Ireland in the last decades are the volumes of the Excavations Bulletins series and their online version, the Excavations database ([www.excavations.ie](http://www.excavations.ie)). While no excavations have taken place directly within the study area, a number of works have been carried out in the near vicinity. For the purposes of this report a radius of 500m will be used for examining prior excavations.

### *Railway Avenue - 01E0421*

A series of four test-trenches, covering a total of 45m<sup>2</sup> were excavated in May 2001. The excavation revealed no features dating prior to the post-medieval period. Substantial stone walls were uncovered in all test trenches and were assumed to have been part of one single structure. A later examination of the Ordnance Survey maps demonstrated that the walls likely belonged to an earlier structure of St Sylvester's Church nearby.

### *St Sylvester's Church - 10E0426*

Test excavations were carried out in the area for a proposed parish centre to the west of the

Previous archaeological excavations that presented archaeological material within 120m of the study area

Licence	Address	Findings	Distance
01E0421	Railway Avenue	Substantial stone walls	70m
10E0426	St Sylvester's Church	Foundation walls	110m
11E0326	St Sylvester's Church	Foundation walls & medieval occupation layers	120m
E4381	Multiple	Stone culverts, post medieval archaeology	N/A

Previous excavations near the study area





church. A separate trench was excavated at the prayer chapel to the east of the church as well. The excavations were similar to those conducted in 2001 as they uncovered a series of foundation walls for an earlier church structure. It was noted in the excavation that an earlier deposit of medieval archaeology may exist.

### *St Sylvester's Church - 11E0326*

A second excavation at the site of St Sylvester's Church the following year. The earliest activity identified on site was medieval occupation layers characterised by structural remains and subsoil cut features. The walls were constructed from undressed limestone with poor facing. The fill surrounding the wall had inclusions of seashell, animal bone and charcoal flecking. A stone drain was also excavated to the south. A later wall was also identified during excavation, which was constructed sometime between 1837 and 1867 (depicted on two separate editions of the

ordnance survey maps). A series of finds demonstrate that the site was multi-phased, these include: a flint scraper, a retouched flake, flint debitage, a medieval pottery assemblage, post-medieval pottery, and a number of metal artefacts.

### *Pipeline - E4381*

The construction of a pipeline measuring 1.1km in length commenced in October 2011. The pipe ran from the Dublin Road through Malahide Castle and terminated at Black Road. The excavations uncovered a number of eighteenth century landscaping features, stone culverts, limestone walls, and a metallised surface. A number of post-medieval finds were recovered including animal bone, pottery sherds, a small milled copper coin, and a clay pipe bowl. The excavator deemed that no features dating prior to the eighteenth century were identified during the excavation.

St Sylvester's Church, taken from Railway Avenue





## Topographical files

In compiling this report the files of the National Museum of Ireland (NMI) were consulted. These contain information on the archaeological artefacts in the collections of the NMI and the discovery locations of those artefacts. No topographical files are listed within the study area. Thus, it is necessary to examine the region surrounding the study area in order to establish a concise historical narrative. Three files are noted within 500m of the study area.

### *Bronze lid - 1984:146*

A bronze lid was uncovered on the beach to the east of Malahide, across from the Grand Hotel. The file lists the lid as possibly belonging to a spirit measure. The lid is designed in a domed manner, with its centre topped by a raised, stepped pattern. The underside has a raised lip

or rim. The figure 6 or 9 appears on the upper surface of the lid. It is noted as belonging to either the seventeenth or eighteenth century.

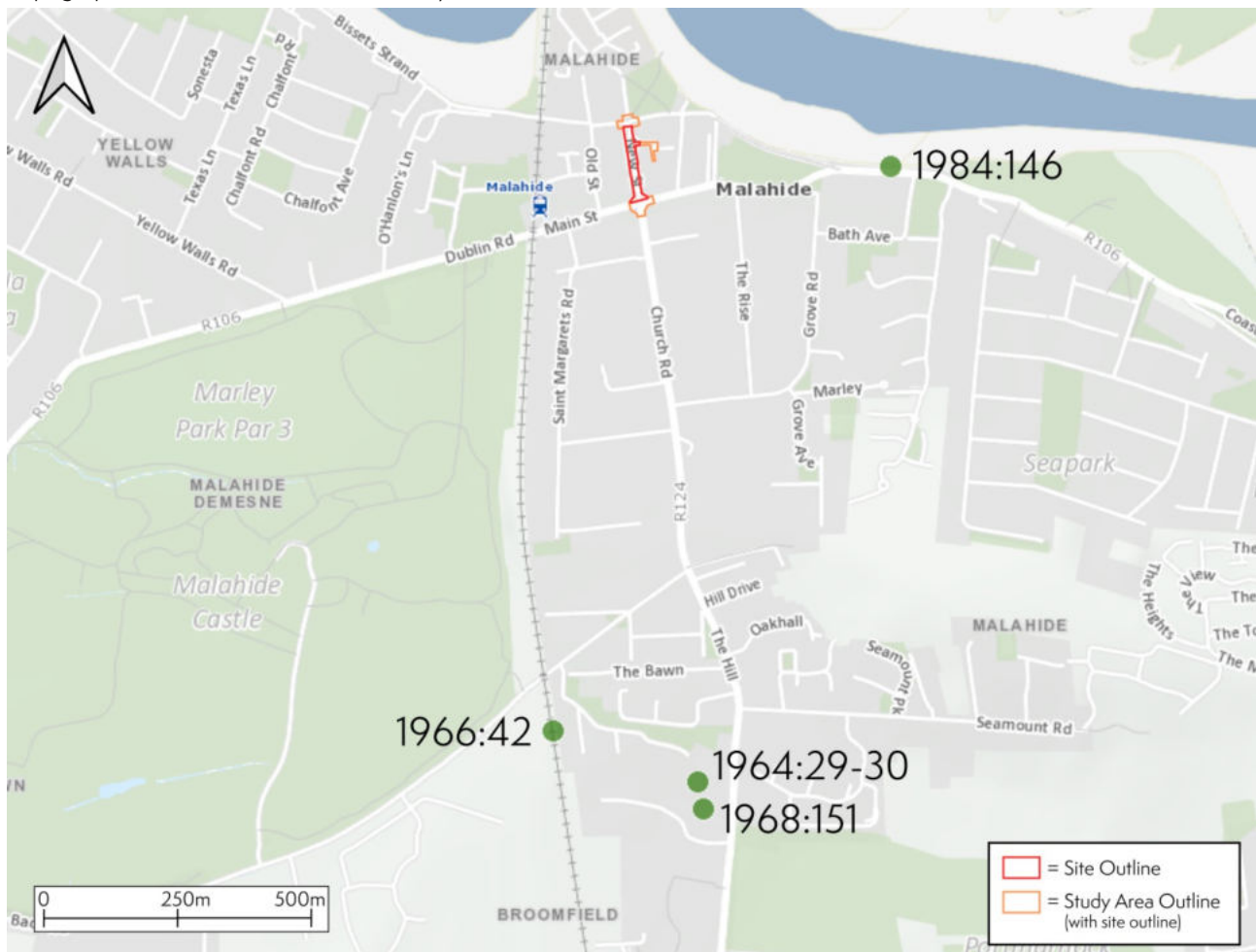
### *Flint scraper - 1966:42*

A flint scraper was uncovered in Broomfield, Malahide, southeast of the study area. It was found on the surface and presented to the museum in a collection of other objects. The scraper is honey-brown and made from a thin flake. One side of the flint is noted as sharp and finely worked. Its dimensions are 2.8cm in length, 1.9cm in width and 0.4cm in depth. It was presented with a slate pencil, broken tortoise shell from an ornamental box, and a sperm whale tooth.

### *Flint assemblage - 1964:29-30*

A series of flint objects were presented to the museum for analysis. It should be noted that the

Topographical files within 1.1km of the study area



ID	Address	Topographical File	Distance
1984:146	Grand Hotel, Malahide	Bronze lid (post-medieval)	470m
1966:42	Broomfield	Flint scraper	1km
1964:29-30	Multiple	Flint assemblage	1.09km
1968:151	Paddy's Hill	Stone assemblage	1.1km

The topographical files within 1.1km of the study area

assemblage represents flint objects from a number of different locations. Among these were twenty-eight waste flint flakes from Feltrim Hill, five waste core-like flints from Kilcrea, and twelve waste flint and three flint flakes with obvious retouching from Paddy's Hill (Keeling & Kelley 1994, 3). The museum determined the objects to be of little archaeological value.

### *Stone assemblage - 1968:151*

A number of stone artefacts were presented to

the museum, who subsequently purchased them for the sum of £30. These included two polished stone axehead fragments, waste flint material, two flint flakes, five water rolled flint flakes, six chert flakes, a flint scraper, an animal tooth, bone fragments, a bronze object, and an iron object. The finds are primarily prehistoric in nature, with the metal objects discovered to be modern. They were located adjacent to 1964:29-30, at Paddy's Hill.

The industrial heritage sites (NIAH) within the vicinity of the study area



Ref	Address	Feature	Distance
11344035	New Street	Lamp standard	0m
11344036	The Mall, Malahide	Post box (ER VII)	50m
11344008	Main Street, Malahide	Railway station	140m
11344055	Main Street, Malahide	Station master's house	170m
11344009	Main Street, Malahide	Signal box	180m
11344015	Strand Street, Malahide	Railway bridge	180m

The industrial heritage sites (NIAH) within 180m of the study area

## Industrial heritage

The industrial period in Ireland is generally accepted to date between 1750 and 1930 (Rynne 2006). The period came with an entirely new economic and social experience. Ireland, however, failed to reach the degree of industrialisation seen in the United Kingdom or the rest of Europe (Ulster Historical Foundation 2021). Ireland as a whole remained an agricultural economy catering to its own growing population and the ever-increasing demands of the British market and Empire. Consequently, the majority of industrial activity was centred in cities and

large port towns.

No features in the Dublin City Industrial Heritage Records are located within Malahide or the study area. For the purpose of this assessment the ordnance survey maps have been examined with a short list of industrial heritage near New Street dating to the industrial period in Ireland. The database for the National Inventory of Architectural Heritage has been employed for reference numbers.

### *Lamp standard - 11344035*

A freestanding gas lamp standard constructed

Malahide Railway Station





from cast-iron in 1900. It comprises a chamfered square pedestal with a foliated shaft (NIAH 2005). The top is intricately decorated and fitted with a double lamp, facing opposite sides. This has been removed and is no longer present.

#### ***Post box - 11344036***

This is a freestanding cast-iron postbox dating to 1905. It is decorated with the monogram 'ER VII'.

#### ***Malahide Railway Station - 11344008***

The Malahide Railway Station was designed by George Papworth and was constructed in 1851 (NIAH 2005). It is a detached nine-bay single storey building constructed from yellow bricks. The entrance to the station is a Tudor style projecting porch at the centre of the structure on its street facing side. It is still in use as a railway station.

#### ***Station master's house - 11344005***

To the east of the railway station stands a detached single storey building constructed from red brick. It was built in 1880 and has retained all of its original features in the present day. The quoins and dressings of the house are in yellow brick. It is presently in use as a domestic structure.

#### ***Signal box - 11344009***

A detached single storey timber signal box constructed in 1855. It is located north of the railway station along the tracks, west of New Street.

#### ***Railway bridge - 11344015***

To the north of the railway station and signal box is a single-arch ashlar limestone bridge built for the railway line in 1844. Still in use in the present day.

Railway station bridge on Strand Street



## Section 3 History and Cartography

### Introduction

In 1609 Fynes Moryson, in his 'Description of Ireland', described Fingal as "a little territory, as it were the garner of the kingdom, which is environed by the sea and great rivers, and this situation hath defended it from the incursions of rebels in former civil wars". The name 'Fingal' in the ninth century referred not to the land north of Dublin but rather a people, the fair strangers later known as the Vikings. By the eleventh century it was synonymous with a place, stretching from the River Delvin toward Dublin City. The names of *Fingal*, *Fine Gall*, *Fingall*, *Crích Gall* or *Fyngall* are named in the Irish annals, as well as Welsh, Scandinavian and Anglo-Norman sources (Baker 2010, 1).

Malahide is located in the northeast of Fingal, situated at the mouth of the shallow Broadmeadow estuary. It is 4km east of Swords and 13km north of Dublin city. The name Malahide, as demonstrated by the Placenames Database of Ireland, has undergone a number of changes since it first appeared (Malachida) in 1181. It possibly derives from the Irish *Baile Átha Thíd*, referring to 'the town of the ford of Thíd'. The modern Irish name *Mullach Íde* means 'the hill-top of Ide', or Hyde's Brow. This likely refers to the Norman family that occupied the Donabate Area (McLoughlin 2009, 6).

Lewis (1837) describes Malahide as having 'a pleasing and sequestered character, [containing]

A photograph of Malahide Castle, circa. 1865-1914





many handsome cottages, chiefly occupied by visitors during the bathing season and in some instances by permanent residents. D'Alton (1838) describes Malahide as 'a well-built and pleasantly situated village on the brow of the sea'.

### *Prehistory*

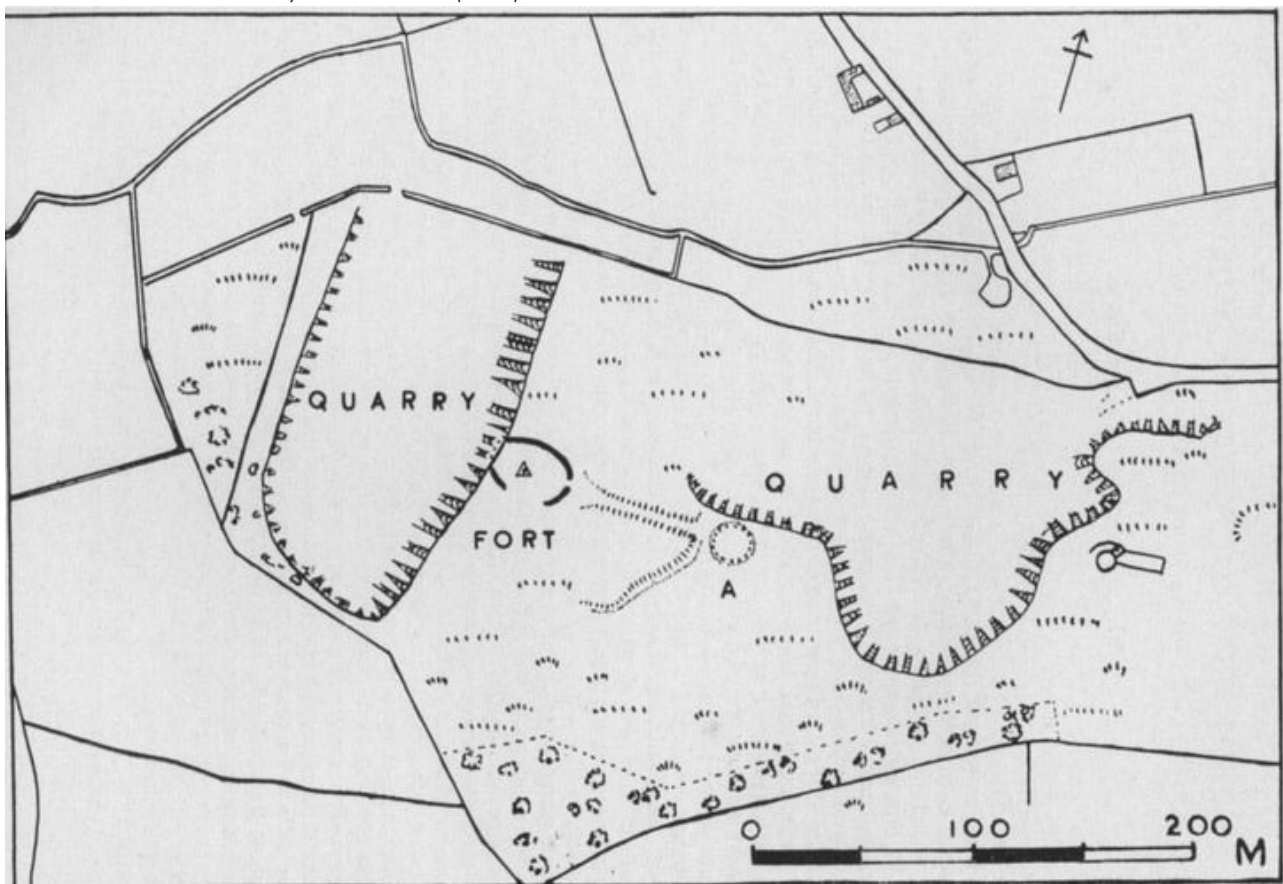
A considerable amount of flint artefacts were collected between 1964 and 1981 by amateur archaeologist Noel Flanagan. A large portion of this material was uncovered in the townland of Robswalls, east of Malahide. The date range for these artefacts ranges between the Mesolithic and the Early Bronze Age. These finds form part of a range of collections uncovered throughout the coast of north County Dublin. Flint flakes dating from the Mesolithic and Neolithic periods have been found at Sutton (Stout & Stout 1992) and Paddy's Hill, overlooking the Malahide Estuary (1964:29-30). Other prehistoric artefacts in the wider landscape in-

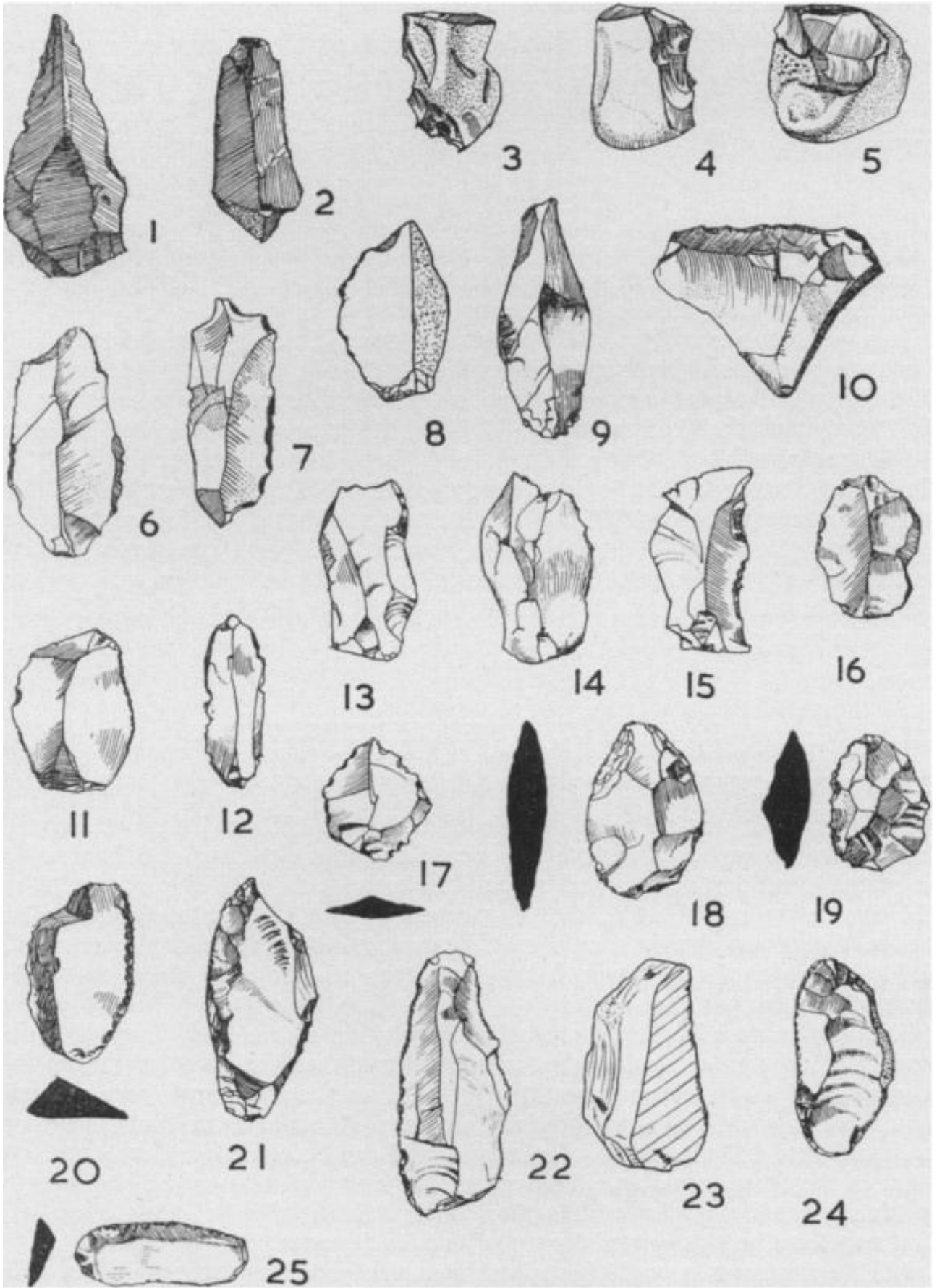
clude a stone axe in Saintdoolaghs (1940:49), a flint arrowhead in Feltrim (1947:159), three waste flints in Ballymadrough (1978:70-72), and flint flakes in Lanestown (1978:73-74).

Excavations by Keeling and Keeley (1994) revealed a substantial quantity of lithic material (almost 3000) at Paddy's Hill in Robswalls (DU012-037). These vary in date between the Neolithic and Early Bronze Age.

Malahide Hill, southeast of the town, is a focal point of prehistoric activity. It is a highly-visible setting for a number of monuments which run along the crest of the ridge (Giacometti 2017, 28). Included within these are a burnt mound (DU012-065), a barrow (14E161), a mound (DU012-032) and two medieval middens (DU012-062 & DU012-012). The ridge is also the location of two lithic scatters (DU012-063 & 00E0037).

Excavations at Feltrim Hill by Hartnett et al. (1964)





Lithics uncovered during excavations at Feltrim (Hartnett et al. 1964)



Excavations at Feltrim Hill (DU012-02502) exhibited evidence of Neolithic activity through pottery sherds and worked lithics, however no evidence of occupation was uncovered (Hartnett & Eogan 1964). These included eighteen neolithic stone axes (Baker 2010, 10). To the northeast, the coast has a strong view of Lambay Island. This was shown through excavations by Cooney (2000, 196) to have once been a manufactory of Neolithic axes (93E0144). The island is also home to five Neolithic cairns. A burial in the west of the island contained an extensive collection of Neolithic artefacts, including flint, stone axes, an adze, and decorated pottery (DU009-001012).

Excavations by Giacometti (2017) at Seamount, Malahide examined a prehistoric penannular enclosure and barrow, and an early medieval resource processing area. Through excavation an identification was made for the historic continuity of landscape. The site ranged in date from the Late Bronze Age to the Early Medieval Period. A Late Bronze Age burial monument (barrow) at the crest of the hill demonstrated evidence for maintenance during the Iron Age. Toward the base of the hill a Late Bronze Age enclosure was identified. Between these monuments a number of features forming an early

medieval farmstead was uncovered.

The prehistoric monuments situated along Malahide Hill formed visible markers within the landscape, which could have defined territory and ownership (ibid. 27). Even after their origins had been forgotten, they continued to define space and boundaries. For example, the early medieval farmstead identified during excavation was positioned with reference to the two prehistoric monuments. The medieval church parish boundary too followed in a similar manner.

Settlement in Fingal during the Bronze Age tended to be focused at coastal areas. A number of sites dating to this period The remains of a round house have been excavated at Balbriggan (02E0298). Lusk appears to have been occupied during the transition from the Neolithic to the Bronze Age. Excavations revealed pits, hearths, and Beaker pottery, in conjunction with a possible structure (02E1719).

A circular ring-ditch was excavated by Antoine Giacometti at Mountgorry, Swords in 2004 (04E1066). The feature had an entrance to the southeast, with a single large pit filled with burnt bone and charcoal at its centre. Bronze

Dublin environs map of Malahide, 1853





Age pottery fragments were recovered from the ditch fill and central pit. Further evidence of settlement during the Bronze Age was identified during a geophysical survey at Skerries. A number of features such as fulactha fiadh, huts, ring-ditches, and at least three round houses were noted (Baker 2010, 26).

Closer to Malahide, a ring-ditch was excavated in the townland of Drinan (DU012-093). It consisted of a circular ditch with a single large pit filled with charcoal and burnt bone. The fill contained sherds of Bronze Age pottery. An unexcavated ring-ditch to the north in the townland of Seatown East may also be evidence of Bronze Age settlement in the area. Such ring-ditches are evident in the wider landscape of Fingal as well.

### *Early medieval period*

The early medieval period dates between the fifth and twelfth centuries AD in Ireland. It was a period of heavy societal fragmentation, based primarily on the fine, a kin-group based on a common great-grandfather. A network of dynasties developed, resulting in constant warfare over land supremacy (Baker 2010, 31). The basis of social interaction surrounded the transacting of cattle, land and female slaves (ibid.). The plains of north County Dublin formed part of the kingdom of Brega during this period. Initially the land was occupied by the Laigin, although the extent of their hegemony was limited to south of the River Liffey during the fifth century AD. The land was controlled by *Síl nÁedo Sláine*, a dynasty of Uí Néill (Byrne 1973). A number of features dating to the early medieval period are located in the region surrounding New Street.

According to Tírechán, a seventh century Irish bishop, St Patrick is believed to have landed on Inishpatrick, the 'Island of Patrick', in 432 AD. Patrick is stated to have arrived by sea to "the plains of Brega... with the true light of miraculous doctrine, lighting the thick clouds of ignorance" (cited in Swift 2004, 61). The following centuries would see the development of a number of religious centres throughout Fingal, including Swords and Lusk. Many of these early churches were constructed from wood and either went out of use or were replaced by more

substantial stone structures in the following centuries. It is unclear as to whether the church in Malahide was part of this original tradition, however the evidence for stone foundations dating to the medieval period suggests that the original church was of some antiquity.

The holy well (DU012-023001) at St Sylvester's Church is the closest feature dating to the early medieval period in the near vicinity of the study area. Lewis (1837) states that 'in the [town] centre is a well of excellent water, arched over and dedicated to the Blessed Virgin'. To the southeast in the townland of Robswalls in a kink in a field boundary is a natural spring called St Patricks' Well (DU012-038). Further south in Portmarnock in the townland of Burrow is St Marnock's Well (DU015-007002). The Pattern

day at the well was August 18th (Ó Danachair 1958, 78). The RMP file states that during its peak the well comprised a large circular pool with sixteen stone steps leading down to it. A hoard of medieval coins were found at the well. The well was destroyed in 1854, along with its associated Ogham stone (DU015-007003). An additional holy well (DU012-039) known as Tobermaclaney was located west of Carrick Martello tower. The 1830 ordnance survey map recorded that the water ran down the hill to form two small pools beside the tower.

The closest evidence for settlement during the early medieval period in the area surrounding Malahide is a cashel west of Feltrim. The cashel comprises an oval area enclosed by a drystone wall (measuring 35m east/west, 25m north/south). The entrance is to the east, and was originally protected by a timber gate (Eogan & Hartnett 1964, 21). Excavations in the 1940s identified extensive activity for domestic activity on the site (ibid.).

Further settlement include ringforts and enclosures at Broomfield, Grange, Springhill, Saintdoolaghs, and Kinsaley (DU012-033, DU015-003001 & -003002, DU015-126, DU015-123, DU015-010). In addition, a multi-period site in the townland of Drinan exhibited a number of enclosures dating to the early medieval and medieval periods. The excavation revealed a truncated ringfort, and it was believed

to have been occupied in the eleventh or twelfth centuries (Halliday 2005).

The Vikings wintered for the first time in Dublin in 841-2 AD. Ball (1920) states that the name Fingal, or Fine Gall, was employed to denote the district that the Vikings left for their excursions. The harbour of Malahide was said to be integral to Viking raids and the Danes had settled there by 892 AD (Bradley et al. 2009, 51). After Viking expansion northwards in the mid 11th century, Hammond McTurkill, the last Viking king of Dublin, settled at Malahide in 1171 (Lewis 1837, 337). Hammond's name lasted until the 19th century when the townland of Hamonstown (or Hamonswood) northwest of Malahide Demesne was renamed to Yellow Walls (oldyellowwalls.org 2022, also see D'Alton 1838 who names Hamonstown). Bradley (1992) suggests that this area of Dublin should be considered as 'the rurally settled area of the Dublin Scandinavians'.

### *Medieval period onward*

The Anglo-Normans that arrived in 1169 knew



The thatched cottages of Old Street (FCC 2009, 8)

of the richness of the soil throughout Fingal (Baker 2010, 47). The new settlers employed an aggressive system of intensive agriculture throughout the landscape, likely owing to the destruction of prehistoric monuments. The Hiberno-Norse occupants of Fingal were initially opposed to the Anglo-Normans, however their resistance was ultimately unsuccessful. The kingdom of Leinster was granted to Strongbow in 1171 by Henry II. Lordships were afforded to

The medieval wall uncovered during excavations beneath St Sylvester's Church (11E0326; McQuade 2012)







Malahide in 1844, note the new railway line spanning the estuary

nobles who accompanied Strongbow to Ireland shortly thereafter. The count of Dublin was retained by the English Crown, which was at this point divided into five baronies. These were granted to Hugh de Lacy, who confirmed it to his son Walter de Lacy in 1208 (Veach 2010, 179). This period was followed by an early period of colonisation in which land grants were given to the Talbots, Barnewells, and St Lawrences (O'Donnell 2008, 50).

The medieval period onward in Malahide is defined by the arrival of the Talbots, who constructed a motte and bailey approximately 1km southwest of the small village in c.1250 AD (Duffy & Simpson 2009, 210). The castle was originally constructed from wood (mentioned in section 2) and was passed down through the male heirs of Sir Richard Talbot for the next eight centuries. A diary entry from 1780 describes the castle as a “large and spacious castle in the highest repair” (Little 1948, 2). The castle and land were sequestered in the 1650s by Cromwellian forces, however the lands were later retrieved by the Talbots in the following decades. The castle and grounds were placed on sale in 1973 after the death of Lord Talbot,

which were purchased by Dublin City Council.

The town of Malahide’s population rose from 100 to 200 in the seventeenth century. During this period, the court and its offices were erected with stone walls and slate roofs, in stark contrast to the thatched mud walled homes of the villagers (McLoughlin 2009, 7). The town was centred around St Sylvester’s Well, its water source. An account by John Dunton in 1699 stated that Malahide “contained 30 ordinary huts in all, and not one without several little children who are sprawling about the fireplace (for there was but a small appearance of a fire on it) like so many maggots on a dunghill in a summer’s day”. The town in this period was poor, and was overseen and heavily influenced by the Talbot family in Malahide castle.

The Talbots played an influential role in the redevelopment of the town in the eighteenth century. As a trustee of the turnpike at Malahide, Richard Talbot was integral in the changes of the street layout being undertaken at the time (Greene 2012, 75). Main Street was extended westward into a shape more familiar today. In addition, the centre of the village was moved



The dispensary on New Street

eastward to New Street, with the Diamond being a focal point.

New Street and the Diamond were built up with houses far grander than their thatched cottage counterparts in Old Street. These developments continued into the nineteenth century, as Malahide slowly became industrialised. In 1837 Lewis wrote that 'the trade of the town, never very extensive, received a great check from the privileges granted to the port of Dublin in the sixteenth century... [a] cotton manufacture was introduced here on an extensive scale... though the Irish parliament granted £2000 for the completion of the requisite machinery, it was ultimately abandoned'. Lewis further states that the primary export at Malahide was flour and meal, with coal being imported from Whitehaven and Scotland. D'Alton (1838, 191) confirms that the cotton manufactory 'metamorphosed into one for silk, which gives daily employment to but eight individuals'.

A number of structures relate to the operation of the railway line from its initial construction

in 1844 onwards. These include the railway station building, station master's house, signal box and the railway bridge. A single industrial feature is located within the study area, a lamp standard.

In the nineteenth century the town saw the construction of the coal works on the northern coast, adjacent to the present day junction of New Street and Strand Street (visible on the first edition OS map). At a later point (prior to the 1913 OS map) the coal works was repurposed as an oil works. Developments also took place southward along New Street. Plates and photographs from the period depict a number of upper-class homes New Street (page 20).

Lewis (1837) and D'Alton (1838, 191) both suggest that industry at Malahide was never grand in scale. D'Alton states that the fishing industry by the time of his writing had declined considerably, with 'but three wherries here now fit to put to sea'. In addition, no pier or quay was constructed north of the village. Fishing vessels were easily beached on the shoreline, with many



# Malahide Dispensary.

*A Dispensary for Sick Poor, will open in Malahide, on the first day of May, 1817.*

**THIS DISPENSARY** will be supported by public Subscription; and each Subscriber shall have a power of recommending an unlimited number of patients.

**PRINTED TICKETS** of recommendation will be furnished to each Subscriber; and no application will be attended to, unless the person making the same shall produce, upon his first coming to the Dispensary, one of those printed Tickets, signed by a Subscriber.

**THE** immediate management of the Dispensary will be vested in a *Committee of Seven*, who will meet at the Dispensary on the *First Monday of every Month*, to make such Rules and Regulations as may, from time to time, appear necessary.

*The Committee for the present year :*

R. W. TALBOT, Esq.  
GENERAL LLOYD,  
CHARLES COBBE, Esq.  
JOHN SHAW, Esq.

JOSEPH MACARTNEY, Esq.  
ANDREW CRAWFORD, Esq.  
*Miss* ~~HELEN~~ HENLY, Esq.

**AN ANNUAL MEETING** of the **SUBSCRIBERS** will be held at the Dispensary, on the *First day of May*, in each succeeding year, to inspect the Books of the Establishment, appoint a Committee, &c. &c.

**A BLANK BOOK** will be constantly upon a table in the Dispensary, to which *every Subscriber* shall have access, during Dispensary hours, for the purpose of making such observations therein as he, or she, may think proper to submit to the consideration of the Committee.

**FROM** the First day of *May*, to the First day of *October*, in each year, the Dispensary will open every Morning, (Sunday excepted,) at Eight o'Clock, and close at Five in the Afternoon;—and from the First day of *October*, to the First day of *May*, it will open at *Nine o'Clock* in the Morning, and close at *Three*.

**PERSONS** applying for Medical Aid must come to the Dispensary within these hours; otherwise they will not be admitted.

**IN** cases however of *Accident* or *Sudden Illness*, the Ticket of a Subscriber will be attended to upon *any Day*, or at *any time of the Day or Night*; but it is expected that no Subscriber will send to the Dispensary at extra hours, except in cases of real danger; or such at least as appear to admit of no delay.

**PATIENTS**, who by reason of severe sickness, are unable to attend at the Dispensary, shall be visited at their own homes, *provided the distance does not exceed three miles*.

**IN** *Labour Cases* attended with danger or extraordinary difficulty, the Dispensary Physician will visit the Patient at a distance not exceeding three miles; but it is to be particularly understood, that if the case should not require or admit of immediate assistance, he shall not be expected to continue in attendance; in all such cases the expediency of remaining with the Patient must rest with the Physician, and be determined by him.

**ON** *Wednesdays* and *Saturdays*, the Children of the Poor will be Vaccinated at the Dispensary.

**AN** Apothecary will reside at the Dispensary, and the Physician will attend every Morning as soon as it opens, and remain for two hours.

NOLAN, PRINTER, DUBLIN.

owners allowing their boats to 'ride afloat in the channel in perfect safety' (ibid.).

Possibly the most prominent feature of the west side of New Street is the dispensary. It is a two storey red-brick structure with an arched entrance way, and horizontal blue-brick string coursing. The building heavily contrasts in style with all other structures on the street. The foundation of the dispensary was possibly encouraged by a 1765 Act which gave Grand Juries the power to match local voluntary subscriptions in order to establish local dispensaries. A local committee was established in 1817, which sought the construction of a dispensary 'for the more immediate relief of the poor in the vicinity to which all persons, unable to pay for advice and medicines, residing within four miles of the dispensary house, and bringing proper recommendations from subscriber, will be admissible' (cited in a document detailing the official opening of the dispensary, Macartney & Crawford, 1817).

Subscribers to the programme paid one guinea per year, which afforded them the privilege of recommending patients for medical treatments to the dispensary. The subscribers were described as a 'very respectable list of nobility and gentry who have honoured this institution with

their patronage and support' (Greene 2012).

The dispensary opened on the 1st of May 1817, It was housed originally on the eastern side of New Street, as depicted on the first edition ordnance survey map. The 1908 ordnance survey map depicts the dispensary as being located in the current location of Donnybrook Fair. The red-brick structure that currently stands in New Street housed the dispensary from the later 19th century onward (McLoughlin 2009).

The 1901 census lists 71 individuals living on New Street. An examination of the census data from the national archives provides the following statistics:

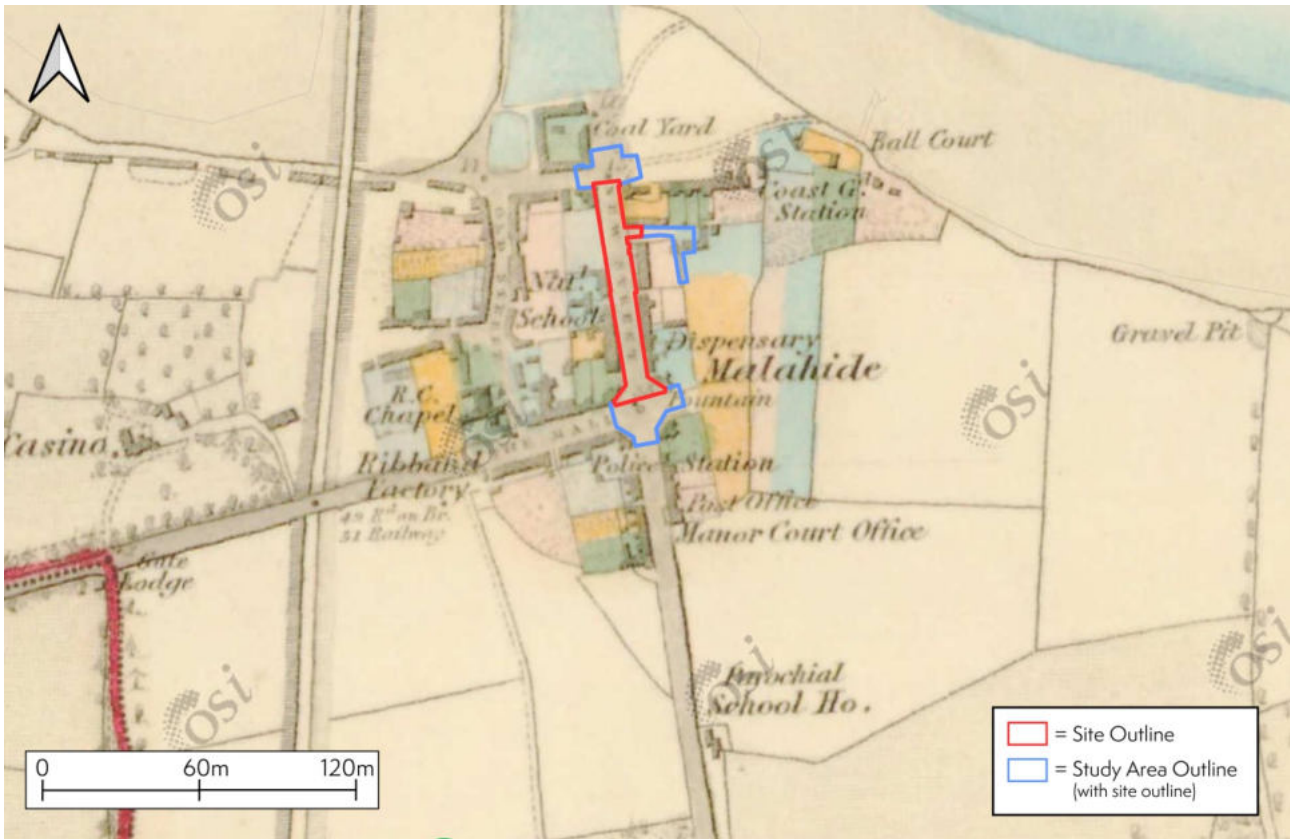
- the average age of individual was 24.9
- the male to female ratio was 52/48%
- the data exhibited 23 unique surnames, with 12 heads of families listed
- 99% of adults were literate
- 12 houses are listed n New Street in 1901

The professions of those inhabiting New Street includes domestic servants, clerks, coal merchants, shop workers, victuallers, painters, post office workers, labourers and teachers. Furthermore, only one person was listed as being ill.

A chart of the Bay of Dublin and Sea Coast, Bernard Scale (1765), from the Bibliotheque National de France

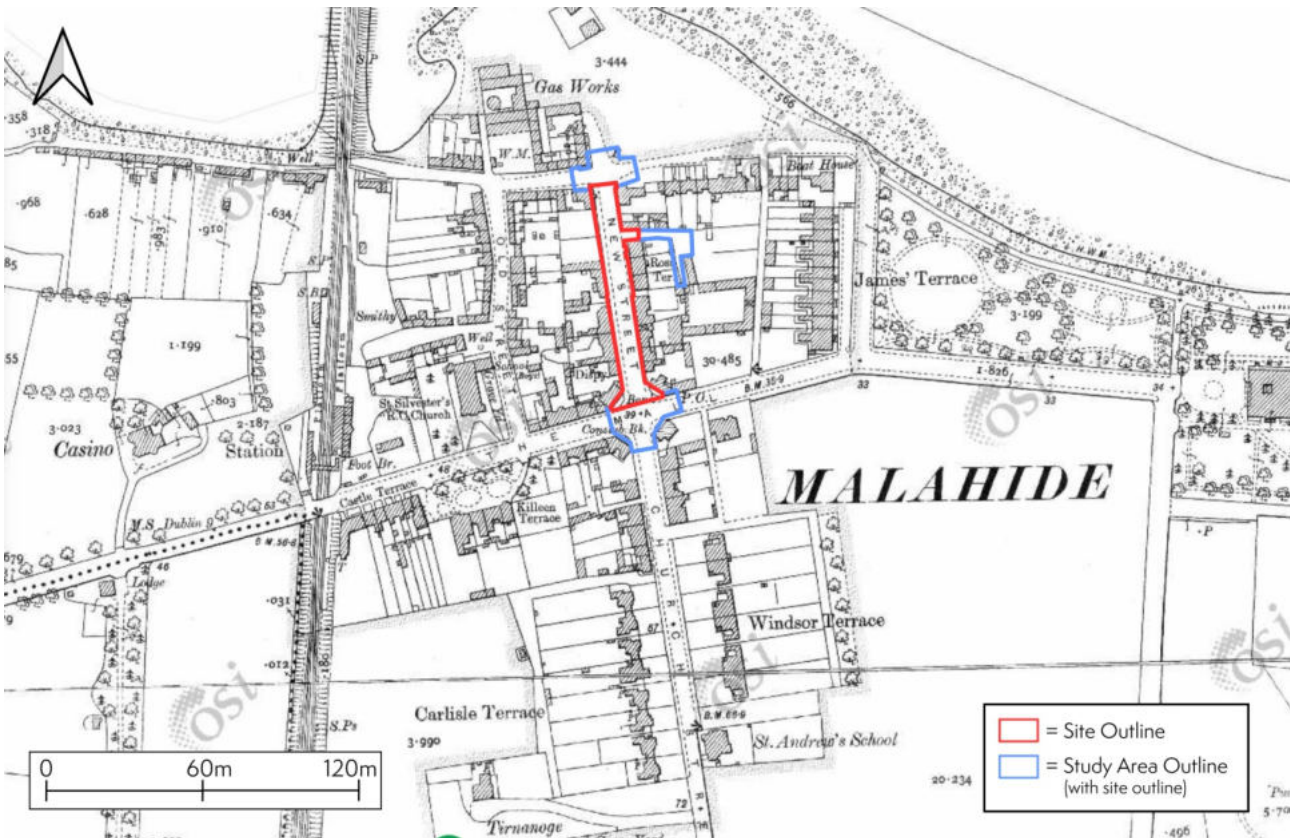






The study area outline over the 6-inch ordnance survey map

The study area outline over the 25-inch ordnance survey map



There were some notable changes in the 1911 census. Notably, the population had increased to 84 since a decade prior.

- the average age raised to 27.6
- the male to female ratio raised to 54/46%
- the data exhibited 26 unique surnames, with 16 heads of families
- 99% of adults were literate
- 18 houses were listed on New Street in 1911

Additional professions mentioned in the 1911 census include fishmongers, hospital workers, general practitioner, telegraph messengers, car drivers, carpenters and a dairy owner.

These figures are notable when compared with the census information from Old Street for the same years. 96 individuals occupied Old Street in 1901 and 100 in 1911.

- the average age of individual was 28.8 in 1901 and 31.56 in 1911, nearly four years above New Street in both censuses

- in 1901 and 1911 the percentage of male inhabitants were 41.6% and 47% respectively
- the number of unique surnames were 34 in 1901 and 1911, with 26 heads of family in 1901 and 28 in 1911
- 85.8% of adults were literate in 1901 and 97% in 1911

The professions represented on Old Street similarly match those on New Street. With a slight tendency toward labourer or clerk jobs on Old Street.

The data suggests that literacy was generally higher in New Street. Additionally, the number of male occupants was lower on Old Street. Interestingly, the average age was higher on Old Street. It is unclear as to whether this is due to the difference in the male/female ratio exhibited in both streets. The surname to head of family ratio is also noteworthy, as Old Street families tended to be smaller than those at New Street.

The site outline overlaid on Rocque's 1760 map, using Dublin Historic Maps resource for georeferencing







Taylor's 1816 map of the environs of Dublin, which is potentially the first map depicting the layout of the Diamond

## Cartography

The landscape of Malahide has changed extensively since the first appearance of human beings there in prehistory. The greatest of these changes, however, took place from the nineteenth century onwards with the development of the small fishing village of Malahide into a seaside resort town. The coast has been altered through the reclamation of land at the northern shore of the town. This occurred originally with the construction of oil and coal works during the industrial period, and the Marina in later years. In addition, the street layout of Malahide town has been changed in the past three centuries, with developments at New Street, Strand Street, The Mall and Church Street.

For the purpose of this assessment Dublin's historic cartography was analysed through [www.dublinhistoricmaps.ie](http://www.dublinhistoricmaps.ie). This resource offers a wide variety of georeferenced historic maps of Dublin and its surrounding environs. The earliest map that affords a detailed view of Malahide was published by John Rocque in 1760. The georeferenced image depicts The Diamond

as being the junction of Church Road, Railway Avenue and Old Street. Rocque offers a glimpse into Malahide prior to the construction of New Street. The location of the site outline over structures that would later be removed for the creation of New Street is notable. Rocque also lists a chapel as being located in the area of New Street. It is ambiguous as to whether this refers to the presently standing church in the west or if this may have been a separate structure altogether. It is possible that D'Alton is describing this chapel when he states that it 'is very old and inadequate for its congregation'. Excavations outlined in this report have demonstrated the existence of a stone structure predating St Sylvester's Church (10E0426 & 11E0326).

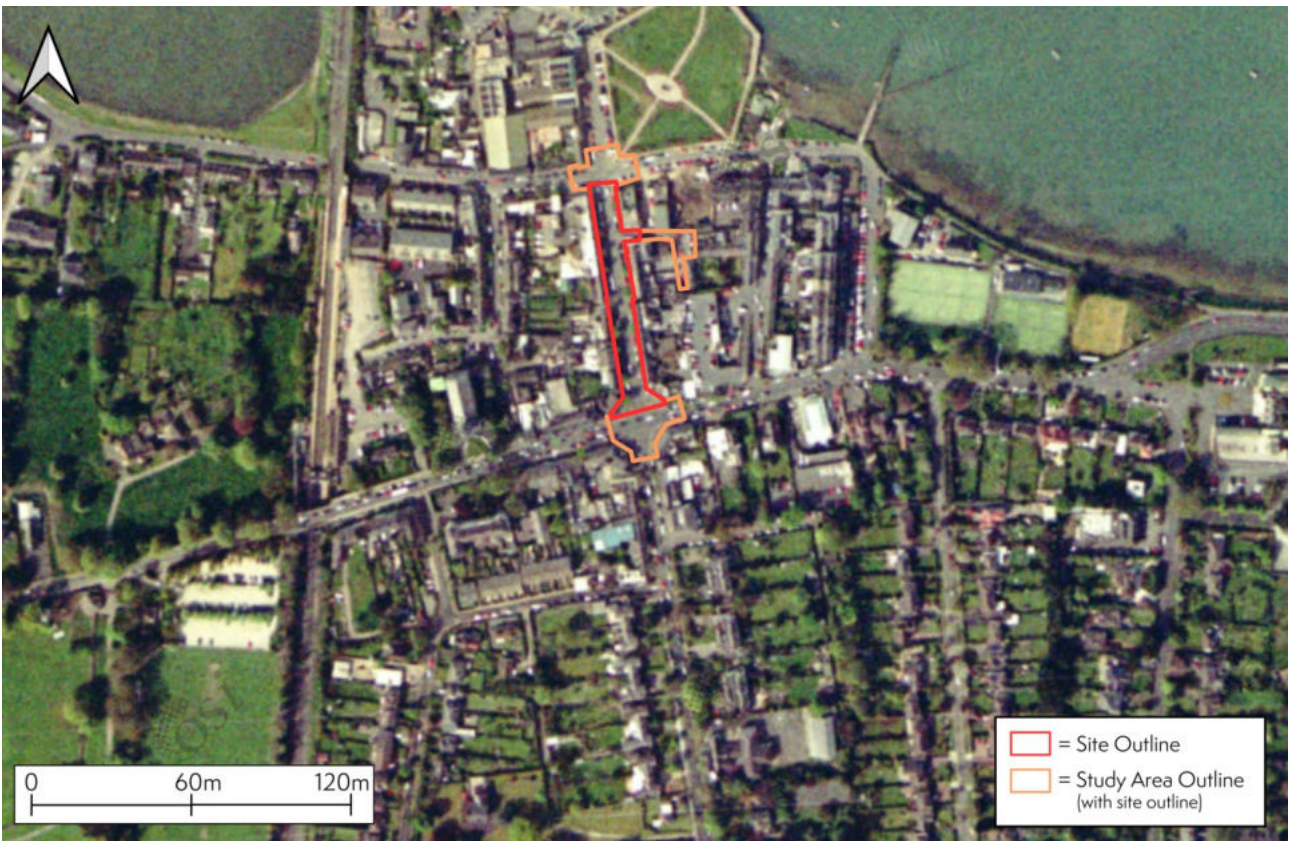
The first edition OS map, published prior to the construction of St Sylvester's Church in 1845, lists the structure as a Roman Catholic chapel. This may refer to the chapel listed in Rocque. Regardless, the identification of possible subsurface structures predating New Street are archaeological receptors that must be heeded in the development proposal.





The study area outline over the ortho 1995 map

The study area outline over the ortho 2000 map







The study area outline over the ortho 1995 map

The study area outline over the most recent aerial imagery





The focal point of Malahide village shifted eastward in the nineteenth century. Prior to this, much of the town's social and commercial activity took place on the junction of Old Street and Railway Avenue; the location of the church, well, and cottages. The street layout can be seen in a chart of the Bay of Dublin and Sea Coast by Bernard Scale, dated to 1765. This map, however, affords less detail of specific structures in the town than Rocque's map. The general layout of the town is similar in Scale's map, with Old Street as a focal point and the town stretching westwards.

The Diamond in the nineteenth century became the home of new grander developments, overshadowing the humble homes of those residing on Old Street. The Talbots of Malahide Castle were influential in the changes that took place to the town's road system during this period (Greene 2012, 75). The primary junction within the town moved to the Diamond's present location. New street was constructed c.1800, which in turn saw the erection of a number of upper-class homes.

By this point the population of the village had expanded to over a thousand residents. Ma-

lahide town had become an established trading port, used for exporting flour and corn meal, and importing coal (McLoughlin 2008, 10). In the late eighteenth and early nineteenth centuries Malahide underwent the process of industrialisation. The exportation of cornmeal and flour through milling was paired with the appearance of a small silk and cotton mill. The town is also shown as having a ribband factory in the first edition OS map (1836). The coal yard (later an oil works) is of note as it borders the study area on the northern side. This links the study area directly with the development of industrial works throughout the town.

The construction of the railway line in 1844 connected Malahide with the city of Dublin (Railscot 2007). Easy access to the harbour made Malahide a popular destination as a seaside resort. Tourists flocked to the sea-baths, which resembled Roman Baths on the eastern side of the Grand Hotel (thegrand.ie 2022). The prominence of the town is demonstrated through the 25-inch OS map, which depicts a series of terraces, estates and homes of upper class families.

The 1937 edition ordnance survey map, 6-inch





# Section 4 Site Visit

## Introduction

The study area was inspected on 03/06/2022 as part of this assessment. It was the primary objective of the inspection to analyse the grounds of the study area and identify any extant archaeological remains outlined in the previous sections. In addition, the wider area surrounding New Street was examined in order to establish a detailed understanding of Malahide's development from a small fishing village to a prominent tourist destination. For the purpose of this assessment, the study area is separated into three components: the Diamond, New Street and Ross Cottages.

## The Diamond

The distinctive appearance of the Diamond is created by four structures that create its outline. Historic photography depicts these as two-storey, five bay dwellings with gable chimneys and front railings (McLoughlin 2009, 27). The front railings created a garden space which would have extended toward the modern road surface. Only two of these structures survive in the northwest and northeast of the junction. The southeastern and southwestern sides are modern structures that mimic the character of the surviving buildings.

A close-up of the south-eastern home at the Diamond





The northeastern house, now in use as a bank

The northwestern house, now in use as a pharmacy and jeweller





The town is notable for its common use of arched entrance ways, visible in old photographs of these houses. The two southern homes were later demolished and replaced with twentieth century structures, which resemble the original two in the north. Old photography can luckily offer a picture of the southern homes prior to their removal (page 30). In addition, the junction was notable for its fountain, which is present in maps between Rocque and the first edition OS. The date of the fountain's removal is not firmly established but it appears to have been demolished at some point in the latter half of the nineteenth century. The Diamond does not appear to have held any commercial use (i.e. acted as a market square), like the similar developments in Slane Village (Hurley & McLoughlin 2008, 12). Instead, it was employed as the entranceway to the new central hub of Malahide: New Street.

## New Street

A large portion of Malahide Village's historic extant structures are located in the southern half of New Street, near the Diamond. This is mostly due to the location of the original shoreline and mudflats further inland near the northern half of the street. A consideration of all features of archaeological, architectural and historical importance is required to establish any archaeological receptors within the study area.

### *Southern New Street*

Adjacent to the dispensary on the southern side is an alleyway, which is matched on the opposite side of the street. These possibly form, in conjunction with two further north, side streets for coach houses along New Street. These are presently occupied by Michael's Garden Centre and Fish Shack.

New Street, looking northwards



Large residential properties dominate this side of New Street. A number of these have their bottom floors presently in use as shop fronts. Their similarities include continuous slate roofing, rendered walls and arched entrance ways. A number have retained their historic doors, fan lights and door surrounds. A number of historic shop fronts have survived this side of New Street. Of particular note are two bow-shaped store fronts, approximately halfway along the street on the western side.

An outbuilding is located behind 13 New Street, where the stall *Griolladh* is located. The structure is of rubble stone with a gable front. It is similar in style to a separate structure on Townyard Street (McLoughlin 2009, 29). The structure dates to the nineteenth century, with later alterations made to the door and window that front the property (ibid.). An east/west running wall in an adjacent property to the north

demonstrates a certain degree of antiquity. It exhibits a number of alterations in red brick, with a different fabric of stone across its surface. This is possibly one of the original property boundaries depicted on both editions of the ordnance survey maps.

### *Northern New Street*

The northern portion of New Street is primarily occupied by twentieth century structures, with the northwestern side being made up of a 1950's shopping centre. A single home on the northeastern corner at the junction with Strand Street dates to the nineteenth century and would have stood in close proximity to the mud-flats that existed there prior to the reclamation of land at the marina. A plaque near the entrance of the property names 'Malahide Hardware Ltd, Regd Office', a company that was set up there in 1969 (solocheck.ie 2021).

A 19th century structure with historic storefront and bowed window







The northern of two historic storefronts with bowed windows

19th century house on the eastern side of New Street







19th century buildings near the centre of New Street, eastern side

The 19th century outbuilding behind 13 New Street







A wall in a property adjacent to the 19th century outbuilding

A 19th century home at the northeast corner of New Street





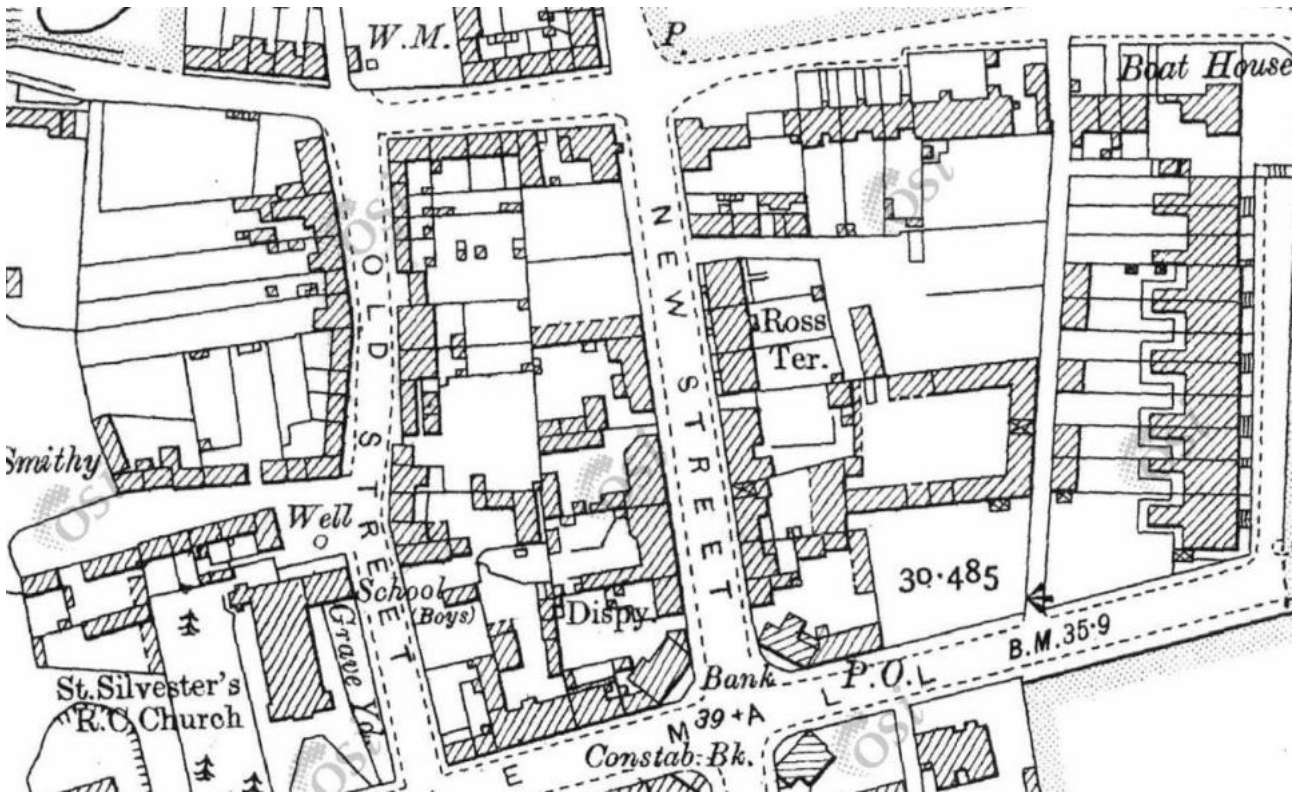


The Old Coach House at Ross Cottages

The stone structures west of the Old Couch House at Ross Cottages







Ross Terrace depicted on the 25-inch OS map, part of a number of 'terraces' constructed during this period

NEW-STREET.				Malahide; lessor should be in fee.	
2	Unoccupied.	—	6 0 0	—	—
3	Michael Gaffney.	—	21 0 0	—	20 0 0
6	Sir Thomas Ross.	—	24 0 0	—	—
7	Michael M'Shea.	—	21 0 0	—	—
1	Nicholas Wogan.	—	8 3 0	—	2 10 0
2	Mrs. Bridget Wogan.	—	14 0 0	—	—
3	Bridget Gaffney.	—	27 10 0	—	20 0 0
DISPENSARY-PLACE.					

Occupier should be Terence McDonagh.  
Lessor should be Lord Talbot d. Malahide.  
House now vacant; lessor should be Sir Thomas Ross.  
House now vacant.  
Occupier should be Miss Bridget Woogan.

An excerpt from Griffiths Valuation, showing the occupants of Ross Cottages

### Ross Cottages

The area known as 'Ross Cottages' forms a pan-handle running easterwards, perpendicular to New Street. The area was likely named after Sir Thomas Ross, named as an occupant of New Street in Griffith's Valuations. As noted above, at least one structure within the area of the cottages was used as a dispensary prior to the construction of the later one on New Street. A dispensary is depicted on the first edition OS map, in a rectangular E/W running structure which may be extant in the present day. The homes within the grounds likely post-date Griffith's Valuation, as the homes are not included within its contents. Furthermore, the cottages

do not appear on the 6-inch or 25-inch OS maps. Consequently it can be assumed that the structures date sometime after 1913, likely in the first half of the 20th century. A standalone structure named 'The Old Coach House' may have once acted as a coach house for Ross's home on New Street, as it appears on the 1913 OS map. Additionally, an east/west running structure behind the coach house exhibits a number of alterations to its fabric across its surface. These are depicted from the 1913 OS map onwards, further suggesting that the structures in the area date to the twentieth century.

# Section 5 Archaeological Impact Assessment

## Archaeological potential

### *Discussion of archaeological heritage*

There are no recorded archaeological sites and monuments within the study area. The Malahide Historic Core Architectural Conservation Area conducted by Fingal County Council lists a number of features scheduled as protected structures and recorded monuments. These fall within the conservation area outlined in the report and include the following:

- RPS No. 387 Station Master's House
- RPS No. 388 Railway Station
- RPS No. 389 St Sylvester's RC Church
- RPS No. 390 St Sylvester's Well
- RPS No. 398-401 Killeen Terrace
- RPS No. 391-397 Castle Terrace
- RPS No. 408 Carnegie Library
- RPS No. 409-419 1-12 James' Terrace

No topographical files exist within the study area. However, this assessment has demonstrated that a number of archaeological finds uncovered in the surrounding landscape offer a detailed narrative of the history of north County Dublin's coastal areas. The majority of these files comprise prehistoric flint scatters gathered and presented to the museum during the second half of the twentieth century. The

substantial quantity of lithic artefacts uncovered across Fingal's coasts suggests a vibrant prehistoric presence. In addition, archaeological works at Seamount, Feltrim and Paddy's Hill have offered a glimpse into the strong historical continuity of Malahide's landscape.

The cartographic sources outlined in this report have shown that a number of subsurface structural remains are likely to exist below New Street's modern road surface. These relate to the occupation of the town which would have been centred around the junction at Old Street and Railway Avenue, with a focus on the holy well at its centre. Coal cellars are probably not present, based on the absence of any basements along the New Street properties.

### *Discussion of built heritage*

New Street contains a number of structures that are of cultural heritage significance. Spacious nineteenth century homes dominate the streetscape just south of the Diamond. These define much of the fabric of the street as they are presently used as retail outlets, with some still in use domestically. These are generally linked by their continuous slate roofing, rendered walls, arched door frames and fanlights. Two structures with bowed window frames further add to the historic appearance of

The archaeological receptors within the study area

Ref	Type	Significance	Presence Chance?	Survival Chance?
AR1	Pre-early medieval occupation layers	High	Moderate	Low
AR2	400-1550AD occupation layers	High	Moderate	Low
AR3	1550-1800AD structural foundations	High	High	High
AR4	19th century streetscape	High	High	High
AR5	Subsurface fountain foundation	High	High	High
AR6	Coal cellars	Moderate	Very low	High

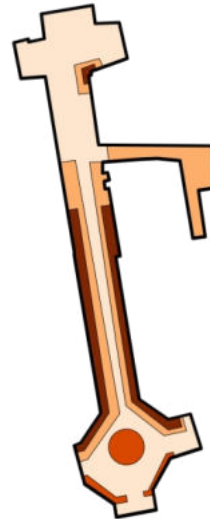


**APPENDIX E. Report for Screening for Environmental Impact Assessment by  
BMA Planning.**



### Archaeological Receptors

- AR1, 2, 3
- AR4
- AR5
- AR6



Zone map of the study area showing archaeological receptors

the street. In addition, a substantial red-brick on the western side of the street near the Diamond strikingly stands out when compared to the other built heritage on New Street. This was constructed for uses as a dispensary in 1817 and is tied in with the stylistically similar Carnegie Library, constructed in 1909 (McLoughlin 2008, 12).

Toward the north, a four-bay corner house at the junction of New Street and The Strand has timber sashes and an elliptical headed door opening. The home is simply decorated with eave brackets and corner quoins (FCC 2009, 28). This is the only structure in the south of the study area of significance.

## Archaeological receptors

### *Pre-early medieval occupation layers*

Previous excavations and topographical files within the wider landscape of Malahide have demonstrated that the northern coast of County Dublin has a rich history dating as far back as the Mesolithic. A concentration of pre-

historic activity in the area directly surrounding Malahide suggests the possible existence of occupation layers dating to these periods. Furthermore, the finds of an excavation Seamount portray a continuous stream of occupation in the area throughout prehistory, with evidence for planning around pre-existing monuments.

### *400-1550AD occupation layers*

St Sylvester's Well at the junction of Old Street and Railway Avenue has been used as a water source since at least 430AD (malahideheritage.ie 2020). The excavations at St Sylvester's Church (10E0426 & 11E0326) provided evidence for stone structural remains dating to the medieval period. A number of artefacts ranging from prehistoric to post-medieval were uncovered during these excavations. This may suggest that the existence of layers within the study area relating to these periods of occupation.

### *1550-1800AD structural foundations*

In section 3 of this report Rocque's 1760 map was analysed in order to establish the presence of structures in the area of New Street prior to its construction. The study area was overlaid



onto the map which suggested that a number of structures predating New Street may exist as subsurface structural foundations beneath the modern street. In addition, toward the end of the period the focal point of the town was shifted eastward to the present location of the Diamond. Structures and other features relating to the alteration of the street layout may also be present.

### *19th century streetscape*

The nineteenth century structures still present on New Street give the area a distinctive historic appearance. The built heritage of New Street resides primarily on its southern side, near the junction with the Diamond. These include a number of nineteenth century homes, the two extant structures at the Diamond, the dispensary and an outbuilding.

Street furniture is a common feature at several locations in Malahide town. These include two

post-boxes at the Mall, a gas lamp standard and water hydrant on Old Street, and a gas lamp standard, decorative bootscraper and balcony on James' Terrace.

At several points along New Street the historic kerbing survives in situ. The kerbstones form part of Malahide's historic paving and are also found on Old Street, Church Street and at the Diamond. The Malahide Historic Core Architectural Conservation Area document outlines that if 'works require temporary lifting or removal of paving material, paving units must be properly recorded, carefully removed & stored and reset following best conservation practice'. Historic photography depicts footpaths with limestone kerbs and cobbled drains (p. 39).

Two areas with nineteenth century garden layers may exist across the study area. The four structures at the Diamond are shown as once

The footpaths along Carlisle Terrace, c. 1900 - from Malahide Historic Society Facebook page



owning gated gardens at their entrances. The area of Ross Cottages is also shown to have once been occupied with gardens associated with the nineteenth century homes on New Street. There is a possibility that both these areas retain their garden layers at a subsurface level.

### *Subsurface fountain foundation*

The fountain that once existed at the centre of the Diamond formed part of the fabric of the 19th century streetscape of Malahide. It is present in Rocque's map in addition to the first edition OS map (1837). It was removed at some point in the late 19th century as it does not appear on photography or maps dating past 1900.

### *Coal cellars*

As part of this assessment the possibility for the presence of coal cellars was examined. This is considered unlikely due to the absence of basements in the surviving New Street properties.

A photo of Malahide dating from 1865-1914, depicting the coal yard adjacent to the estuary







Plan courtesy of DFLA, Fc. 03-DR-2001

## Impact assessment

The New Street Public Realm Landscape Plan by DFLA has been examined. The proposed engineering drawings by Punch Consulting Engineers and Axiseng Consulting Engineers have also been incorporated into the impact assessment.

Repaving of the street and realignment of historic kerbs is likely to require some level of excavation to create a sub-base of hardcore and concrete, which will have a moderate impact. Similarly, while planting areas for grass and flowers, foundations for dining tables, public seating, bins, cycle stands, and similar infrastructure are designed to require a depth of 250mm to 300mm, in practise a sub-base will probably require a deeper excavation.

The design intent for the new lighting scheme is based on placing lights on existing buildings, rather than the erection of new lighting poles, which significantly reduces the archaeological impact of the proposals, though ducting will still be required and this is likely to have a moderate impact. These proposed public lighting shall be controlled via PECUs through a 7-pin NEMA socket as per Fingal County Council Public Lighting Specifications. The locations of these are outlined in the plan presented on the following page.

Two levels of subsurface impact are set out below.

### *Moderate impact*

Moderate impacts involve excavation works of c. 400-600mm below the existing ground level. This will go through the modern street surface and modern sub base, and in some cases may impact on underlying archaeological deposits if these are present.

Moderate impact areas include repaving and realignment of existing paving, planting areas for grass, flowers, hedges and shrubs, and foundations for dining tables, public seating, bins, cycle stands, and similar infrastructure. The proposed new water feature and water services upgrade, which comprises a central drain running underground down the centre of

New Street, is also categorised as a moderate impact, though the depth subsurface work required has not been defined at this stage. Rerouted ESB, telecom and gas services will also require trenches of between 450mm and 600mm depth, but the locations of these is currently undefined. Any ducting for street lighting will also have a moderate impact.

### *Deep impact*

Deep impacts involve excavation works of 1m to 1.5m below the existing ground level. This covers planting areas for trees and the foundations of six proposed telescopic vehicle bollards.

## Mitigation measures

Areas that have a moderate or deep sub-surface impact, which effectively covers the entirety of the New Street proposal groundworks, should be archaeologically monitored under license from the NMS. In the event that archaeological material is identified, the archaeologist should halt the groundworks in that zone, assess the archaeological deposits, and revert to the NMS and Fingal County Council regarding the next step.





Plan courtesy of Axiseng Consulting Engineers, NSM-X-X-DR-AXE-EE-60103

# Bibliography

- Byrne, F.J. 1973. *Irish Kings and High Kings*, London.
- Cooney, G. 2000. *Landscapes of Neolithic Ireland*, London.
- D'Alton, E.A. *History of Ireland: from the earliest times to present day*, 6 volumes, The Gresham Publishing Company: Dublin.
- Bradley, J., Fletcher, A.J. & Simms, A. (2009) *Dublin in the Medieval World: Studies in Honour of Howard E. Clarke*, Four Courts Press: Dublin.
- Greene, R. (2012) *Old Malahide*, Fingal County Libraries: Dublin.
- Halliday, S. 2005. 'Preliminary Excavation Report for Montgorry Site A, County Dublin', Unpublished report, Arch-Tech Ltd.
- Hartnett, P.J., Eogan, G. & Jackson, J.S. (1964) 'Feltrim Hill, Co. Dublin; a Neolithic and Early Christian Site', *The Journal of the Royal Society of Antiquaries of Ireland*, 94(1), pp. 1-37.
- Hurley, L. & McLoughlin, R. (2008) *Slane Village Architectural Conservation Area Character Appraisal*, Meath County Council.
- Keeling, D., Keeley, V., Cooney, G. & Farley, E. (1994) 'Excavation of a Flint Scatter on Paddy's Hill (Robswalls), Malahide, County Dublin', *Proceedings of the Royal Irish Academy: Archaeology, Culture, History Literature*, 94C (1), pp. 1-23.
- Lewis, S. 1837. *A topographical dictionary of Ireland comprising the several counties, cities*. New York, 1970 facsimile reprint of 1837 edition.
- Little, G.A. (1948) 'About Malahide', *Dublin Historical Record*, 10 (1), pp. 1-16.
- Macartney, J. & Crawford, A. (1817) Letter for the opening of the dispensary in Malahide.
- McMahon, M. (2011) *Fingal Industrial Heritage Survey: Phase 1 - Desktop Survey*, Fingal County Council.
- McQuade, M. (2012) *Excavations at Malahide Parish Centre, St Sylvester's Church, Malahide, Co. Dublin*, Archaeological Report.
- Moryson, F. *The Description of Ireland*, translated by Hughes, C. (2014), University College Cork: Ireland.
- Ó Danachair, C. (1958) 'The holy wells of county Dublin', *Reportorium Novum*, 2, pp. 68-87.
- O'Donnell, E.E. (2008) *The Annals of Dublin: Photographs from the Father Browne Collection*, Currach Press: Dublin.
- O' Reilly, P.J. (1910) 'The Dedications of the Well and Church at Malahide', *The Journal of the Royal Society of Antiquaries of Ireland*, 40 (2), pp. 147-165.
- Railscot (2007) 'Malahide Station', Railscot - Irish Railways.
- Reid, P., Farrelly, A. & McAleese, M. (2017) *Fingal Development Plan 2017-2023*, Fingal County Council.
- Simms, A. & Fagan, P. (1992) 'Villages in County Dublin', In: Aalen, F.H.A. & Whelan, K. (eds.) *Dublin City and County: From Prehistory to Present*, Dublin.
- Swift, C. (2004) 'St Patrick and the earliest evidence for local church organisation in Ireland', In: MacShamhráin, A. (ed.) *The Island of St Patrick*, pp. 61-78, Four Courts Press: Dublin.
- Veach, C. (2010) 'King and magnate in medieval



Ireland: Walter de Lacy, King Richard and King John, *Irish Historical Studies*, 34 (179), pp. 179-202.

### **Websites**

Dublin Coal Holes - <https://www.thelocals.ie/features/dublin-coal-holes>

St Sylvester's Holy Well - <https://pilgrim-agemedievalireland.com/2015/12/31/st-sylvesters-holy-well-at-malahide/>

Old Yellow Walls - <https://oldyellowwalls.org/why-yellow-walls/>

Malahide Heritage - <https://www.malahideheritage.ie/The-Village.php>

Malahide Name - <https://www.logainm.ie/en/865>

Malahide Castle - [https://en.wikipedia.org/wiki/Malahide\\_Castle#/media/File:Malahide\\_Castle,\\_March\\_2011\\_\(2\).jpg](https://en.wikipedia.org/wiki/Malahide_Castle#/media/File:Malahide_Castle,_March_2011_(2).jpg)

Malahide Hardware Stores Ltd - <https://www.solocheck.ie/Irish-Company/Malahide-Hardware-Stores-Limited-29286>

Gallica chart of the Bay of Dublin and sea coast - <https://gallica.bnf.fr/ark:/12148/b-tv1b53010900x/f3.item.r=dublin.zoom>

### **NIAH**

Lamp Stardard - <https://www.buildingsofireland.ie/buildings-search/building/11344035/new-street-malahide-malahide>

Malahide Castle - <https://www.buildingsofireland.ie/buildings-search/building/11344019/malahide-castle-fingal>

Malahide Railway Station - <https://www.buildingsofireland.ie/buildings-search/building/11344008/malahide-railway-station-dublin-road-malahide-malahide>

Malahide Railway Station Master's House - <https://www.buildingsofireland.ie/buildings-search/building/11344007/malahide-railway->

[dublin-road-malahide-malahide](#)

Post box - <https://www.buildingsofireland.ie/buildings-search/building/11344036/the-mall-malahide-malahide>

Railway Bridge - <https://www.buildingsofireland.ie/buildings-search/building/11344015/malahide-railway-station-the-strand-malahide-malahide>

Signal Box - <https://www.buildingsofireland.ie/buildings-search/building/11344009/malahide-railway-station-dublin-road-malahide-malahide>

### **Excavations**

01E0421 - <http://excavations.ie/report/2001/Dublin/0006390/>

02E1719 - <https://excavations.ie/report/2002/Dublin/0007945/>

02E0298 - <https://excavations.ie/report/2002/Dublin/0007811/>

04E1066 - <https://excavations.ie/report/2004/Dublin/0011630/>

10E0426 - <http://excavations.ie/report/2010/Dublin/0021491/>

11E0326 - <http://excavations.ie/report/2012/Dublin/0023182/>

E4381 - <http://excavations.ie/report/2011/Dublin/0022306/>

### **Topographical files**

Bronze lid 1984:146 - [https://heritagemaps.ie/documents/NMI\\_TopographicalFiles/IA-153-1984\\_1984-146.pdf](https://heritagemaps.ie/documents/NMI_TopographicalFiles/IA-153-1984_1984-146.pdf)

Flint scraper 1966:42 - [https://heritagemaps.ie/documents/NMI\\_TopographicalFiles/IA-93-1966\\_1966-42.pdf](https://heritagemaps.ie/documents/NMI_TopographicalFiles/IA-93-1966_1966-42.pdf)

Stone assemblage - 1968:84  
[https://heritagemaps.ie/documents/NMI\\_TopographicalFiles/1968-151-171.pdf](https://heritagemaps.ie/documents/NMI_TopographicalFiles/1968-151-171.pdf)

**APPENDIX C. Architectural Heritage Assessment by Coady Architects.**





COADY  
ARCHITECTS

**PUBLIC REALM IMPROVEMENTS FOR A PEDESTRIANISED NEW STREET.**

ARCHITECTURAL HERITAGE ASSESSMENT

Date: October 2022

Job ref: 2747



# 1 Conservation Report

## Table of Contents

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### Appendices

- A Photographic Study - New Street Elevations
- B Point Cloud Survey Drawings - New Street & The Diamond



Fig. 1: Aerial View - Malahide



**1**

**Introduction**

# 1 Conservation Report

## Introduction

Coady Architects are appointed as sub-consultant to DFLA to provide conservation input on the New Street Public Realm Project in Malahide, County Dublin, working in collaboration with Michael O'Boyle, Grade 1 Conservation Architect.

The scope area is located at the centre of Malahide Village. It begins at 'the Diamond' a crossroads where four of the town's most prominent routes, Church St. The Mall, Main St. and New Street meet. The red line boundary begins at the northern perimeter of The Diamond, travelling north along New Street and terminates at Strand St.

Fingal County Council's objectives for the project include the provision of a high quality public space with increased pedestrian flow and enhanced vibrancy which will add to the 'sense of place' and 'local distinctiveness' while responding to local challenges; and a design that highlights and emphasises existing heritage structures while providing a seamless transition with the newly upgraded Green, noting specifically:

*'an expertly designed public area that complements the Village Green and enhances the heart of Malahide for the benefit of residents, businesses and visitors alike.*

*The project is an opportunity to prioritise, upgrade and expand the public realm on New Street and to deliver an improved experience for all users while supporting and balancing the needs of the different users.'*

A conservation-led approach was adopted in the development of the proposed design, based on research and analysis of the individual buildings and the streetscape as a whole. We note the following:

1. A record all of the buildings on the street – a photographic survey has been completed alongside a point cloud survey. An inventory of all historical structures on the street will be provided, each record will include a description, photographic record, façade drawing and external inventory and its significance.
2. While there are no protected structures on New Street, the street is included within the Malahide Historic Core Architectural Conservation Area (ACA). The Statement of Character Report for the ACA references a number of architecturally significant buildings on the street, most notably the four-bay corner house at the intersection with The Strand, larger 19th century houses closer to The Diamond, some with shops at ground floor, with similarities of external appearance; and the red brick former Dispensary near The Diamond, which is noted as a building of distinction. Smyth's Pub is another prominent historical building. Other features of note include the intact granite kerbing along New Street. The contribution of these buildings and features is recognised and the proposed design seeks to support and enhance their contribution to the character of New Street and the ACA.
3. The terraced streetscape of New Street collectively has historical, architectural and social heritage value, contributing to the character of the street. Some buildings might also have individual significance.
4. An Architectural Heritage Impact Assessment has been prepared in liaison with DFLA to evaluate the impact of the proposed new public realm design in the context of historical buildings, and the interfaces between the new design and the buildings. An understanding of how the design responds to the context, the character of the new elements inserted into the existing historical fabric, the

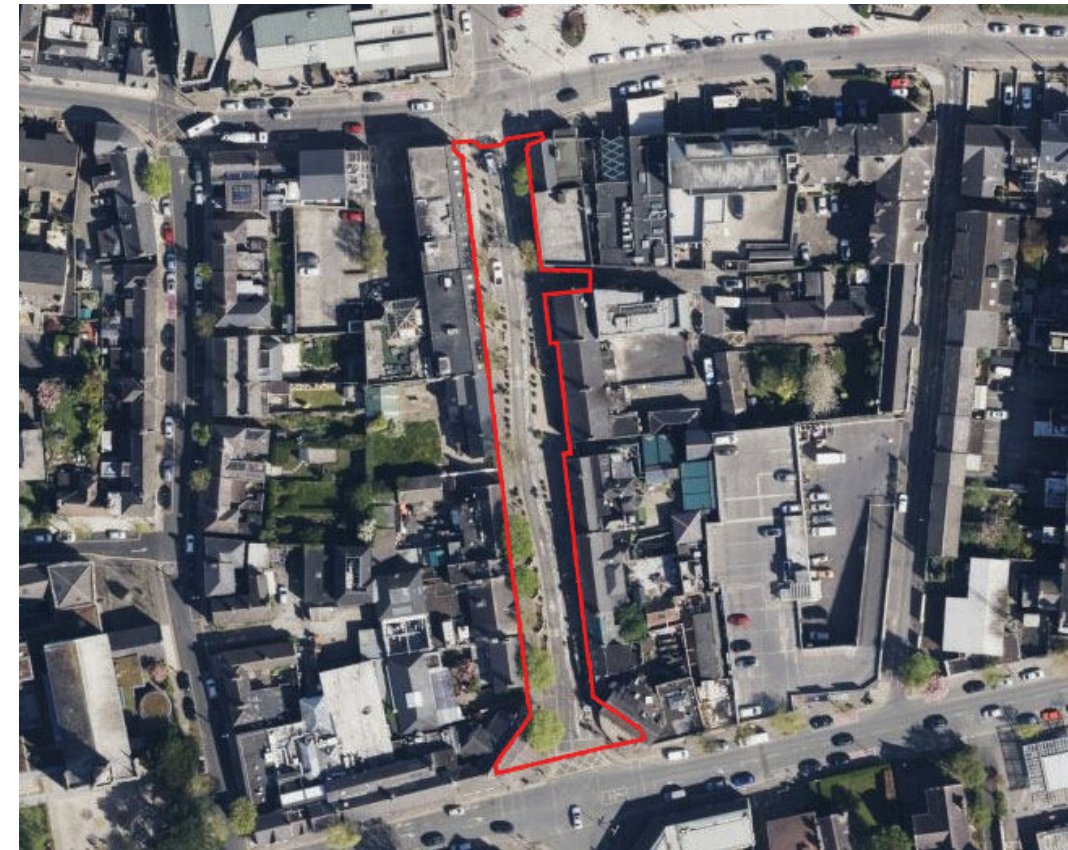


Fig. 2 - New Street Aerial

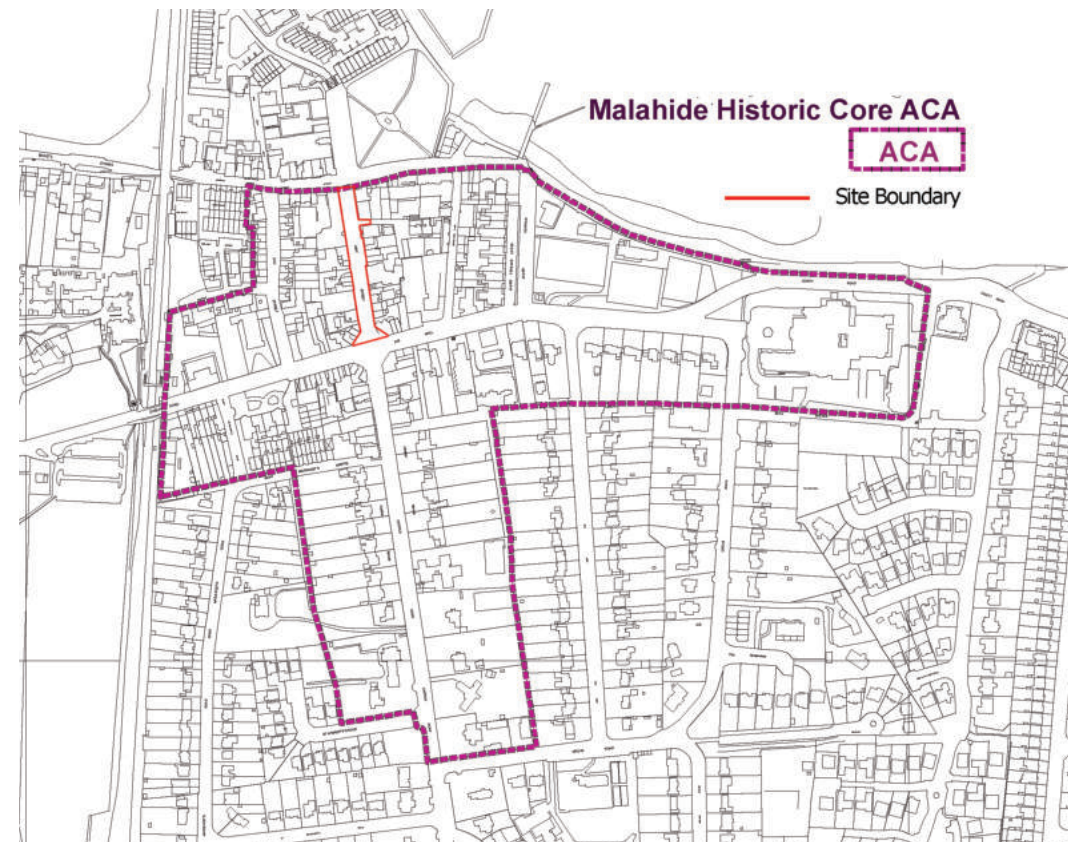


Fig. 3 - Malahide ACA - Fingal Development Plan 2017 - 2023



# 1 Conservation Report

Introduction

retention of granite kerbing, the use of materials and spaces and the extent to which proposed designed structures are reversible have been assessed as part of design collaboration to ensure the integrity of the street is maintained and enhanced.

In preparing this report, we have referred to historical records, the National Inventory of Architectural Heritage, Irish Architectural Archive, Fingal's Local Studies Office and Malahide's Historic Core Architectural Conservation Area - Statement of Character Report. A number of site visits took place during the period June 2022 - August 2022 to assess and record the existing structures. A Photographic Report of New Street accompanies this report. (Appendix A)



Fig. 4: Fingal Development Plan 2017 - 23

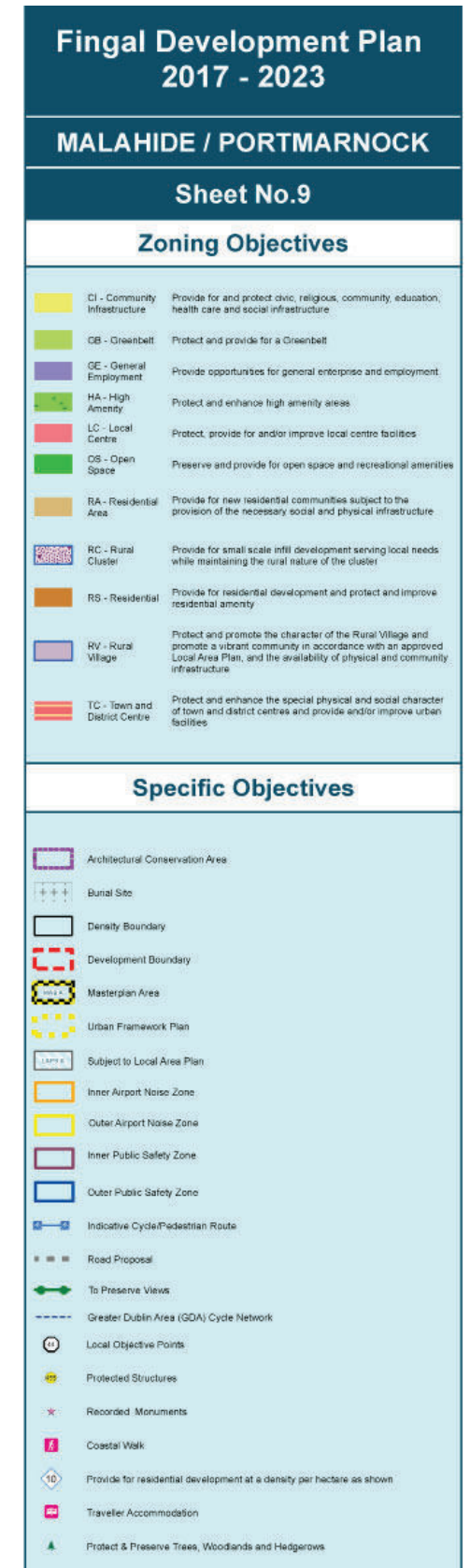


Fig. 5: Development Plan Key

# 2

History of Malahide



## 2 | Conservation Report

### History of Malahide

The town of Malahide is a coastal settlement located 14 kilometers north west of Dublin City. It's village centre has grown rapidly during the 19th and 20th centuries, as new industries and infrastructure have created a vibrant town with a population of over 17,000 in 2022. The modern name Malahide (Mullagh h-Ide) is thought to have derived from the Norman Invasion during the twelfth century. The town's name translates to "the sandmills of the Hydies, a Norman family from the Donabate area.

From the 12th century onwards, the town of Malahide developed around Talbot Castle. Among the invading Normans, was Sir Tichard de Talbot, a young knight who served King Henry II, in the invasion and was rewarded with a grant of lands around Malahide in 1185. The Talbots occupied the castle for the majority of eight hundred years, and had an extensive influence over the town's development during this period.

The royal land throughout Malahide was intensively tilled to supply cereals, vegetables and hay to the nearby Dublin markets. The ancient local townland name of Yellow Walls suggests that flax may also have been produced to supply a cottage linen spinning and weaving industry. The Talbot family sought to establish a large-scale weaving industry within Malahide, in order to lessen poverty levels in the area.

Although this cotton and linen enterprise had collapsed before the 19th century, this had led to an increase in the town's population and other trades within the locality. The Talbot's positive influence on Malahide continued into the first half of the 19th century. Becoming a trustee of the Malahide turnpike, established in 1786, Richard W. Talbot played an influential part in improving the road from Dublin to Malahide. At this time, the layout of the main approach road to Malahide was altered. The original route turned eastwards where Kinsaley Church now stands, traveling northwards along Kinsaley Lane up to and around Malahide Castle, then to Bridge Field and onto Old Street. The turnpike road follows the current route, northwards through Steamstown/ Mabestown past Old Street and commencing at a new village centre at The Diamond. (Fig.6)

The Diamond was laid out as the focal point of the town with a fountain at its centre, and three main roads, New Street, Church Road and the Dublin Road radiated from this central core. In 1792, Richard W. Talbot granted a lease for the first four houses that formed the present day Diamond. This newly formed town centre (including New Street) acted as a catalyst for subsequent development within the Village of Malahide.

With the arrival of the Dublin to Drogheda railway line in 1844, the village became a fashionable destination for day-trippers from the city. The town's reputation of a seaside resort increased with visitors from Ireland and Britain. Industries such as salt harvesting, a steam bakery, silk factory, saw milling and a gasworks were established during the 19th century. By the early-1900's many of these industries had begun to decline, with the exception of the gas works, which continued to expand throughout much of the 20th century.

The outward expansion of Dublin's suburbs from the 1960's onwards, triggered by improved car, bus and rail transport, led to a significant expansion of Malahide as a dormitory town. Although the town has experienced vast growth during the last 60 years, New Street and the Diamond remain as a strong focal point within the commercial and social centre of the town.



Fig. 6: Malahide to Dublin Road Layouts

3



New Street



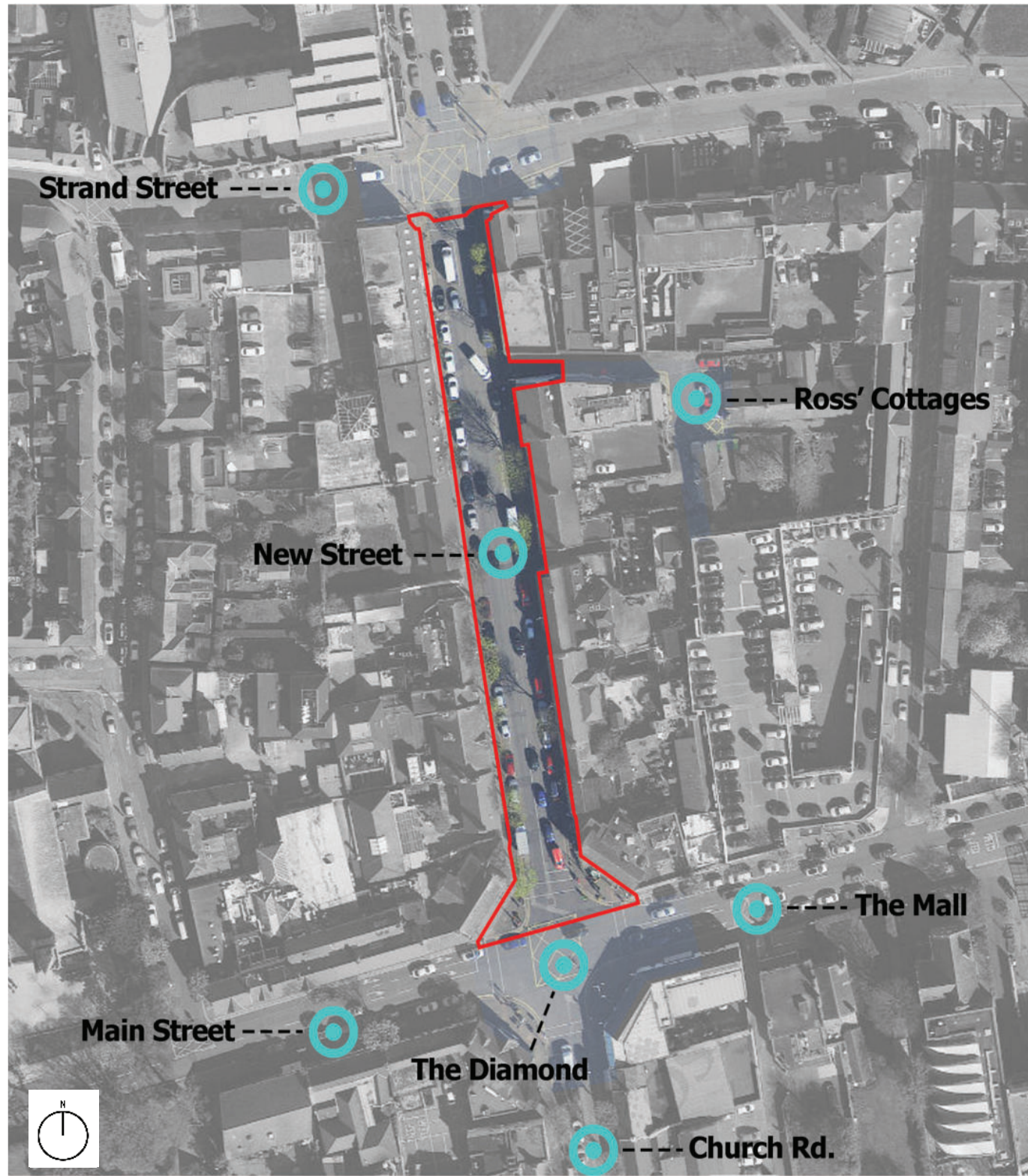


Fig. 7: New St & Diamond - Aerial View

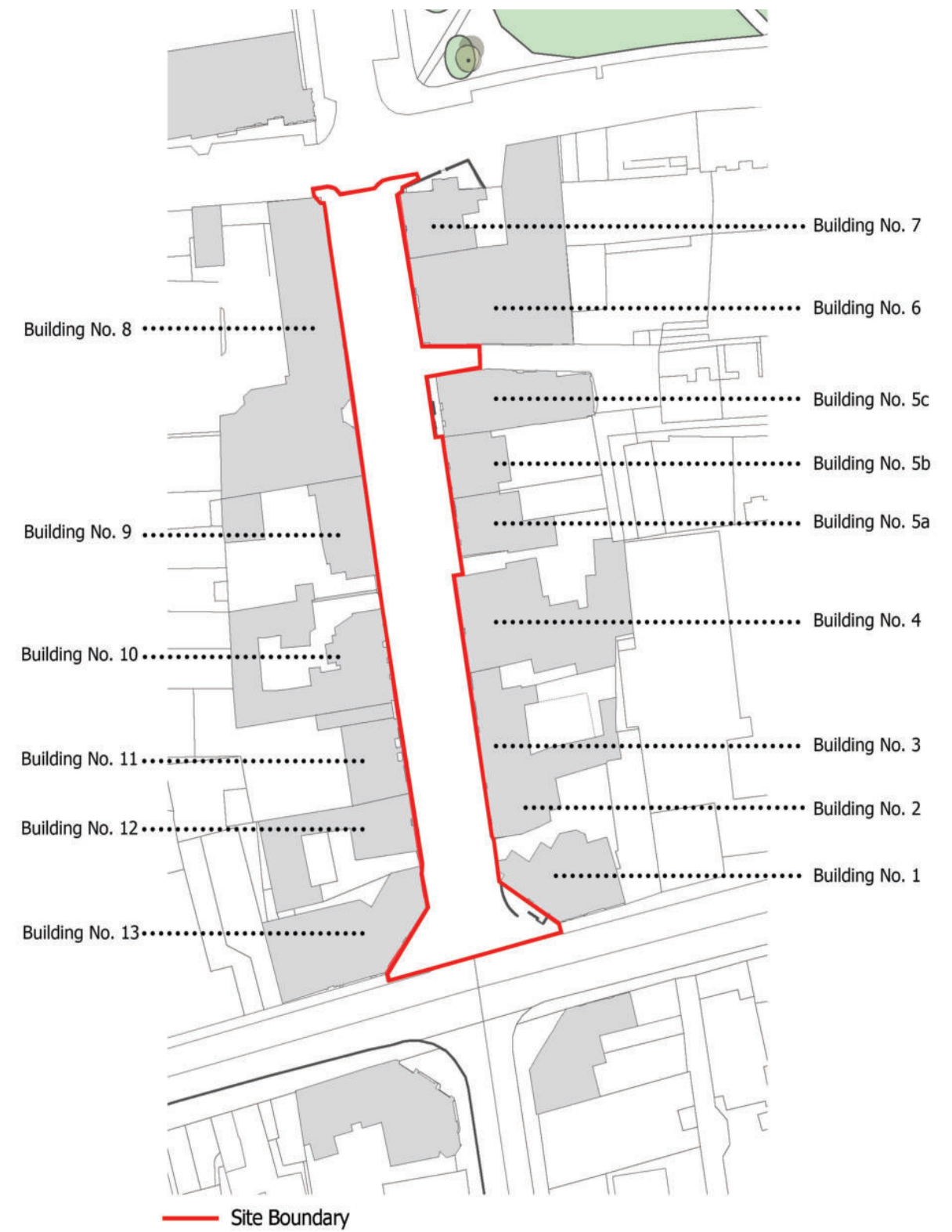


Fig. 8: New St & The Diamond - Building Numbering System



# 3

## Conservation Report

New Street



For consistency and ease of identification in this report and across all of the documents, a numbering system, has been implemented on New Street. Each individual building received a number regardless of its occupancy/use for commercial or residential purposes.

**Building No. 1** - Ulster Bank/Sale e Pepe Restaurant

**Building No. 2** - O'Farrell Deere

**Building No. 3** - Residential & Off Licence

**Building No. 4** - Gibney's Bar

**Building No. 5a** - Ladbrokes, Roseland Takeaway

**Building No. 5b** - Doyle's Seafood, Aileens Hair & Beauty

**Building No. 5c** - Il Sorriso Restaurant, Gilbert & Wright

**Building No. 6** - Donnybrook Fair

**Building No. 7** - Residential Dwelling

**Building No. 8** - New Street Mall

**Building No. 9** - Residential Dwelling

**Building No. 10** - Drums, Orchid Restauran, Al Fresco Restaurant

**Building No. 11** - Fowler's Pub

**Building No. 12** - Dispensary Building

**Building No. 13** - Dial-a-Cab, Bouchon Jewellers

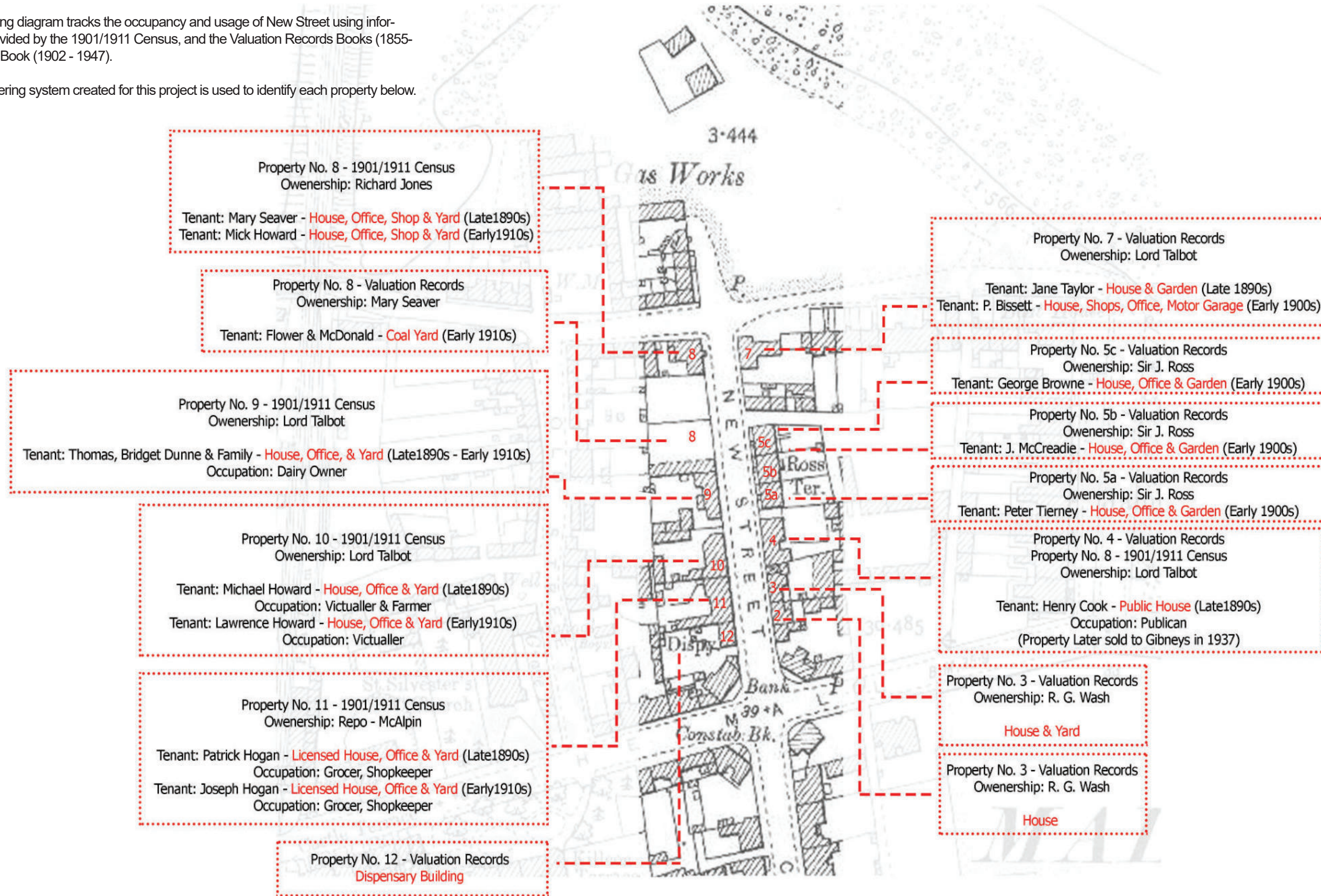


# 3 | Conservation Report

New Street

The following diagram tracks the occupancy and usage of New Street using information provided by the 1901/1911 Census, and the Valuation Records Books (1855-1902) and Book (1902 - 1947).

The numbering system created for this project is used to identify each property below.



# 4

Chronology of the Site & The Development of New Streets Building Footprint



# 4

## Conservation Report

### Chronology of the Site & Development of Building Footprint

The following mapping documents dating from 1760 to 2022 have been sourced from The Ordnance Survey Ireland online database, Fingal Local Studies Office, The Glucksman Map Library Trinity College Dublin, The Irish Architectural Archive and Fingal County Council. These archives can be used to track the growth and development of New Street and its context, through the 18th, 19th and 20th centuries. The occupancy and use of some of the historic structures on the street can also be studied, alongside the changes in building footprint seen in the area during this time.



Fig. 9: John Taylor Map of Malahide - 1816

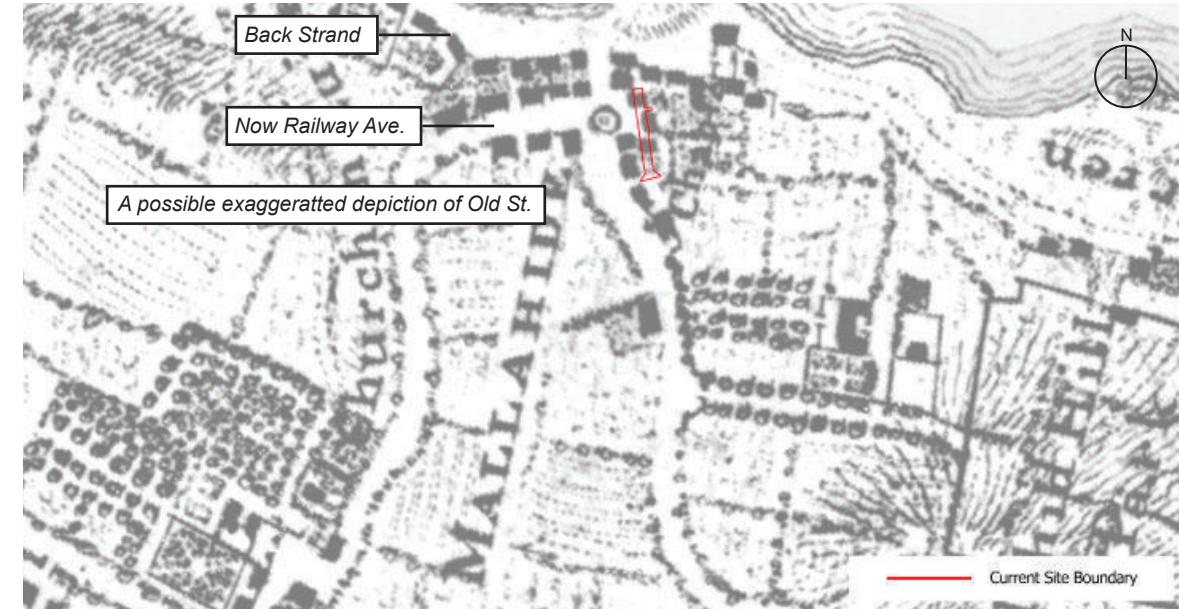
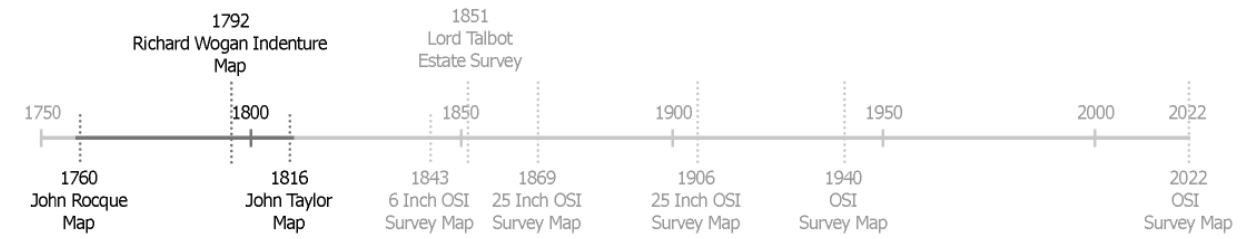


Fig. 10: John Rocque Map - 1760 (For Reference)

#### 1. 1760 John Rocque, Dublin County North East

This document (Fig.10) provides the earliest detailed record of the planning of Malahide Village. Throughout the 17th & 18th Century Malahide remained a small settlement centered on Old Street, Strand Street and the Back Strand. The majority of the town's social and commercial activity occurred on the junction of Old Street and Railway Avenue, the present location of St. Sylvester's Church, well and surrounding cottages. The Civil Survey of 1654 - 56 states:

*'In ye town of Malahide about 20 thatch houses, one sea water mill. Also a stone thatch house with two small thatch houses in possession of Thomas Jones. Also an orchard and garden with a fishing harbour and a conny warren.'* (Green 2012)

New Street, outlined in red on (Fig. 10) with the aid of geo-referencing, cannot be identified on this map. However, Rocque gives us a valuable insight into Malahide before the creation of New Street and The Diamond.

#### 2. 1816 John Taylors Map of Dublin & Environs

John Taylor's 1816 (Fig.9) map provides a first glimpse into the layout and plan of New Street, Malahide, following the formation of the Diamond, and is used as a starting point, to map the development of the street and its immediate context through the 19th and 20th centuries. The map identifies New Street, some buildings either side of the street, the Diamond and the coal yard to the north.



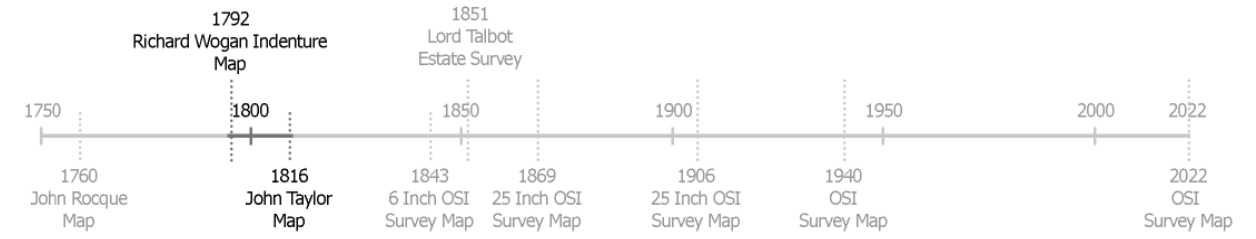


Fig. 11: John Taylor Map of Malahide - 1816

**Indenture, 1792 - Map of The Diamond, Malahide.**

Although John Taylor’s 1816 map provides an initial view of New Street and its context, an indenture dated 24 years earlier in 1792 (fig. 12) provides an early insight of The Diamond development, planned by the Talbot family. The legal document provided by Richard Wogan Talbot grants James Crawford twenty-four perches with ‘a House and Garden in the new street in the Town of Malahide’ for a term of seventy-one years at a yearly “Rent of Five pounds thirteen shillings and nine pence”.

The map which accompanies the indenture, shows an elevation of a two-story, five-bay slated house with a door at the centre and chimneys located on either gable. The property is located on the newfound intersection of ‘New Street to the Sea’ and ‘New Street to the Green’. (Greene 2012)

Diamond development is discussed in further detail, in Chapter 5 of this report.

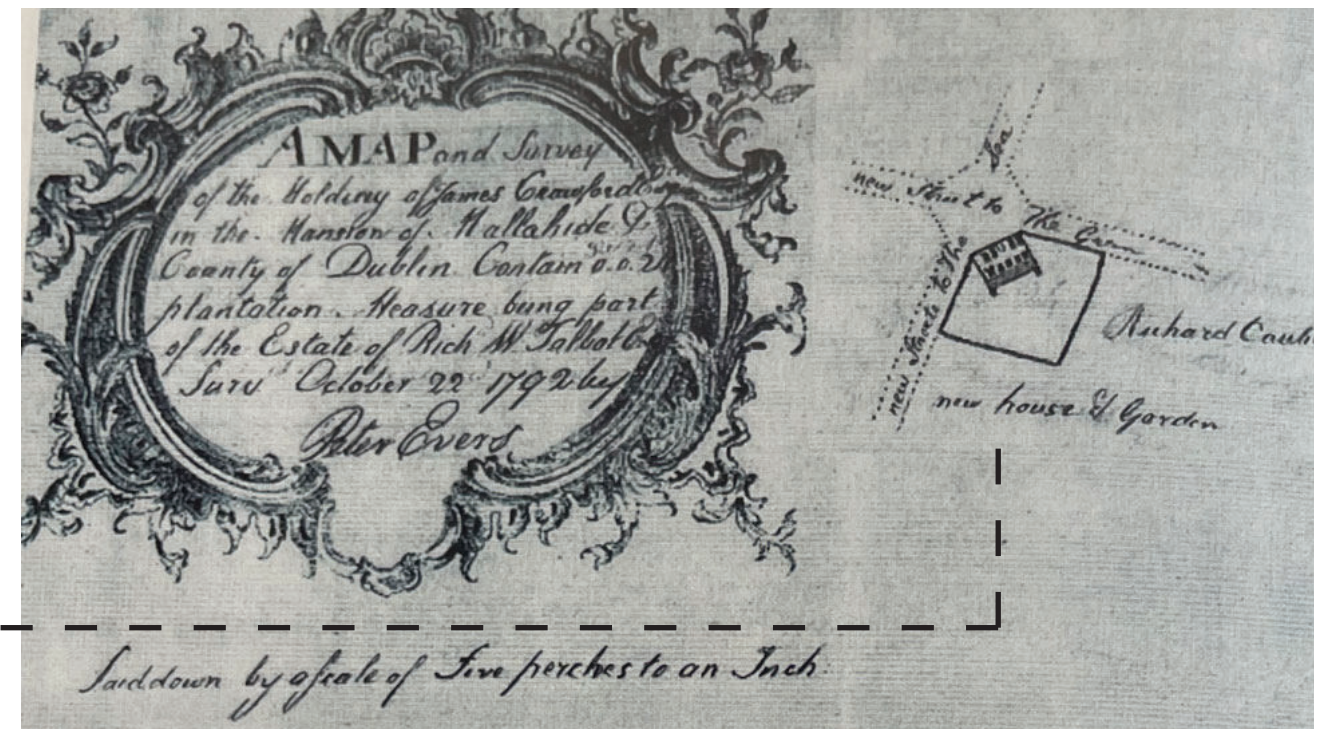


Fig. 12: Indenture, dated 1792, granting land with ‘a House and Garden in the new street in the Town of Malahide’ for a term of seventy-one years



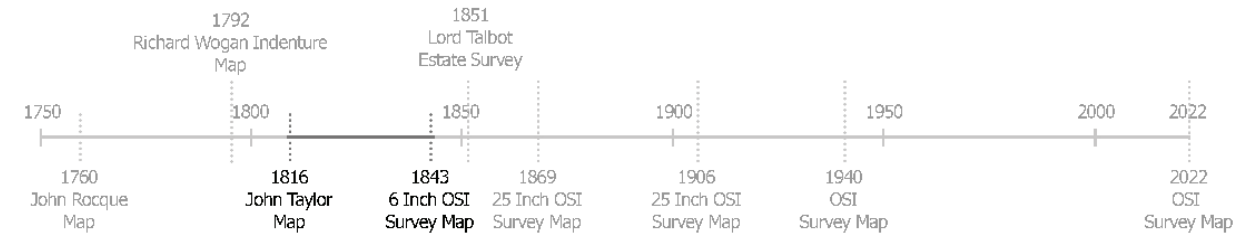


Fig. 13: John Taylor Map of Malahide - 1816 (For Reference)

2. 6 Inch Ordinance Survey Map 1829 - 43 Map

Between 1829 and 1842 Ordinance Survey Ireland completed the first ever large-scale survey of the entire country. Due to the fact The Grand Hotel and the Mall road from the Diamond does not appear on this document (Fig. 14), this would indicate that the map predates 1835, the year the hotel opened.

When this map is compared to John Taylor's 1816 drawing, it is clear there has been substantial development throughout New Street and its surrounding context. The reason for this expansion has often been accredited to the introduction of the Dublin to Drogheda railway line. (First planned in mid 1830s with works commencing 1840).

The form of the Diamond with a central water fountain can be seen alongside increased development along 'The Mall' /'Main Street'. Towards The Green, there is further development that defines New Street at this period in time. Construction to the rear of properties along the street is more apparent. The map also depicts possible demolition work to the area marked with a dotted red line on page 16 (Fig.15). Note, a 'police station' was also located within the Diamond on the 6 Inch Ordinance Survey Map 1829 - 43 Map.

The lane way to Ross' Cottages (marked in blue) is also beginning to form, creating potential for increased expansion to the east of New Street.

The early-nineteenth century evolution of the buildings and sites along New Street can be tracked by a comparison between the (1816) Taylor Map and the first edition Ordnance Survey map (see Fig. 15 & 16) on page 16.



Fig. 14: 6 inch OSI Survey Map - 1829 - 43 (Newly formed laneway indicated in blue)



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

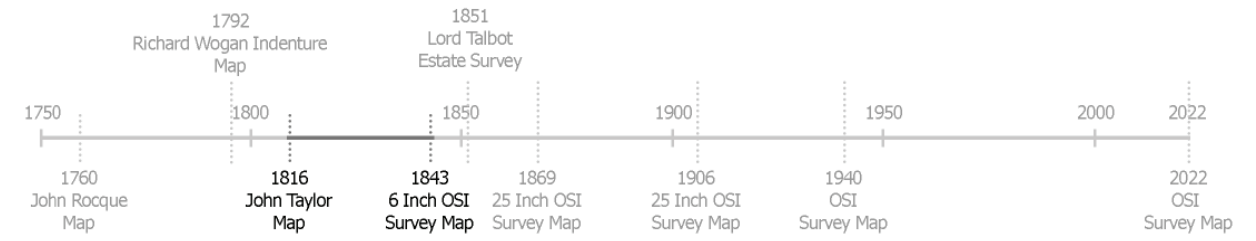


Fig. 15: John Taylor Map of Malahide - 1816

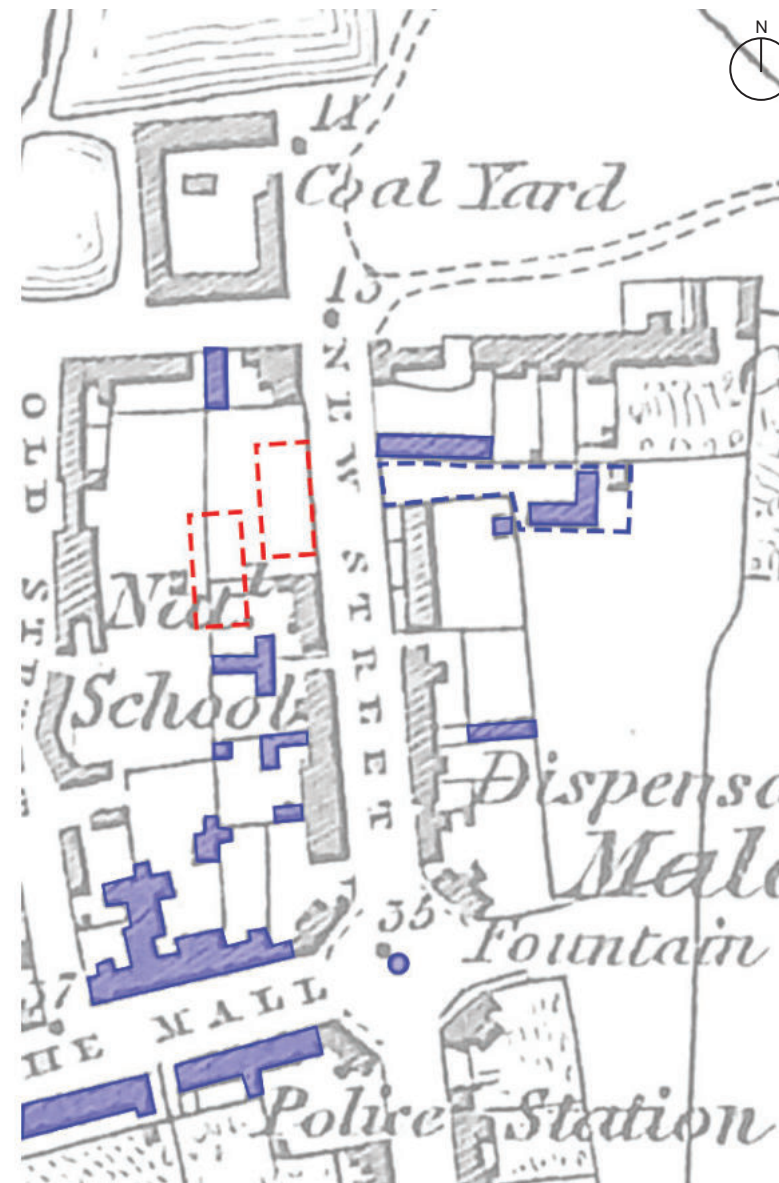


Fig. 16: 6 inch OSI Survey Map - 1829 - 43

### Alterations to Building Footprint:

- Potential demolition to structures to north - west of New Street. (Outlined in red dashed line).
- The early formation of Ross' Cottages (Dispensary Lane) can be seen.
- Development begins along Main Street towards Dublin - extending from The Diamond.
- The water fountain at the centre of The Diamond can now be seen.
- Out-housing and other structures to the rear of New Street properties can be seen forming, populating the lands to the rear of the properties.
- This map illustrates the consolidation and development of the plots to the rear of New Street and the Diamond in the period between the Taylor Map (1816) and the first edition Ordnance Survey map. In some cases, the buildings fronting onto New Street on the O.S. map may not necessarily be the same buildings that were shown on the earlier Taylor map.

- Further Development
- - - Apparent New Route Formed
- - - Potential Demolition of Building Footprint



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

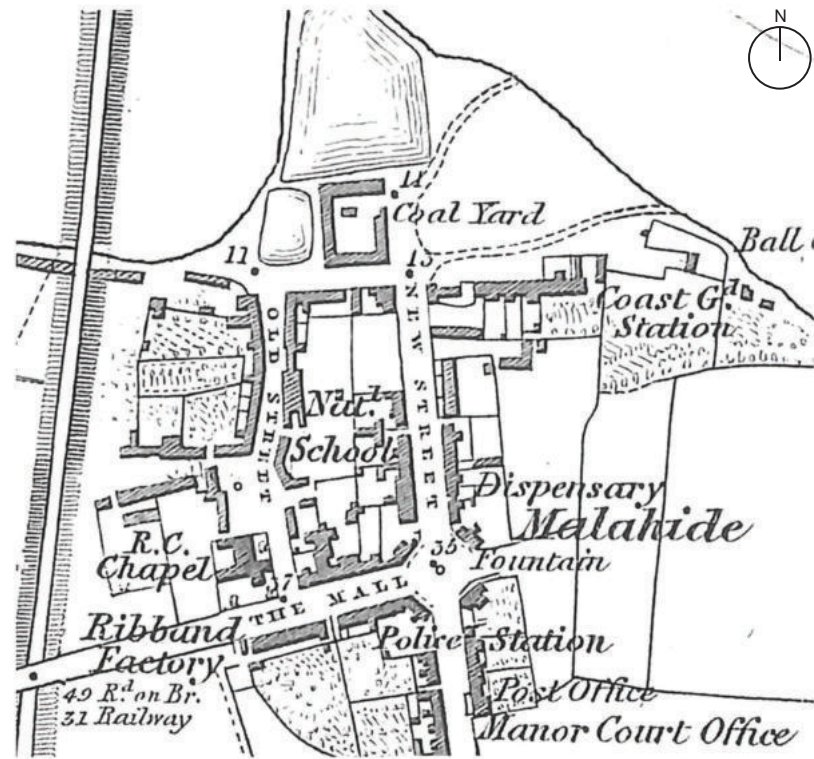
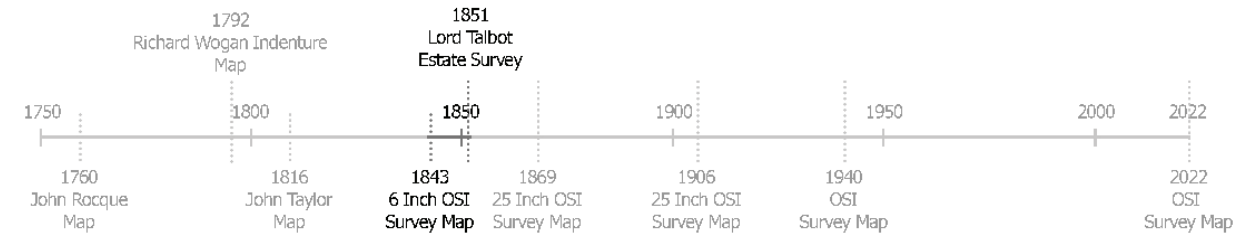


Fig. 17: OSI Survey Map - 1829- 43 (for reference)

### 3. 1851 Survey of Town & Lands of Malahide Co. Dublin. The Estate of the Right Honourable Lord Talbot of Malahide. (Fig. 18).

Halfway through the 19th century the development of the Malahide's new train station is visible on the 1851 map (See Fig. 18) 'The Mall' has now been extended eastwards from the Diamond, to allow for access to the Grand Hotel (constructed 1935). Due to the increase of horse and carriage transport along The Mall, the central fountain within the Diamond has been removed. (Green 2012).

Further development throughout the town continues, with the appearance of Townyard Lane and St. James Terrace, indicated in orange.

The dwellings of New Street remain similar to previous maps, however further accommodation to Ross' Cottages lane way can be seen. (Outlined in blue). Increased construction activity within the backlands between New Street and neighbouring Townyard Lane is evident.



Fig. 18: Survey of Town & lands of Malahide Co. Dublin. The Estate of the Right Honourable Lord Talbot of Malahide, 1851



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

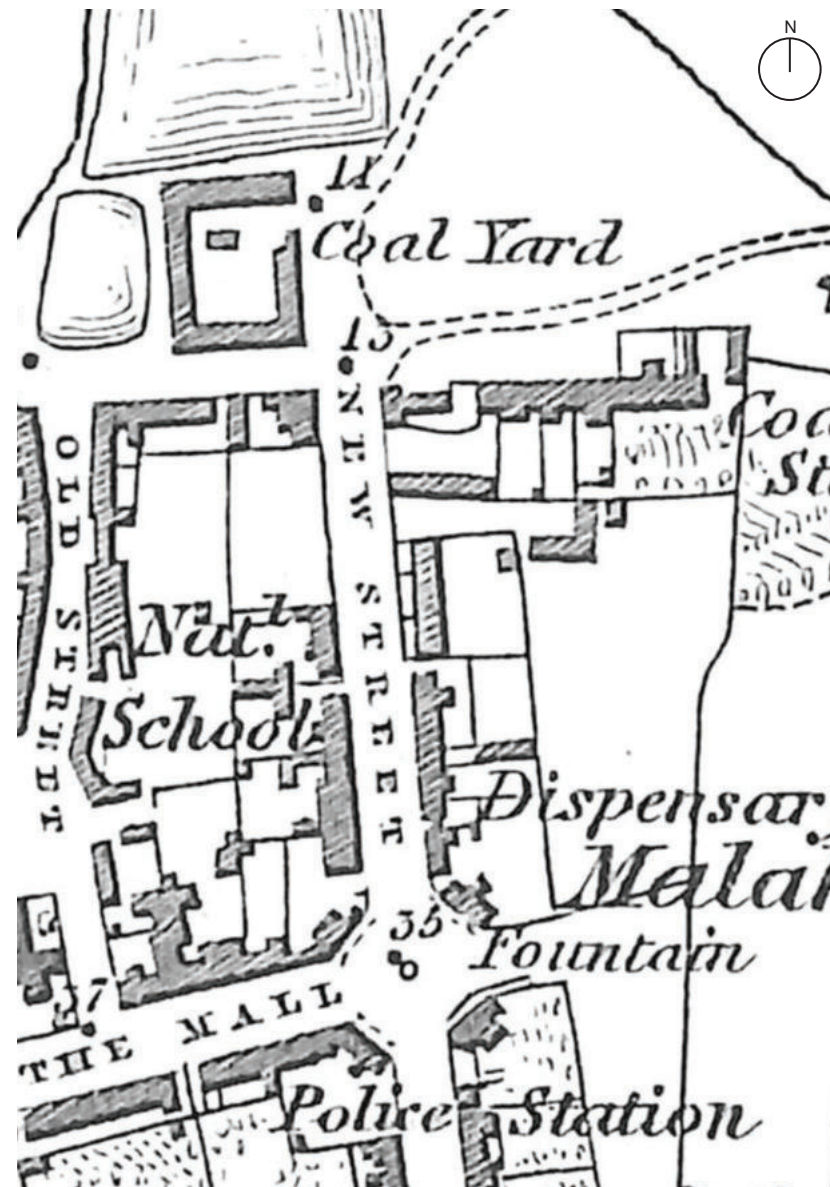
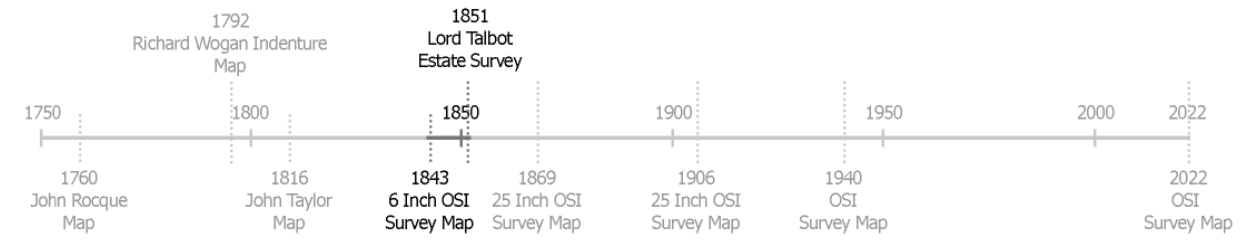





Fig. 19: OSI Survey Map - 1829



Fig. 20: Survey of Town & lands of Malahide Co. Dublin. The Estate of the Right Honourable Lord Talbot of Malahide, 1851

### Alterations to Building Footprint:

- Increased development at Dispensary Lane
- Large 'U-shaped' development south of Dispensary Lane. Use unknown.
- The extension of the Mall eastwards due to the opening of the Grand Hotel
- The removal of the fountain at the centre of The Diamond.
- Potential demolition of structures to rear of New Street properties.
- This map illustrates the consolidation and development of the plots to the rear of New Street and the Diamond in the period between the first edition Ordnance Survey map and the 1851 Talbot Estate Map. In some cases, the buildings fronting onto New Street on this later map may not necessarily be the same buildings that were shown on the earlier O.S. map.

-  Further Development
-  Apparent New Route Formed
-  Potential Demolition of Building Footprint



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

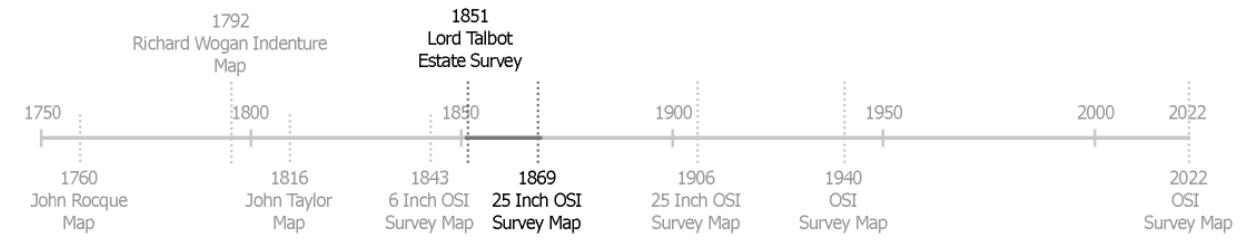


Fig. 21: 1851 Survey of Town & lands of Malahide Co. Dublin. The Estate of the Right Honourable Lord Talbot of Malahide.

### 4. 25 Inch Ordinance Survey Map 1869 (Fig. 22).

Further development is apparent within Malahide towards the end of the 19th century. South of the Diamond, Church St. is further framed by the inclusion of Carlisle and Windsor Terrace. The Post Office, previously indicated to be on Church St., now is referenced to be located on Main St. (The Mall).

Kerb lines are now indicated on the 1869 map along New Street's buildings. Although the structures along New Street remain similar to previous maps, some further building has taken place to the rear of these buildings.

An extension to the coal yard and gas works to the north of New Street is now evident.

The rapid development of Ross' Cottages seen through the previous maps has now subsided. The Dispensary building has been annotated within Ross Cottage's Lane way. Previously this has been indicated to the south of New Street, close to the Diamond. See 6 Inch Ordinance Survey Map 1829 - 43 Map. (Fig.14).

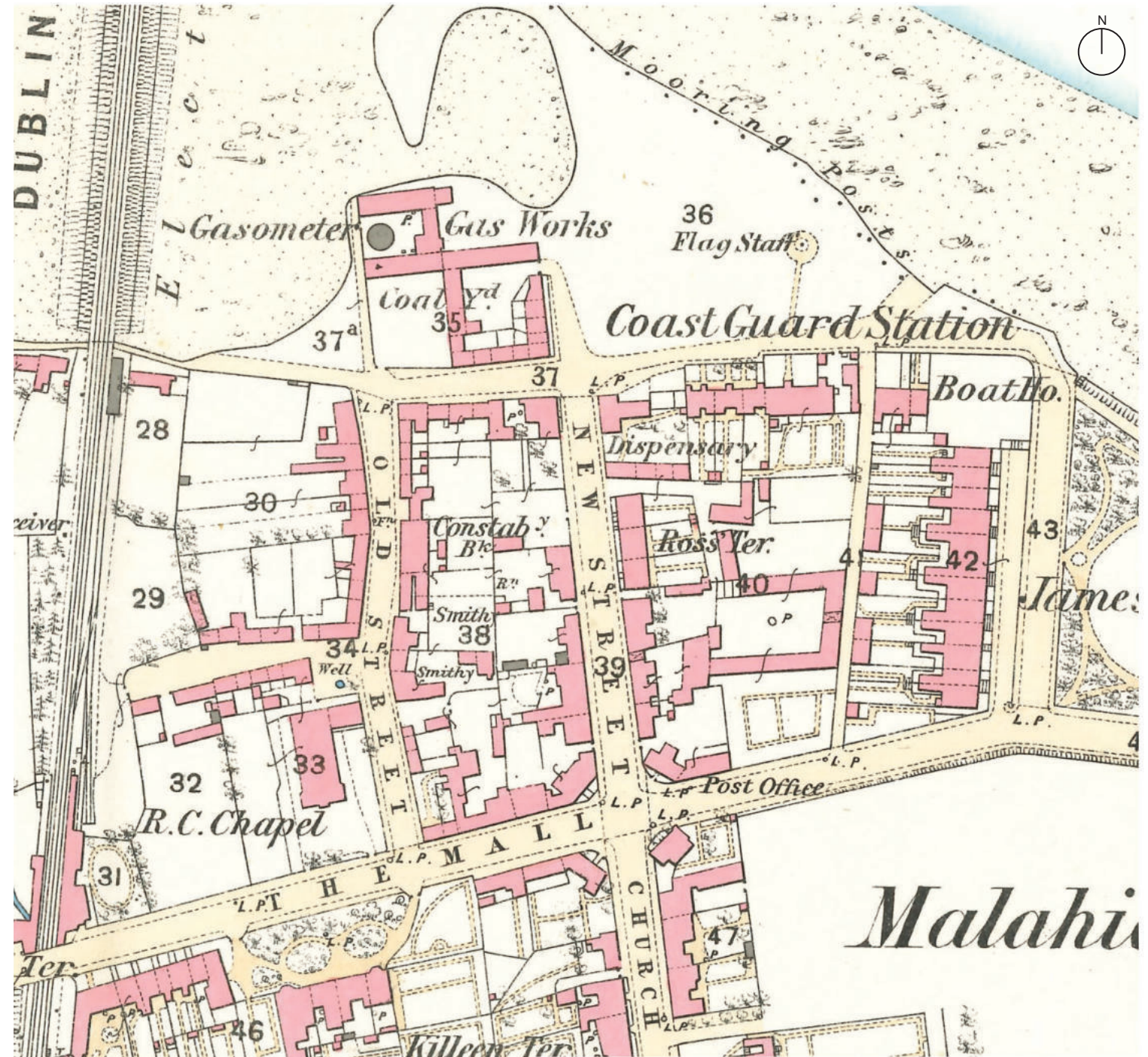


Fig. 22: 25 inch OSI Survey Map - 1869



# 4

## Conservation Report

### Chronology of the Site & Development of Building Footprint

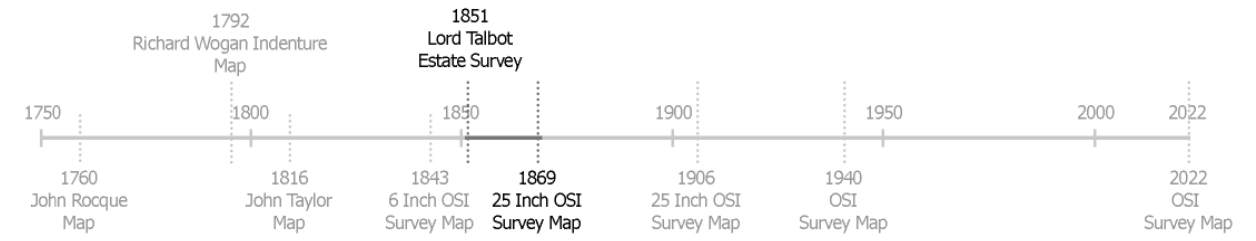


Fig. 23: 1851 Survey of Town & lands of Malahide Co. Dublin. The Estate of the Right Honourable Lord Talbot of Malahide.

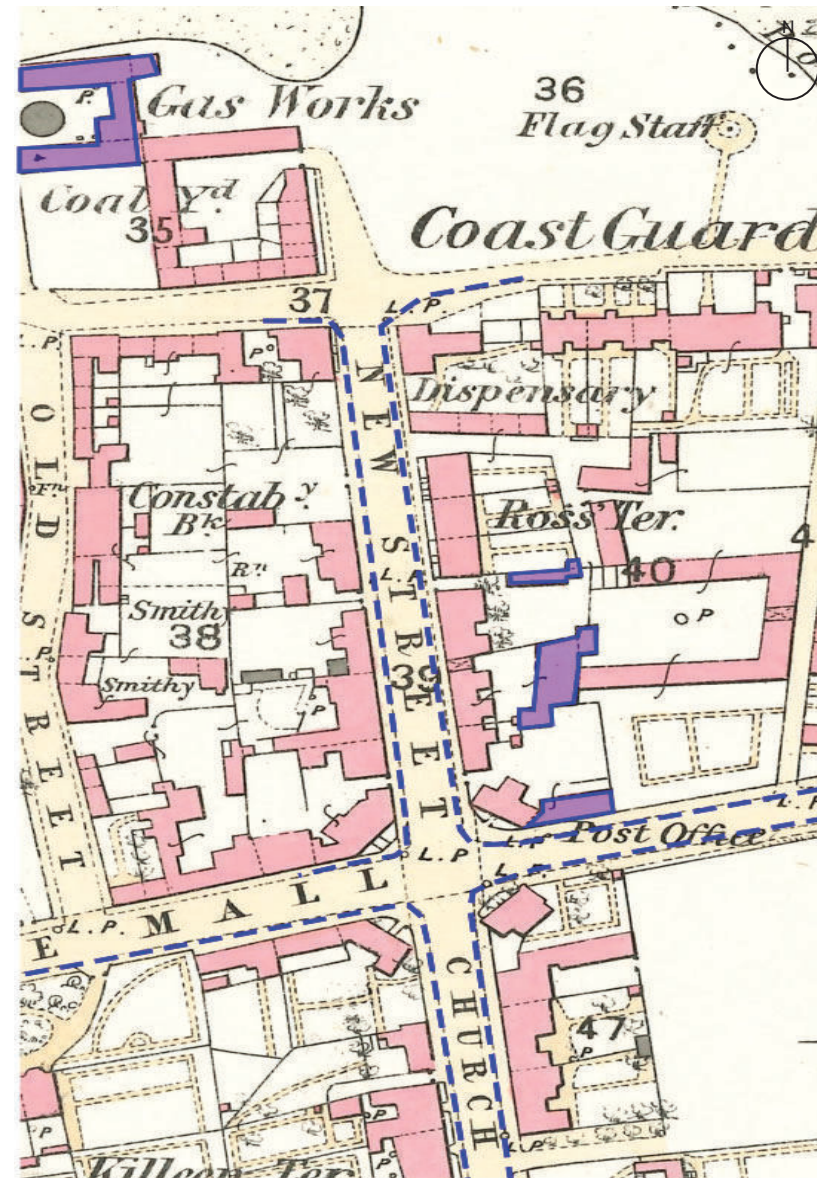


Fig. 24: 25 inch OSI Survey Map - 1869

#### Alterations to Building Footprint:

- Extension to coal and gas works to the north of New Street.
- First indication of pedestrian footpaths to street.
- First apparent building can be seen on the extension of the Mall road, towards The Grand Hotel. This has been indicated as a Post office.
- Development to rear of properties at New Street.

- Further Development
- Apparent New Route Formed
- Potential Demolition of Building Footprint



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

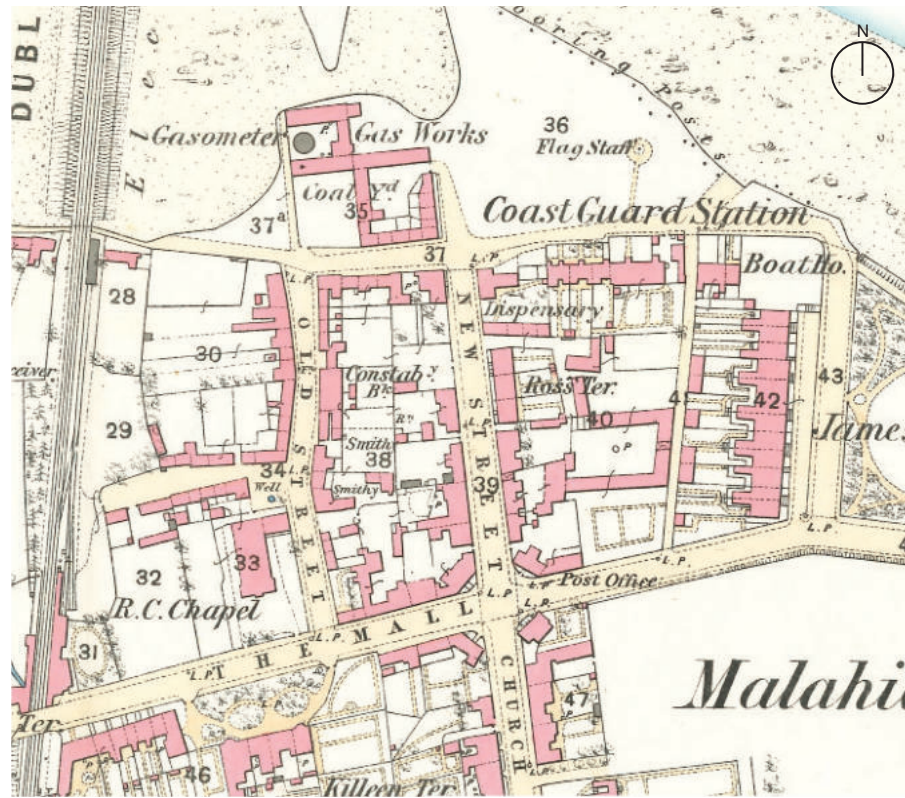
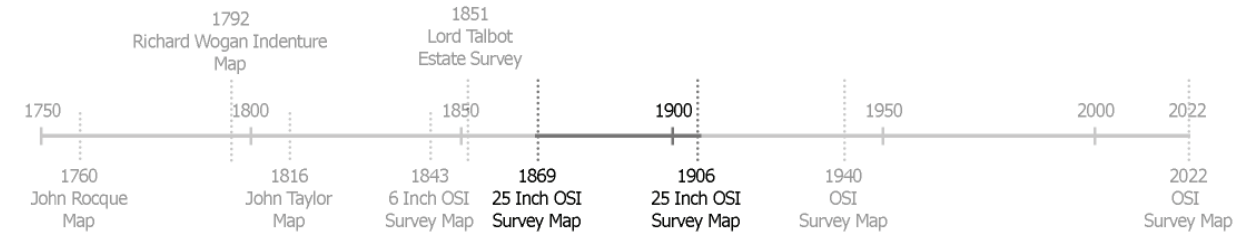


Fig. 25: 25 inch OSI Survey Map - 1869

### 5. 1906 25 Inch OSI Map (Pub. 1908) (Fig.26)

At the beginning of the 20th century, the industrial activities of gas and coal to the north of New Street continue to grow.

The lane way to Ross' Cottages seems to have undergone some demolition works, decreasing the building footprint between New Street and Townyard Lane.

The Dispensary Building is now located to the south-west of New Street. moving from Ross Cottages as seen in previous maps. A building within the Diamond is now referenced as a bank.

Also worth noticing, the Constabulary Block is located between New St. and Old St. on the previous map dated 1869. (Fig. 25). However, this institution is now referenced within the Diamond. A police station was previously indicated in this location on the 6 Inch map (1829 - 43) (Fig.14).

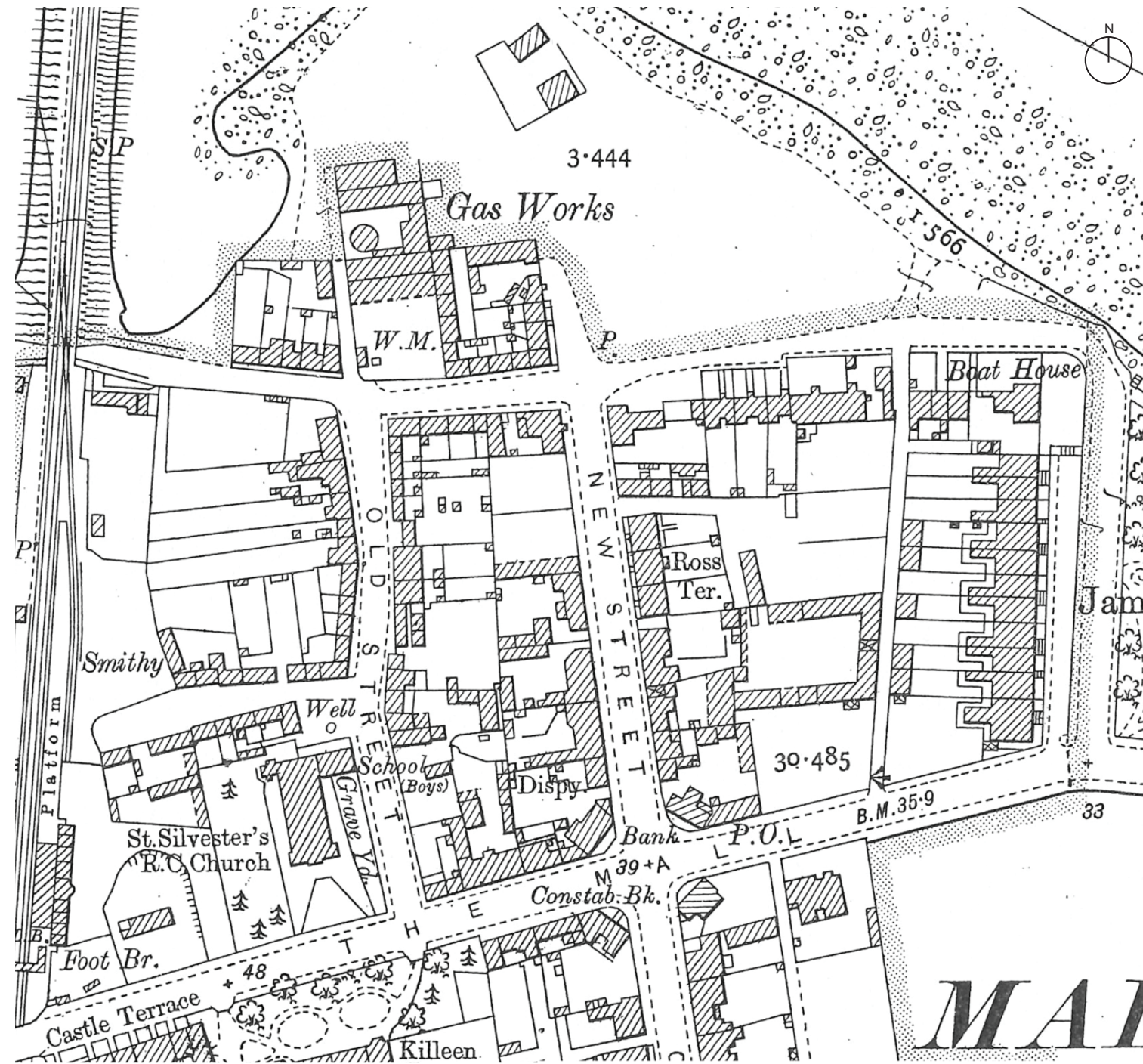


Fig. 26: 25 inch OSI Map - 1906



# 4

## Conservation Report

### Chronology of the Site & Development of Building Footprint

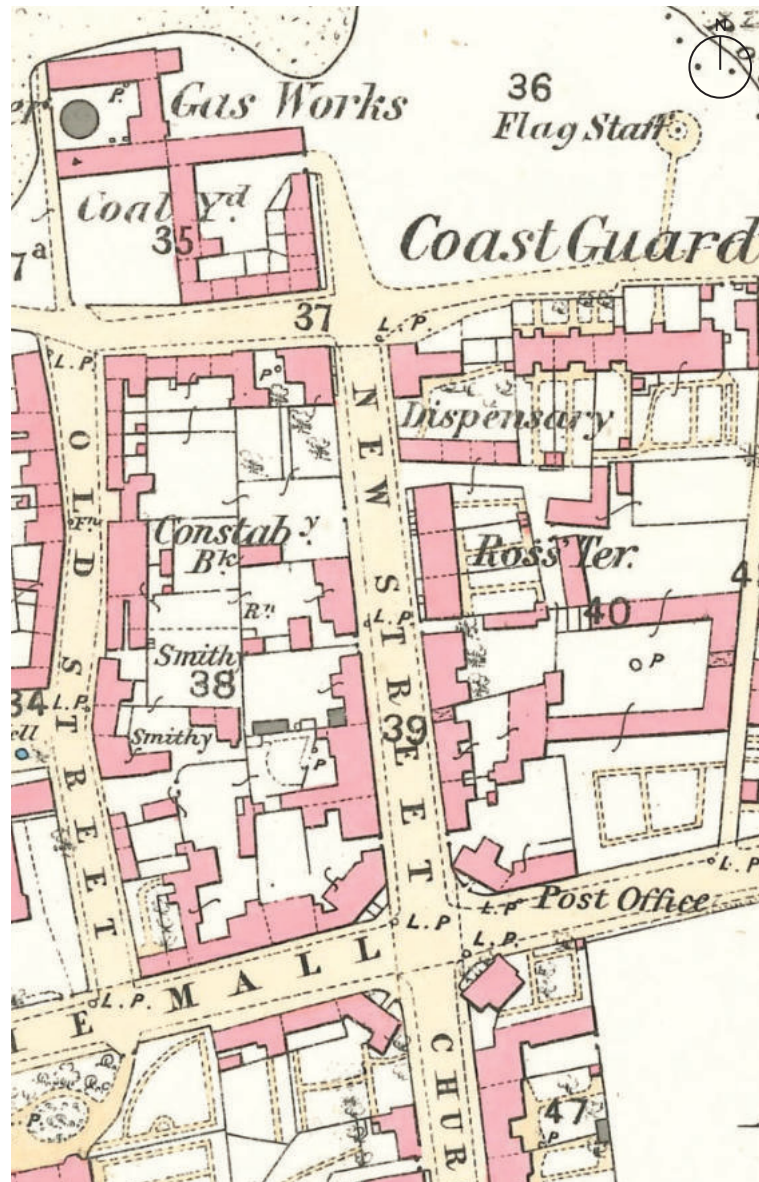
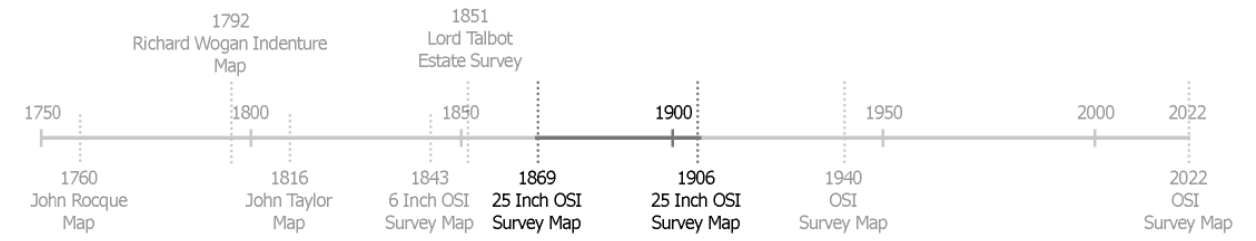


Fig. 27: 25 inch OSI Survey Map - 1869

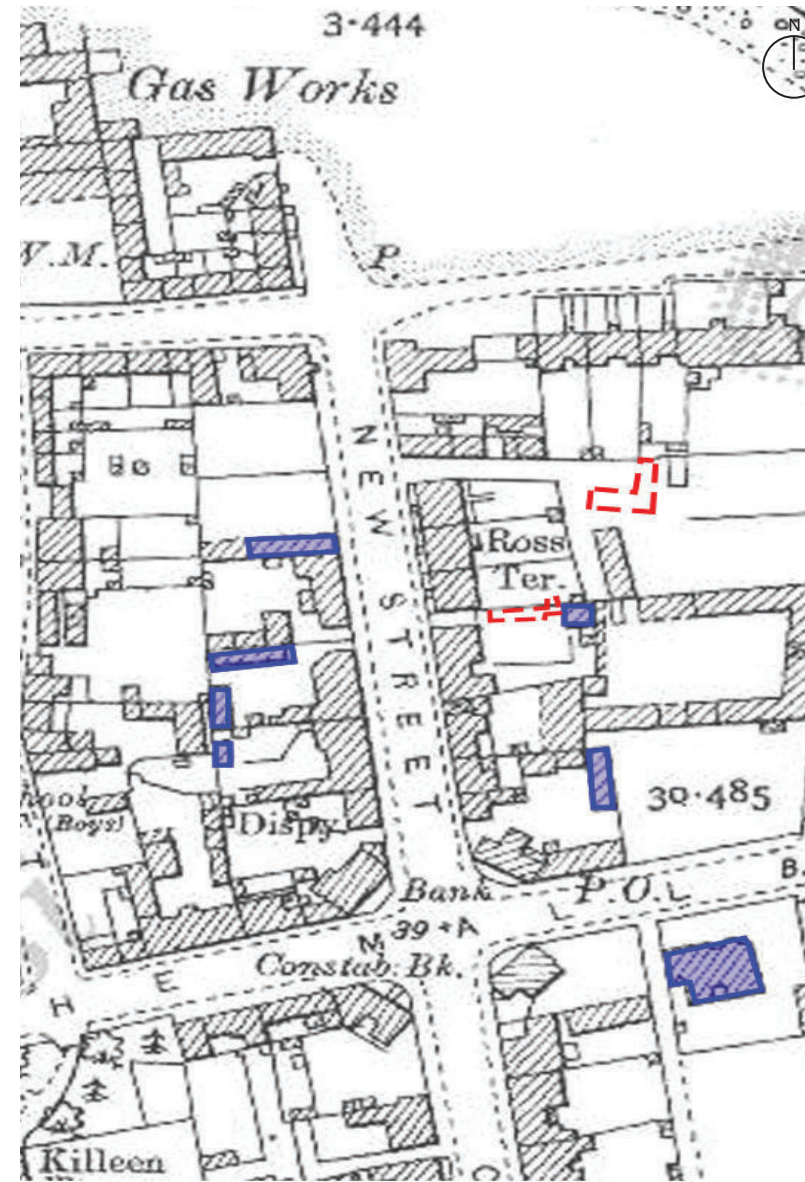


Fig. 28: 25 inch OSI Map - 1906

#### Alterations to Building Footprint:

- Development now evident on the extension of the Mall Road, towards The Grand Hotel.
- 1 minor instance of potential demolition to the rear of properties on New Street.
- Development to Ross' Cottages (Dispensary Lane) demolished.
- Further development can be seen throughout New Street to rear of properties.

- Further Development
- Apparent New Route Formed
- Potential Demolition of Building Footprint



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

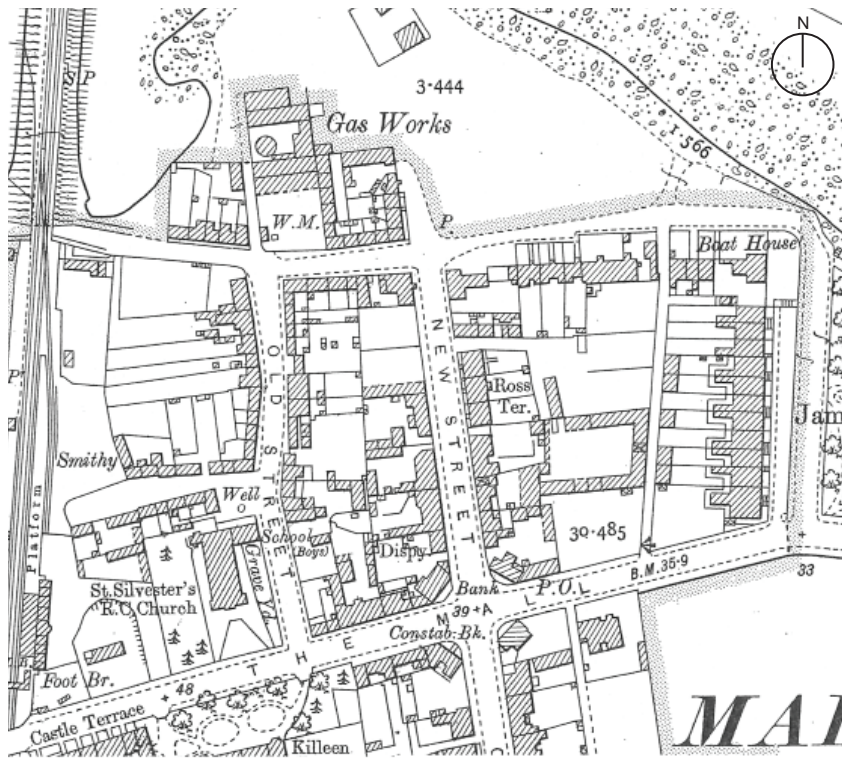
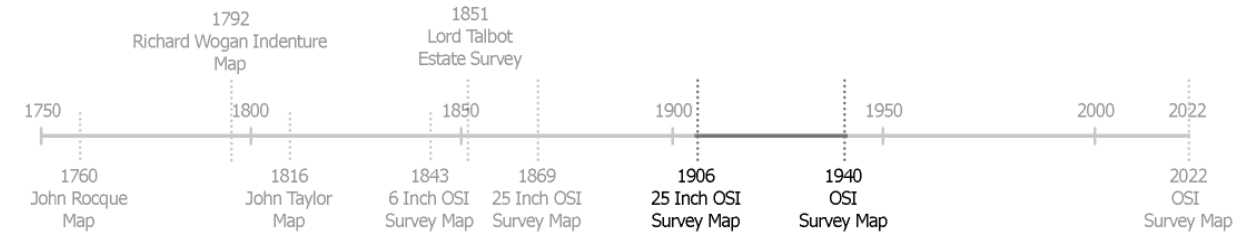


Fig. 29: 25 inch OSI Map - 1906



Fig. 30: 1940 Ordnance Survey Ireland, Malahide Map.

### 4. 1940 Ordnance Survey Ireland, Malahide Map (Fig. 30)

Further development has appeared within the Ross' Cottages lane way, which suggests to have replaced previous building stock from the 19th Century.

Some waterworks infrastructure now appears to be mapped throughout New Street and its environs. This framework includes a well, situated east of New Street. Two pumps, are located to the north and south of Ross' Terrace. A pump also existing to the south-west of The Diamond, behind the former RIC Barracks.

New properties and urban buildings such as the Carnegie Library (constructed 1909) are now depicted south of The Mall.



# 4

## Conservation Report

Chronology of the Site & Development of Building Footprint

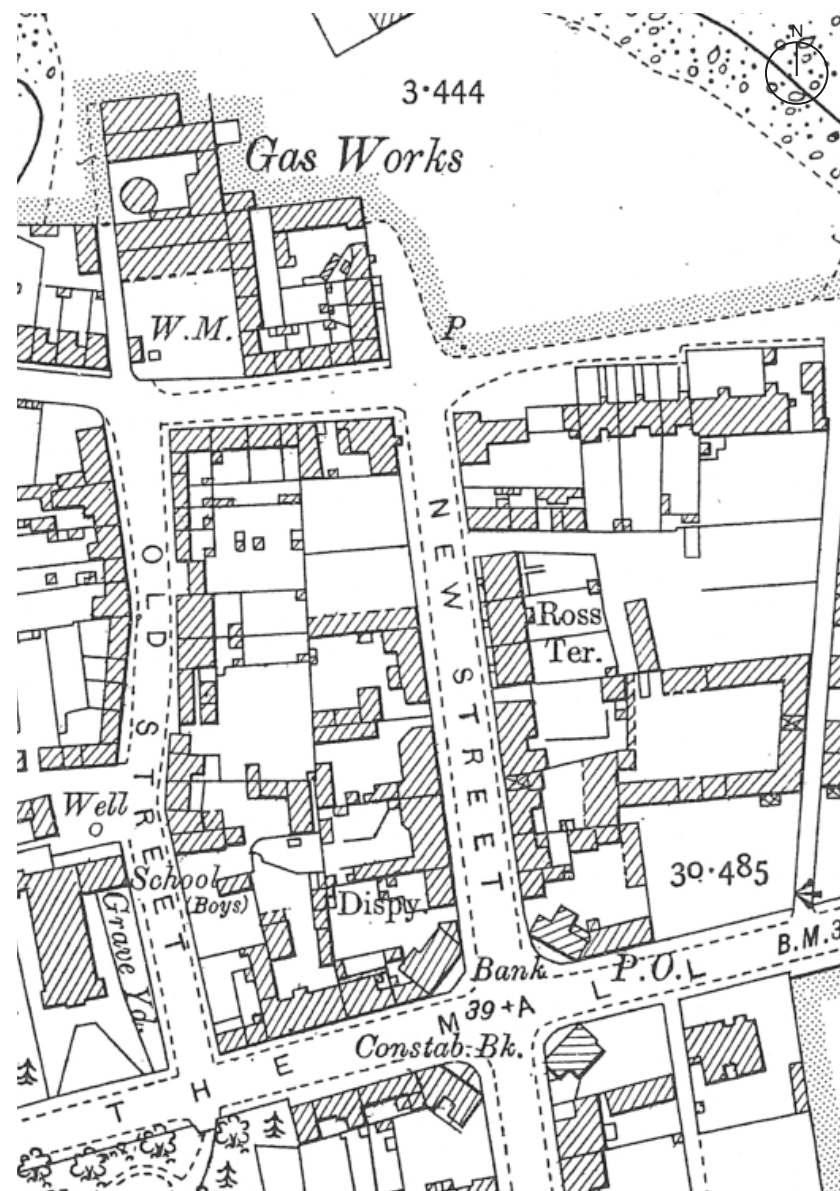
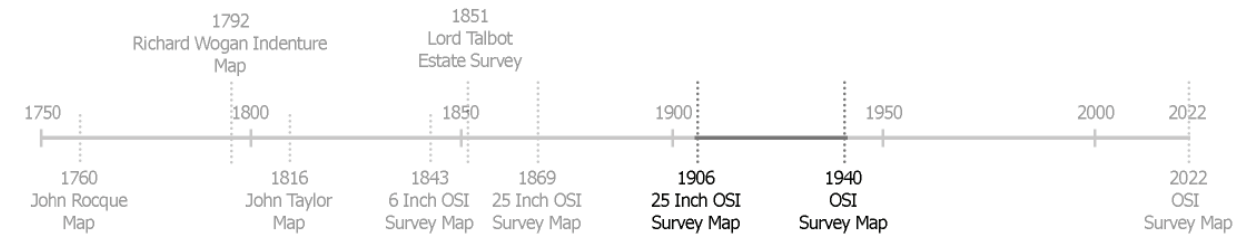


Fig. 31: 25 inch OSI Map - 1906



Fig. 32: 1940 Ordnance Survey Ireland, Malahide Map.

### Alterations to Building Footprint:

- New development to Ross' Cottages to replace previous demolition.
- Potential demolition to properties on Dispensary Lane and to rear of properties on New Street.
- Further development to properties at north and south of New Street.
- Waterworks infrastructure now visible. (Eg. Wells, Pumps)

- Further Development
- Apparent New Route Formed
- Potential Demolition of Building Footprint



# 4

## Conservation Report

### Chronology of the Site & Development of Building Footprint

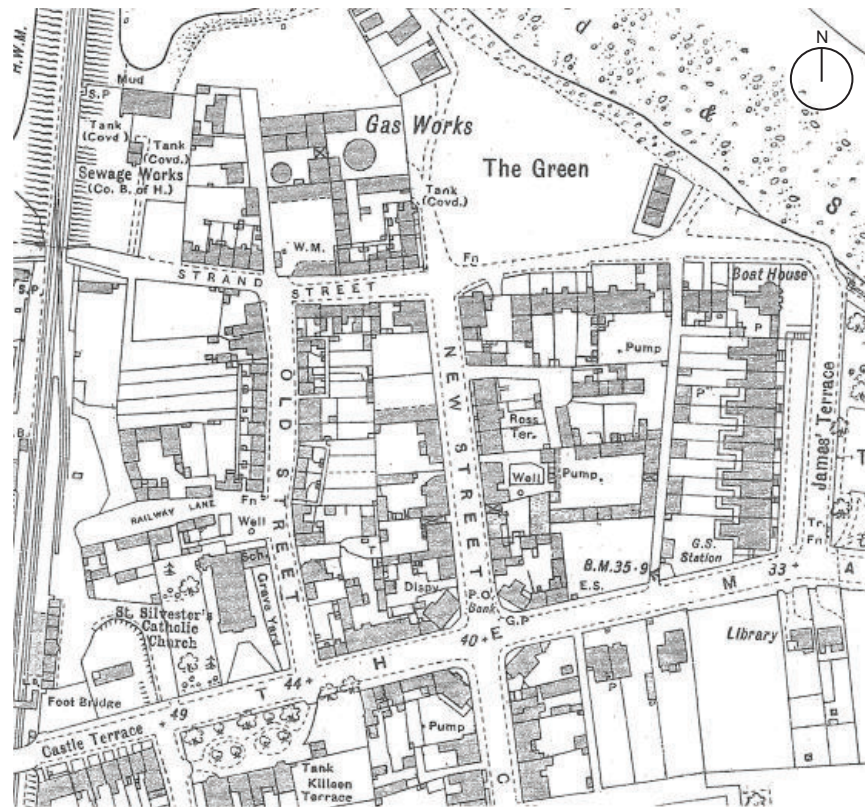
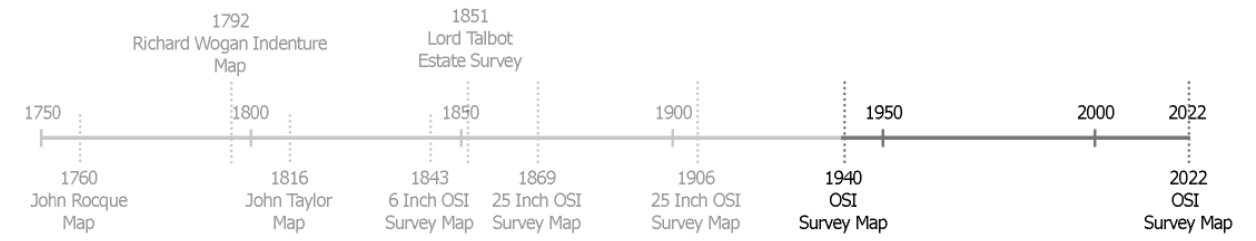


Fig. 33: 1940 Ordnance Survey Ireland, Malahide Map.

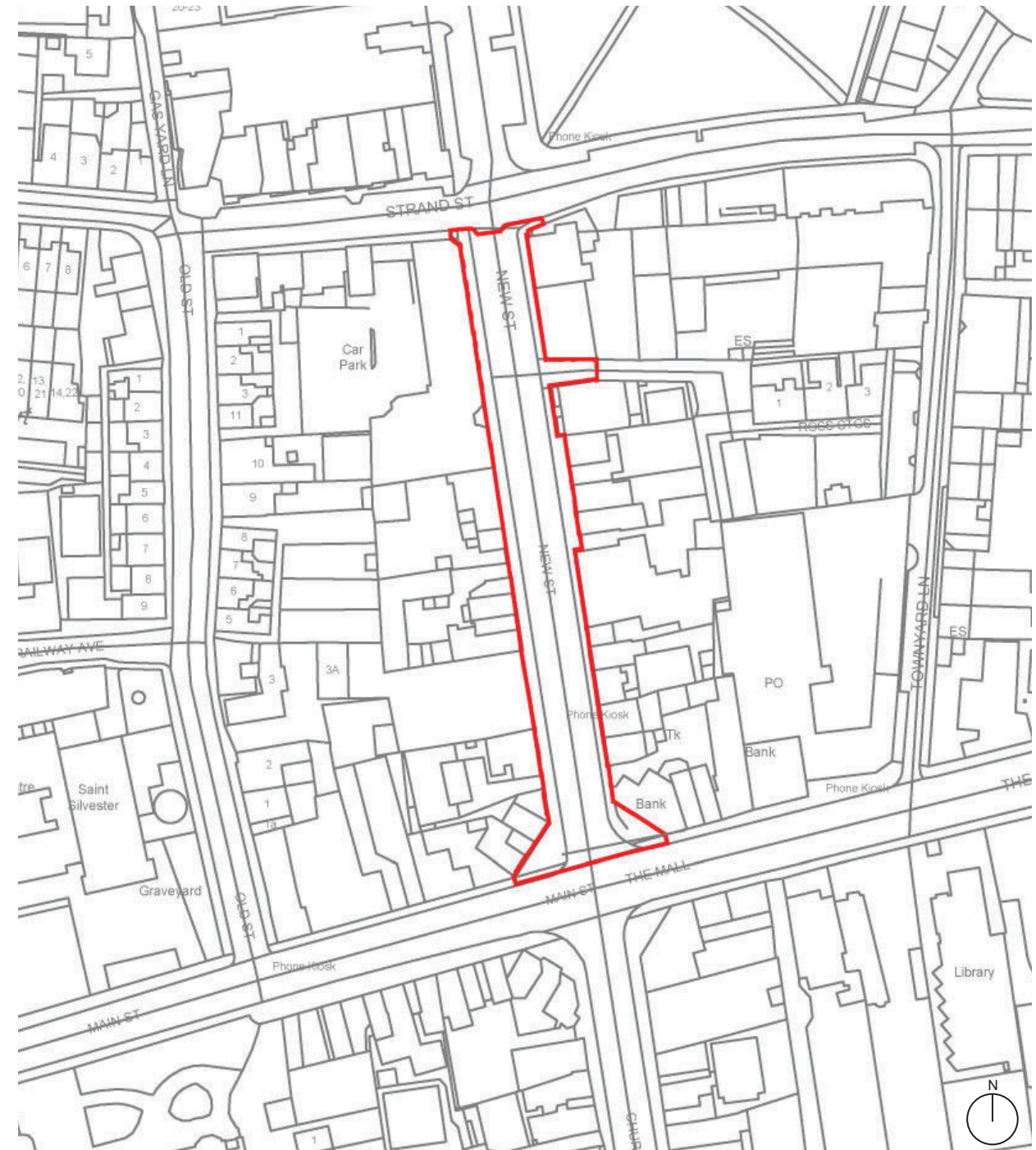


Fig. 34: 2022 OSI Survey Map

#### 4. 2022 Fingal Co. Co. Map - Malahide (Fig. 34)

The final map of Malahide which has been reviewed in this study is the 2022 OSI survey map retrieved from OSI.ie as part of the planning package.

The suburban expansion of Malahide began during the 1960s, feeding a sustained pace of housing construction within the town and its environs. As a result of this influx of people settling and visiting the town, the services within Malahide grew as well. These developments include, New Street Mall (Constructed 1980s), Malahide Shopping Centre, large-scale extensions to hospitality premises and the introduction of a new convenience store in 2015 replacing the previous Malahide Hardware Store.



# 4

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Chronology of the Site & Development of Building Footprint

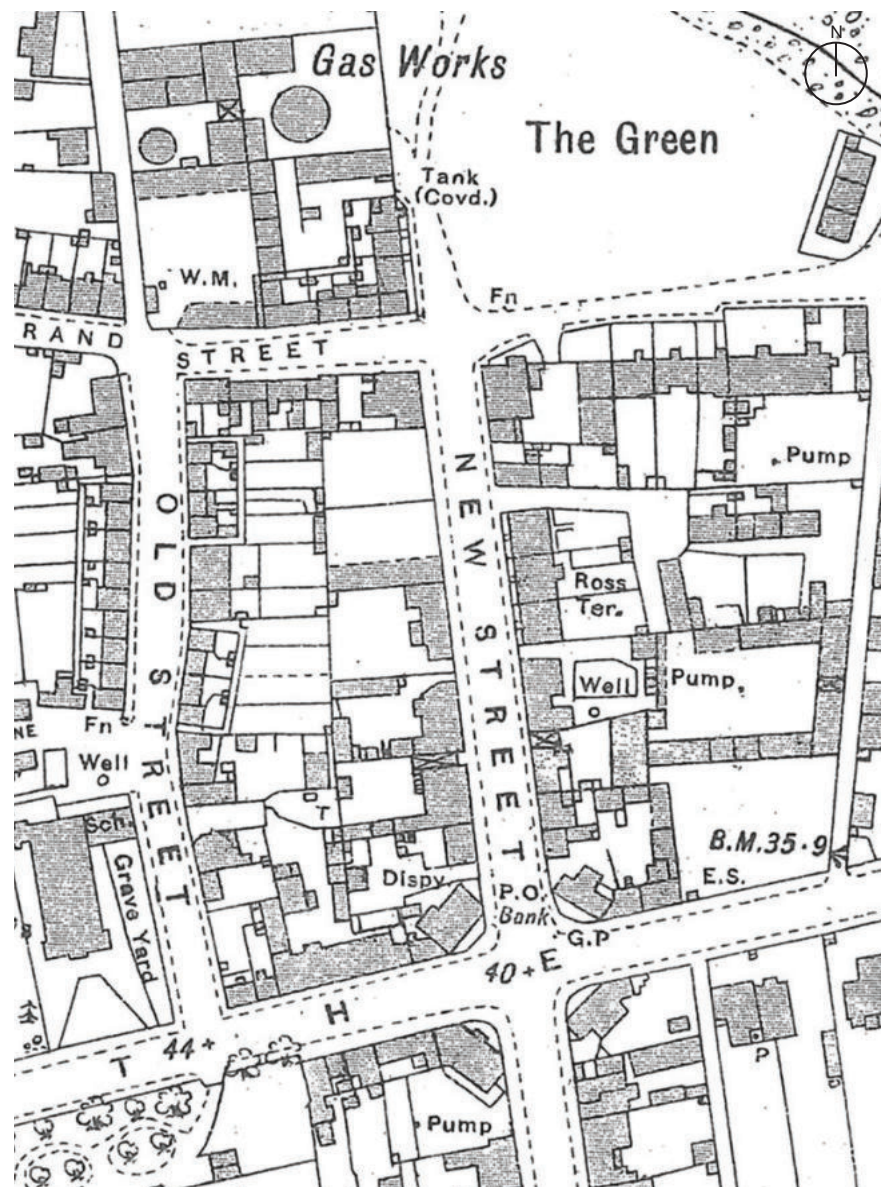
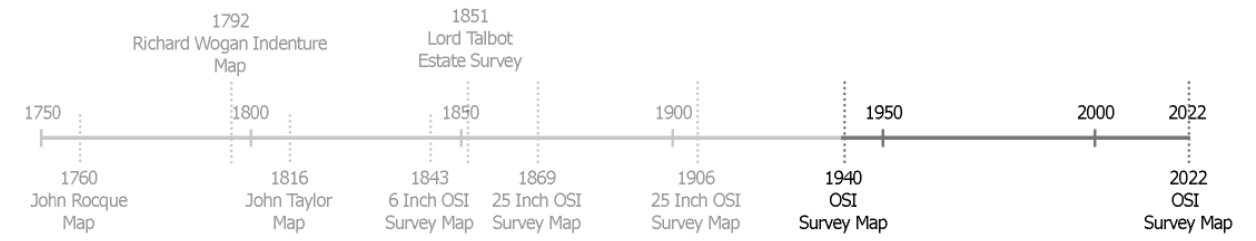


Fig. 35: 1940 Ordnance Survey Ireland, Malahide Map.



Fig. 36: 2022 OSI Survey Map

### Alterations to Building Footprint:

- Larger scale development has occurred throughout the street. The former coal yard to the north west, of the street, has been infilled with New Street Mall during the late 1980s.
- Considerable extension to Fowlers bar, beside the current Dispensary building has occurred.
- Considerable extension to Gibneys Bar & Restaurant.
- Development of Malahide Shopping Centre
- Re-development of Malahide Hardware Store to a convenience store in 2015.

- Further Development
- Site Boundary





Fig. 37: (View A) New Street - Early 1900s - Image taken from The Diamond



Fig. 38: (View A) New Street - 2022 - Image taken from The Diamond



Fig. 39: (View B) New Street - Image taken from Strand Street.



Fig. 40: (View B) New Street - 2022 - Image taken from Strand Street

Above are two still images of New Street dating from early 1900 (Fig. 37 & 39). (Source: Fingal Local Studies Collection). These historic images show the appearance of the street from more than 100 years ago. It also allows the viewer to make comparisons between the past streetscape and the current design of New Street.

**A.** Fig. 37 is an image from The Diamond, facing north towards New Street, with a clear view of the Marina beyond. Firstly we notice the defined pedestrian paths to either side of the street. In the foreground, hard landscaping detailing is visible, consisting of a kerb (likely granite) with a footpath and road surface. Fig. 37 shows two horses tied up outside Cooke's Abercorn Tavern (now Gibney's Pub). Another cart can be seen at the North end of the street. The development of the Marina during the turn of the 20th century, means the view of the estuary from The Diamond is now lost.

The buildings on the north-east and north-west sides of The Diamond survive from the earlier (c.1900) photograph, with some modifications. These have been modified throughout the 20th century with the implementation of shop fronts. The red-brick Dispensary which is located close to The Diamond still remains on the west side of New Street.

These surviving buildings make a significant contribution to the character and architectural quality of The Diamond and New Street.

**B.** View B (fig.39) is positioned on Strand Street facing south towards New Street. The historic image has also clearly defined pedestrian pathways which frame the street. The gabled building on the south-east corner (left side in foreground) survives from the earlier photograph and continues to make a significant contribution to the streetscape. The single-storey 4-bay cottage to its rear has been replaced with a modern two-storey commercial building.

The now-demolished No. 9 New Street is visible on the west side of the street in the earlier photograph (fig. 40, right hand side). Using the Valuation Records, No. 8 was used as a 'shop, off license, house and garden'. Behind No. 8, we can see a large undeveloped plot. This can also be seen on each of the historic maps, sourced for this report. Using the Valuation Records, this area was in use as a coal yard during the 19th & early 20th centuries. This plot possibly had close affiliations with the coal and gas works industrial site beside The Green.

In the modern photo (fig.40), this plot has been infilled. The surrounding context has been redeveloped with the construction of the New Street Mall, a two-storey terraced building with a prominent pitched roof, incorporating attic accommodation.

5

The Diamond



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## The Diamond

### The Diamond

The Diamond became the central hub of Malahide in the early 19th century when the Talbot family restructured the Dublin Rd. and created New Street. The square became the central crossroads where the major routes of Church Rd., Dublin Rd. New Street, and later The Mall, meet.

By an indenture dated 1792, Richard Wogan Talbot, heir to Richard Talbot, granted James Crawford of Seafield twenty-four perches with "a House and Garden in the new street in the Town of Malahide" for a term of 71 years. The indenture also stipulated that:

*"The said James Crawford, his Heirs and Assigns, shall not build or cause to be built any House, Stable or Hut on the front of the new street without the same to be at least as high as the House which is now built thereon."*

The associated map with the indenture (Fig.43) shows the proposed form the building must take. A five-bay, two storey house, with a centre door, and chimneys at either gable. This would appear to be the first of four buildings that framed The Diamond. The instructions Richard Talbot gave to James Crawford provides clues to an interest in town planning, before future development took place along New Street and The Diamond.

As a result, the four original houses which completed the Diamond were identical. A sprinkler water fountain occupied the centre of The Diamond, however this was possibly moved due to construction of The Grand Hotel in 1835. This was to allow large stage-coaches to maneuver The Diamond on their route towards the hotel to the east. (Greene 2012). When constructed, each of these buildings had front railings,



Fig. 41: The Diamond former RIC Barracks on south-east side - Image 1980s

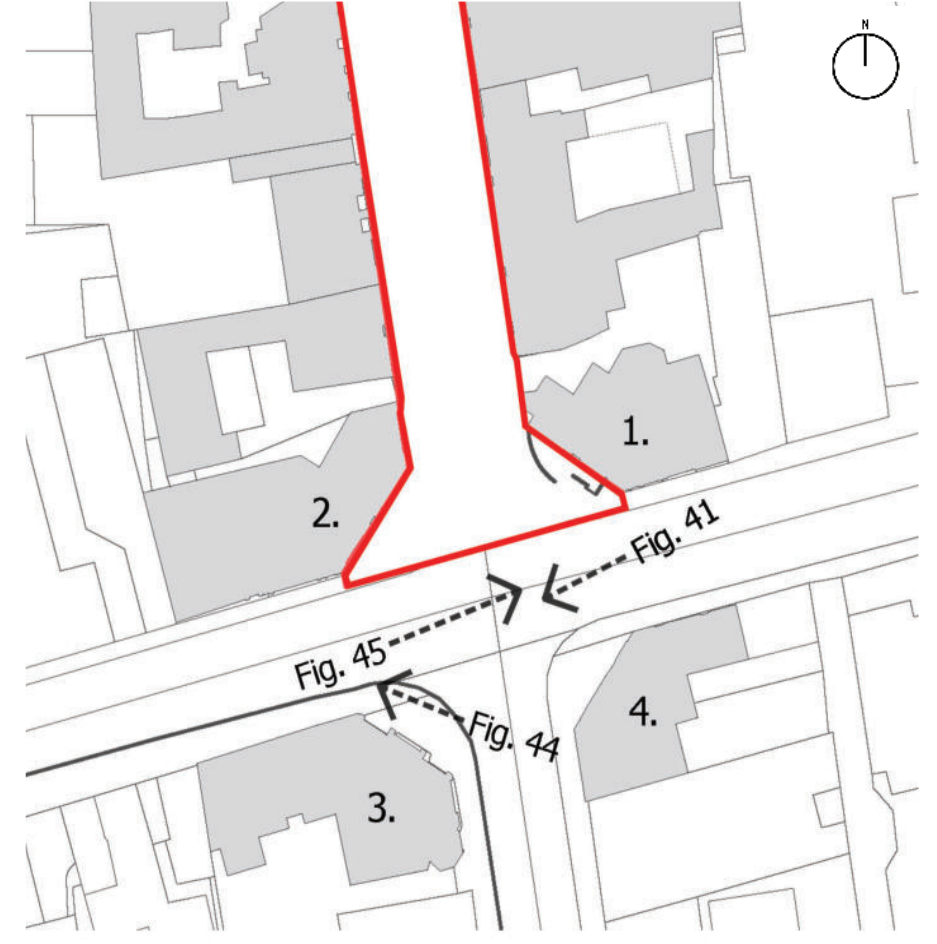


Fig. 42: The Diamond- Key Map

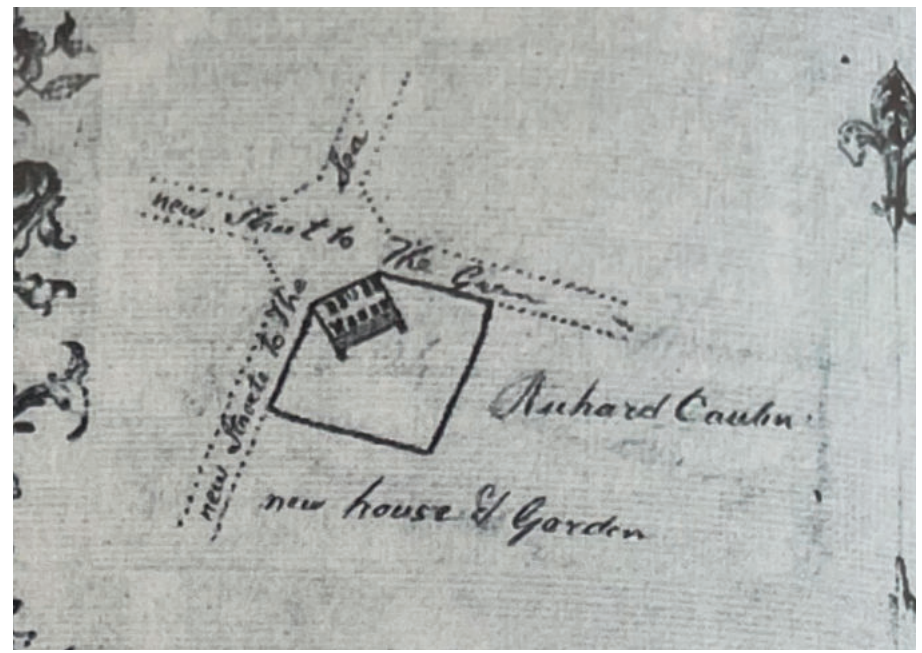


Fig. 43: The Diamond with RIC Barracks to LHS of image - Early 1900



Fig. 44: View of The Diamond from West with RIC Barracks on the left - Early 1900



Fig. 45: View B - From The Diamond facing east towards The Grand Hotel



## 5 | Conservation Report

enclosing a piece of land. Building No. 1 (currently Ulster Bank) has the last example of these railings. These railings can be seen in fig.46 & later in fig.48.

Corner Blocks 1 & 2 are the existing structures which were constructed to form the original Diamond square.

Building No. 3 housed the RIC barracks, which can be located on the 1908 25 Inch OSI Map on page 21. The station seems to have relocated to the centre of town as it can be found on Old Street on the 25 Inch Ordnance Survey Map 1869 on page 22 of this report. The RIC Barracks on The Diamond was burned down in 1922, by the I.R.A as a retaliation to a Black and Tan attack on Balbriggan in 1920. (fig. 47).

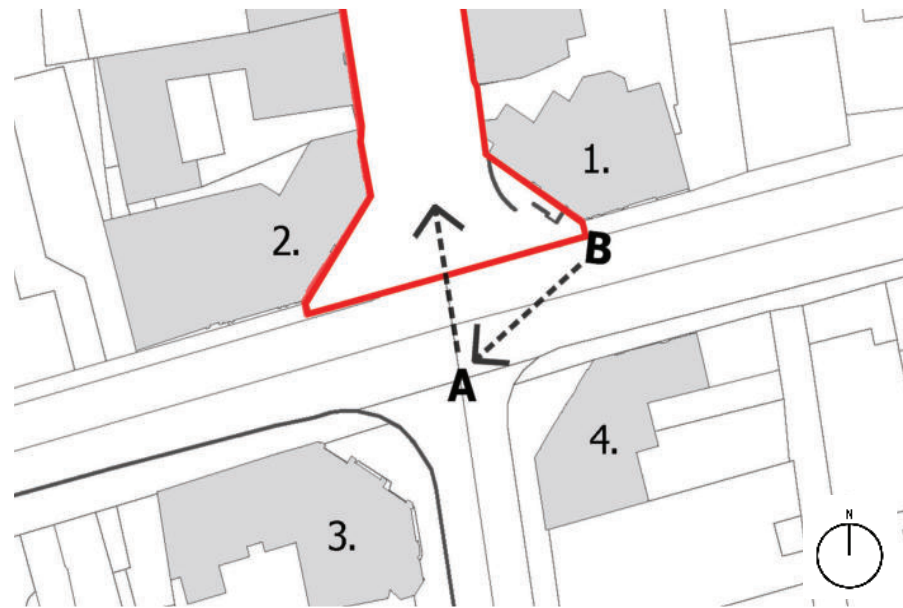


Fig. 46: View A from the Diamond facing north towards New Street - 1940s



Fig. 47: View B: The Diamond with RIC Barracks sacked - Early 1922



Fig. 48: View A from the Diamond facing north towards New Street - 2021



## 5 | Conservation Report

Block 3 & 4 have been rebuilt to imitate the previous facade features seen in the early 19th century structures. Block 4 can be seen in its previous form in fig. 49, and later in its current imitative design in fig. 50.

Once again, the black railings which can be seen in front of Block 3 & 4 in fig.49, have been removed as these structures were rebuilt. These former enclosed garden areas have been given back to the public realm as the use of these buildings has changed from residential to commercial. The restaurant occupying Block 4 currently uses this area for outdoor furniture. Similar to New Street, the historic granite kerbing is still in situ, marking the threshold between pedestrian and vehicular activity at The Diamond and southwards onto Church Road.

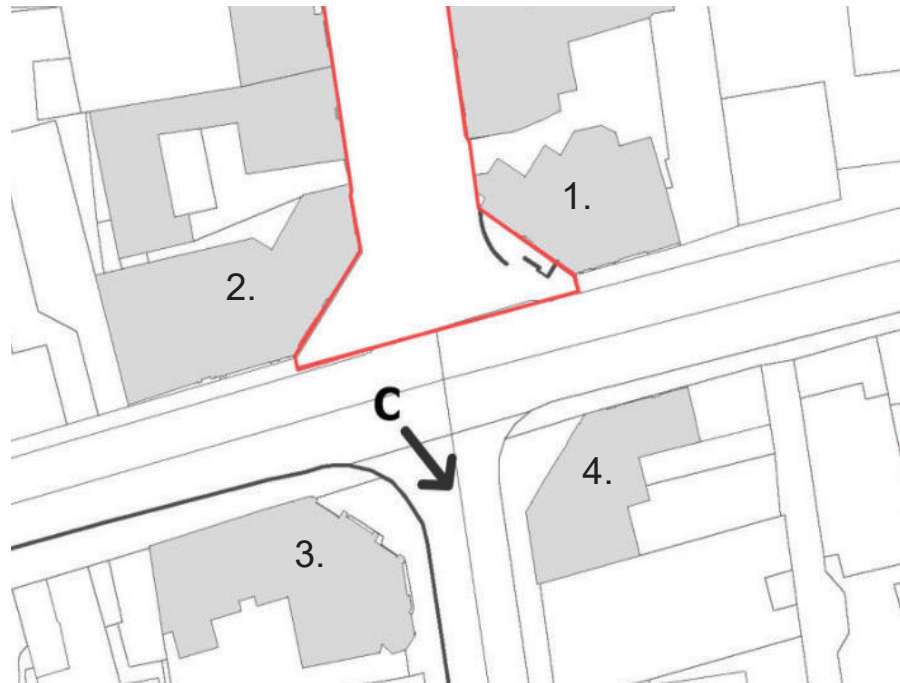


Fig. 49: View C from the Diamond facing south towards Church Street - 1920s



Fig. 50: View C from the Diamond facing south towards Church Street - 2021

6

Buildings Inventories



**Building Numbering System**

For consistency and ease of identification in this report and across all of the documents, a numbering system, has been implemented on New Street. Each individual building received a number regardless of its occupancy/use for commercial or residential purposes. (fig.52). A photographic study and point cloud survey have been completed and can be viewed in Appendix A & B of this report.



Fig. 51: Building 1

**No. 1 The Diamond - Ulster Bank, Sale e Pepe Restaurant**

The building forms part of the original Diamond development at the centre of Malahide in the early 19th century. By an indenture dated 1792, the Talbot family granted James Crawford of Seafield, twenty - four perches with a "House and Garden in the new street in the Town of Malahide" for a term of seventy-one years at a "Rent of Five pounds thirteen shillings and nine pence". This would appear to be the first of four houses that stood facing each other to form The Diamond. (Greene 2012).

The building has rendered walls and natural slate roofs, a chimney was positioned over the apex of both gables of the north-western building however this has been removed from the building. Raised quoins on the corners lend architectural formality to the buildings. A section of railing survives outside the building which is now occupied by a bank. This marks the boundary of the earlier curved front garden, which existed historically on all four sides of The Diamond.

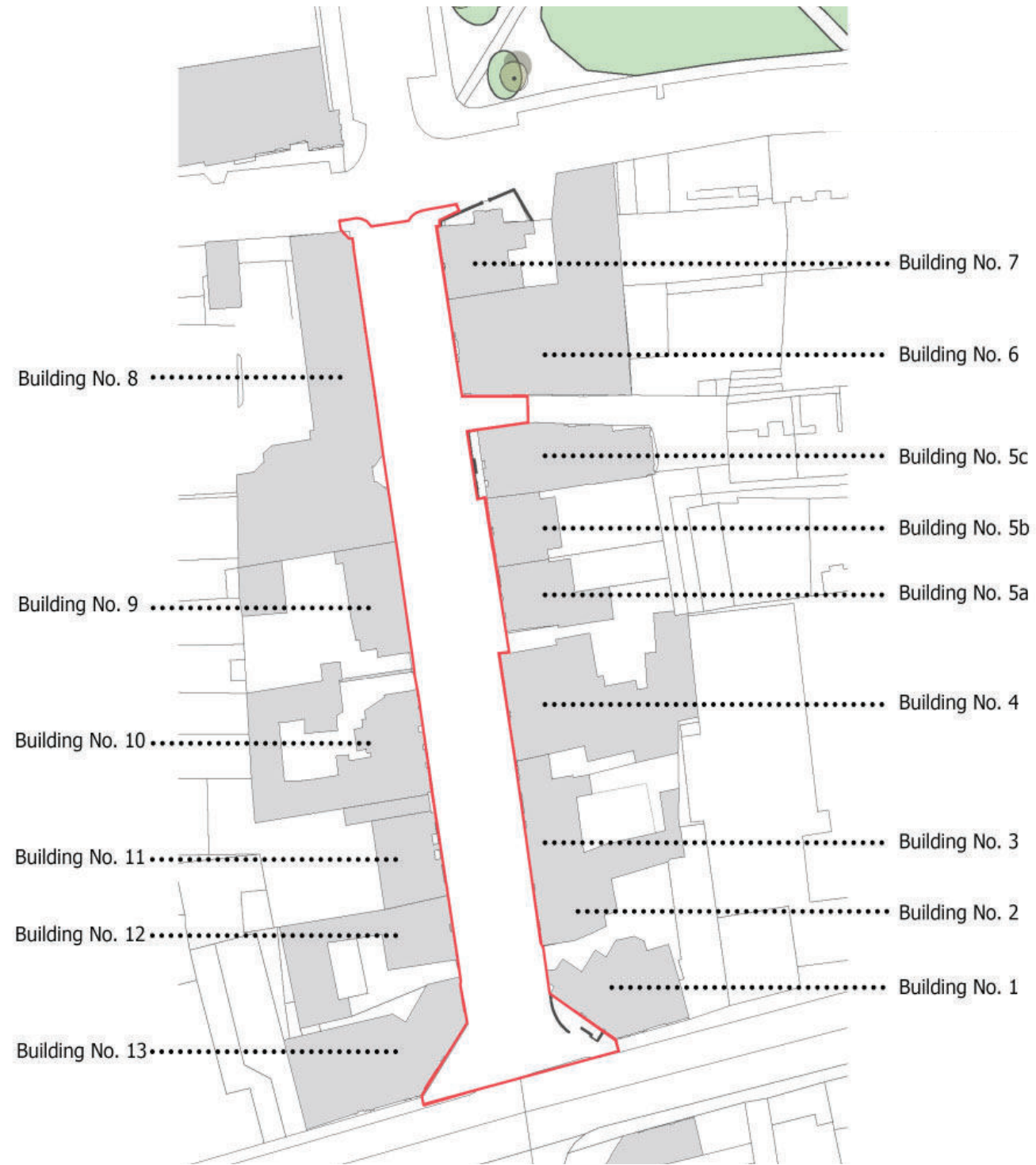


Fig. 52: Key Map







Fig. 53 Building 2



Fig. 54: Building 3



Fig. 55: Building 4



**No. 2 O'Farrell Deere**

Single-storey commercial building, possibly retaining some fabric from early-nineteenth century building shown on first edition O.S. map. Fibre cement tiled roof.

**Building 3: 2 no. Residential & Off License**

Terrace comprising three-bay two-storey double-fronted house (to south, right hand side) and six-bay two-storey building with wide carriage arch and (modern) shopfront. These buildings date from the early-nineteenth century and were almost certainly constructed as a pair. The central doors, elliptical fanlights, natural slate roofs, and Georgian window proportions make a significant contribution to the character of New Street.

**No. 4 - Gibneys Pub**

Six-bay two-storey nineteenth century building, with early-twentieth century shopfront. This public house has a long-standing presence on New Street. The front door with elliptical fanlight, slate roof and timber sash windows, together with the later stucco additions (quoins, mouldings to the front door) and shop front all make a significant contribution to the streetscape and character of the ACA. Blue natural slate tiles to roof.

The Gibney family purchased the property in 1937. When the family arrived they were greeted with a very basic, 'spit and sawdust' pub with an apple garden and piggery to the rear. (Gibney Website). The property has a history of hospitality. In 1937, and for many years beforehand, the Malahide pub had been known as the Abercom Tavern - the name which had been adopted by Henry Barton Cooke on the 6th of June 1890 when he acquired the pub from James O'Hara and the ground landlord, Richard Hogan Baron Talbot De Malahide. Henry Cooke was the nominal owner, however the premises appears to have been administered by his daughter Alice until the sale to the Gibneys.

It was through Colonel Richard Talbot, that the pub first came to prominence in the 1740's as the famous golden Lion Inn'. At this time, Colonel Talbot granted permission for an inn to be constructed on his lands near the Village Green, which was known locally to accommodate the visiting Circuses and strolling players who spread their tents there.







Fig. 56 No. 5 - New Street



Fig. 57: No. 6 - New Street



Fig. 58: No. 7 - New Street



**No. 5a - Ladbrokes, Roseland.  
No. 5b - Doyle's Seafood, Aileens Hair & Beauty.  
No. 5c - Il Sorisso, Gilbert & Wright**

This terrace of three two-storey 3-bay double-fronted houses was constructed in the early-nineteenth century. The front facades are set back from the primary building line and the removal of their historic front gardens (visible on the earlier historic maps, (fig.22)) has created a widening of the footpath. The former houses are now primarily in commercial use, with shopfronts added during the twentieth century. The removal of render to expose the underlying stone rubble on Building 5c is visually incongruous. The natural slate roofs, surviving chimney stacks, central front doors with elliptical fanlights, and Georgian window proportions, are important contributors to the character of New Street.

**No. 6 - Donnybrook Fair**

Five-bay two-storey late-twentieth century building of limited architectural significance. The current use as a busy food store adds to the vibrancy and foot fall on the east side of New Street.

From 1976 - 1986, The property also included No. 1 - 4 Dispensary Lane, then owned The Bissett Family. A hardware store occupied the plot from the mid 1960s owned by the Bissett Family. This closed in 2015, with the plot to the rear of the dwelling re-developed into a convenience store/cafe.

**No. 7 - Residential Dwelling**

The large four bay corner house (fig. 58) at the intersection with The Strand has an elliptical - headed door opening and timber sashes, simply ornamented with eaves brackets and corner quoins. From researching The Valuation Records available we can track the usage and occupancy of this building can be traced from 1855 onwards. The roof covering is fibre cement tiling.

Lord Talbot was the immediate lessor of the building, with a Miss Jane Taylor occupying the 'house and garden' until early 1900s, where Margaret Seaver converted part of the property to a 'shop & yard'.

The occupancy continued to change on a regular basis as did the recorded building use. From 1902 - 1947, the property now held a 'shop, off license, motor garage, yard and the inclusion of 16 The Strand, to the rear of the property.







Fig. 59: No. 8 - New Street



Fig. 60: No. 9 - New Street



**No. 8 - New Street Mall**

Two-storey multi-bay late-twentieth century commercial terrace with ground floor shop units and mixed use first floor and attic level. This modern building encloses the west side of New Street, with the shop units consolidating the established retail character of New Street.



**No. 9 - Residential Dwelling**

Two-storey five-bay mid-terrace house, dating from the first half of the nineteenth century. The dashed render to the front facade dates from the early-twentieth century. Still in residential use, the central front door with fanlight, Georgian-proportioned window openings, wrought iron railings, pitched slate roof and chimney stacks contribute to the character of New Street. The roof covering is fibre cement tiling.

The attached two-bay 2-storey structure to the south, with twentieth century shopfront and white-painted render, appears to be contemporaneous.







Fig. 61 : No. 10 - New



Fig. 62: No. 11 - New Street



Fig. 63: No. 12 - New Street

**No. 10 - Drums, Orchid Restaurant & Al Fresco Restaurant**

This six-bay two-storey terrace of three buildings was constructed in the early-nineteenth century, with shopfronts introduced during the twentieth century. Two of these shopfronts - Drums (to the north) and Orchid Restaurant (centre) - incorporate early-twentieth century turned joinery details of high quality. The window openings at first floor level and pitched slate roof contribute to the character of the streetscape. A laneway to the north of the terrace leads to a small yard with a two-storey gabled carriage house, incorporating unusual (possibly relocated) historic features, visible from the street.

**No. 11 - Public House**

Two-storey commercial building, with former residential accommodation on upper floor. The interior may incorporate fabric from an earlier (nineteenth century) building on the site. The central tripartite sash window with gabled roof is an interesting feature. The shopfronts are modern but well-proportioned.

**No. 12 - Dispensary Building**

This red brick building has considerable presence and is an important landmark at the south end of New Street. Its use of red brick with profiled red brick details adds to the richness and diversity of the streetscape. The building has flat-arched window openings, with surviving timber sash windows, a fibre cement tiled roof, red brick chimneys and cast iron rainwater goods.







Fig. 64: No. 13 - The Diamond



#### No. 13 - Dial-a-Cab, Bouchon Jewellers

The building forms part of the original Diamond development at the centre of Malahide in the early 19th century. This structure is included on the National Inventory of Architectural Heritage. Reg no. 11344046. (fig. 46)

It has retained its original sash fenestration to first floor level. The ground floor has been remodeled extensively during the 1970s with a pair of aluminum shop fronts fitted. The roof is typical of buildings within Malahide's ACA from this era. It is a double pitched, natural slate covered unit with concrete ridge tiles. The walls are roughcast, painted with raised nap rendered corner quoins. (NIAH 2022).

The original openings to first floor level are square headed with stone cills with 2/2 sash timber windows fitted.



Fig. 65 New Street Aerial Photo



7

National Inventory of Architectural Heritage  
Records

1. On New Street, one structure/monument is listed on the National Inventory of Architectural Heritage. Freestanding cast-iron gas lamp standard, c.1900, comprising chamfered square pedestal with foliated shaft, decorative double lamp fitting above. The light fixture has since been removed and replaced with a modern LED unit. Based on information provided by Fingal Co. Co. This lamp standard is not original to its location nor does it carry any historic significance.



Fig. 66: Image NIAH record on file for the lamp standard.

2. Corner-sited end-of-terrace five-bay two-storey former house, c.1835, retaining original fenestration to first floor. Single-bay single-storey extension to east c.1890. Ground floor remodelled c.1975 with pair of aluminum shopfronts. Unit is current vacant. Date (1820 - 1850). (Fig. 67).



Fig. 67: Image NIAH record on file for the property.



Fig. 68: NIAH Monument Locations





Fig. 69: New Street - 1987 - Photo ref: Evening



Fig. 70: New Street - 2017 - Note Lamp Standard



Fig. 71: Lamp Standard

**NIAH Reg. No 11344035**

NIAH records for monuments present on New Street includes, reg no. 11344035, a street lamp which can be viewed in Fig. 71. This was described as a 'Freestanding cast-iron gas lamp standard, c.1900, comprising chamfered square pedestal with foliated shaft, decorative double lamp fitting above.' Dated 1890 - 1910.

As evident from historical photos and from information provided by Fingal Co. Co. these decorative units were installed in the mid 1990s, by the Chamber of Commerce at different locations in Malahide Village. These units were possibly relocated from elsewhere. Due to high levels of corrosion and high winds from Storm Ophelia in 2017, the top of the lamp standard fell and struck a pedestrian. This led to a health and safety risk to the public and the top portion of these units were removed and fitted with a L.E.D fixture to improve lux levels onto the street (Fig. 72).

An image from The Evening Herald from 1987 also re-affirms this, as no lamp standard is present on New Street at this time. See Fig. 69.

This lamp standard was replaced in 2019 with the unit seen in Fig. 73 & 74.



Fig. 72: New Street - 2019 - Note Lamp Standard in Place with LED fixture.



Fig. 73: New Street - 2022 - Note New Lamp Standard in Place



Fig. 74: New Street - 2022 - Note New Lamp Standard in Place



# 8

Description of Proposed Works



# 8 Conservation Report

Description of Proposed Works

A Design Rationale Report has been prepared by DFLA. This document explains in detail the aspects of design proposed for New Street's public realm improvements at a pedestrianised New Street.

The design principles help to generate a strategy for the public realm at New Street, which was formulated in conjunction with FCC and the design team in order to integrate the existing site context, architecture, improved circulation and accessibility, traffic, civil engineering, lighting, archaeological and ecological considerations with the overarching public realm design and the key objectives of the brief. These include:

- Provision of a high-quality urban environment which enhances the 'sense of place' on the street and respects the context as part of Malahide's Historic Core Architectural Conservation Area;
- Consider accessibility and safety for people of all ages and abilities;
- Find a balance between existing and possible future proposed uses along the street in a way which is attractive to visitors and locals alike;
- Innovate, taking into account principles of sustainability and resilient public spaces;
- Ensure access for local residents, deliveries, fire tender, emergencies and refuse collection;
- Provide opportunities for resting and socialising to increase dwell time, while at the same time taking into consideration overall functionality;
- Provide a biodiverse environment where possible, with trees and planting as well as incorporating sustainable drainage solutions.

New Street is a key node within Malahide's town centre. The public realm improvements increase the area provided for civic amenity along the thoroughfare and improve pedestrian priority and accessibility for the public. It creates new opportunities for visitors and passers-by to engage and enjoy the space by increasing the width of the footpath on either side of the street. The eastern side remains sunny for the majority of the day, therefore an asymmetric layout is proposed, taking full advantage of the orientation. Large trees are proposed to 'book-end' the street and signify threshold, tying the public realm into its surrounding context. Areas of planting are proposed as the main organisational device, incorporating sustainable urban drainage (SuDS) and increasing biodiversity on site. Opportunities for seating, art and informal play installations are proposed to be located in between the areas of soft landscape. Some areas of planting are also proposed to be introduced to act as buffer zones between public use and existing residential buildings, creating defensible space in front of the dwellings. Clearly marked zones for outdoor dining are proposed to be organised in linear strips on both sides of the narrowed central carriageway.



Fig. 75: Artist impression of New Street public realm, facing north towards Strand Street



Fig. 76: Artist impression of New Street public realm, facing south towards The Diamond



Fig. 77: Proposed Site Plan

# 9

Statement of Significance



## 9 | Conservation Report

### Statement of Significance

The layout and morphology of New Street and The Diamond, to its immediate south, were an integral part of the realignment of the centre of Malahide undertaken by the Talbot Family at the start of the nineteenth century and are of considerable architectural, historical, and social interest. This early-nineteenth century planned town centre provides tangible evidence of the important role of the Talbot Family in the evolution and growth of the town. Many of the two-storey terraced buildings that face onto The Diamond and New Street date from the early-nineteenth century and are contemporaneous with the construction of the planned town centre. The survival of these buildings, with their Georgian-proportioned window opening (some with surviving sash windows), front doors with well-crafted fanlights, slate roofs and chimney stacks helps to define the character and sense of place of the Malahide Historic Core Architectural Conservation Area.

The transition of New Street from a predominantly residential street to a vibrant retail street took place gradually over the course of the twentieth century. The terraced streetscape incorporates high quality early-twentieth century shopfronts with well-crafted joinery, which are of significance in their own right and add to the character and sense of place within the ACA. The embellishment of a number of the nineteenth century facades with high-quality early-twentieth dashed render and stucco details, is typical of many Irish towns and adds to the visual interest of the street. The late-twentieth century buildings at the northern end of the street, while not of the same architectural quality as the earlier historic buildings, replicate the terraced streetscape and consolidate the established retail activity along the street.

The growth of retail activity along New Street during the twentieth century led to the incremental loss of historic features that contributed to the streetscape. Earlier railed front gardens along New Street and on the chamfered corners of The Diamond have now been lost. There are no historic lamp standards on the street. The ground floor window railings on some of the buildings provide a visual reminder of the quality and character of the earlier boundary railings. The surviving granite kerb stones along New Street make a strong visual contribution to the quality of the public realm.

New Street embodies a social and cultural significance as a place where generations of Malahide residents go to shop and socialise. The present-day New Street acts as an important pedestrian and visual connection between The Diamond, the historic centre of the town during the nineteenth century, and the Marina and waterfront, which has become a focal point for commercial and recreational activity.



Fig. 78: New Street - circa 1930s

10

Heritage Impact Assessment



# 10 Conservation Report

Heritage Impact Assessment

The overarching objectives of the proposed development are very positive for the town centre and will enhance the established character of the ACA. The public realm improvements will facilitate the permanent pedestrianisation of New Street and improve the public realm that supports and consolidate the established retail, restaurant and hospitality uses along the street. This early-nineteenth century street was laid out at a time when motorised transport did not exist. The removal of traffic away from the street has made New Street a safer and more attractive place for visitors and locals to visit and linger.

The historic cut stones (fig. 79) are an important surviving feature of the existing landscaping of New Street. It is proposed that these will be retained in their existing (historic) alignment, with the individual stones re-laid to suit the new pavement levels. The retention of these kerbstones and their incorporation into the new landscaping is a key conservation component of the proposed design.

The selection of new paving materials will be a key decision in the development and finalisation of the new landscaping design. Where new paving stones are proposed, these shall comprise local (Irish) stone – Leinster granite, blue-grey limestone, or a combination of the two. The paving design, as shown on the proposed drawings, adopts unfussy orthogonal coursing using a limited palette of materials. The avoidance of unnecessary pattern or embellishment will be essential to ensure that the new hard landscaping is appropriate to the scale and width of the street, and the sensitive receiving environment of the predominantly early-nineteenth century buildings that front onto New Street. The final paving design shall include curved paving stones to mark the line of the early-nineteenth century curved front gardens on the north-east and north-west corners of The Diamond. It will also be important to ensure that the selected paving materials are durable, easy to clean and resistant to staining from oil and grease. Prior to the finalisation of the selection of materials, evidence shall be provided to Fingal County Council (FCC) of the successful use of those materials in comparable urban locations. Samples of the proposed materials will be presented for review and agreement by the project Grade 1 Conservation Architect at a meeting with the Architectural Conservation Officer (ACO) of FCC.

The introduction of level plateau areas of planting, is a welcome addition with the potential to significantly enhance the sense of place and human scale of New Street. Detailed drawings will be prepared to demonstrate that the work will not adversely impact on nineteenth century stone entrance steps and architecturally significant door surrounds. Where possible, planting beds are proposed in front of buildings that remain in residential use. These locations will not be used for formal outdoor seating. These details are to be agreed with the project Grade 1 Conservation Architect in the first instance and will then be presented to the ACO for review and agreement.

The drawings include examples of proposed benches, planters, and other items of street furniture. The proposed street furniture will adopt a limited palette of materials, with metal surfaces adopting a single uniform colour where possible. The final locations of street furniture will be selected to minimise visual clutter along the street and to avoid physical barriers along the more heavily used footpaths. Pavement access covers will include integral paving. These details are to be agreed with the project Grade 1 Conservation Architect in the first instance and will then be presented to the ACO for review and agreement.

The proposed development includes for designated areas of outdoor seating and dining, which shall be made available to the restaurant, bar and café businesses along the street. Final details of such seating will be subject to review and agreement with the ACO of Fingal County Council. Such seating, tables, and associated furniture (umbrellas, signage) shall be fully demountable and capable of being removed and stored indoors each area. The proposed development does not include for fixed outdoor furniture in these locations. The lighting strategy requires careful consideration and is to be detailed sympathetically in respect to the surrounding historical buildings. Final details of lighting fixtures and placement are subject to review and agreement with the project Grade 1 Conservation Architect.

In summary, the proposed public realm upgrading of New Street represents a change from its current (and historic) configuration of a central carriageway with footpaths on both sides. This change is necessary and appropriate to enhance the setting of the historic buildings and consolidate and support the established retail character of this important street. The recommendations noted above are intended to mitigate and manage the impact of the proposed alterations on the character, fabric and features of the Architectural Conservation Area.



Fig. 79: New Street Existing Kerbing

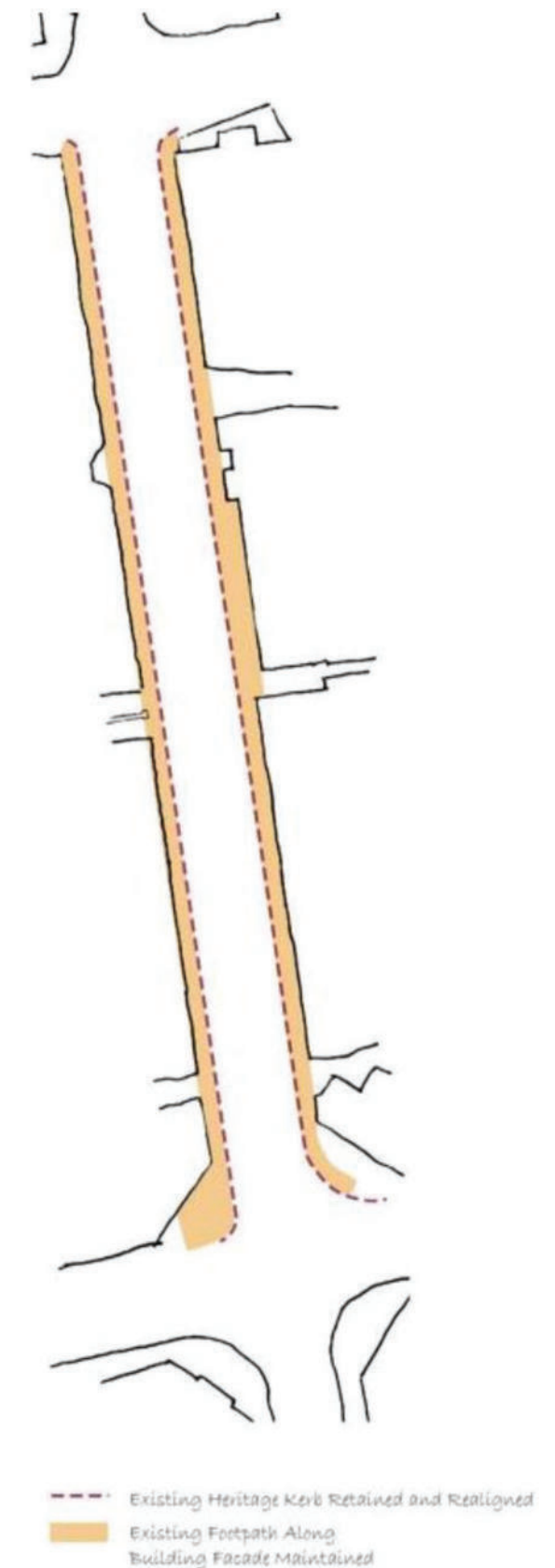


Fig. 80: New Street Existing Kerbing Location

## **Bibliography & Sources**

### **Literature**

1. Kingston, G. (2018). Malahide Snapshot 1901. Gerry Kingston & Fingal Co. Co.
2. Greene, R. (2012). Old Malahide. Publisher
3. McLoughlin R. - Lotts Architecture (2008). Malahide Historic Core - ACA - Statement of Character. Fingal Co. Co.
4. <http://www.barrygibney.com/history.html> Gibneys History
5. Flanagan, N. (1984) Malahide Past and Present. Publisher

### **Mapping Data**

1. 1760 John Rocque, Dublin County North East. - Dublin Historic Maps, Boundaries and OSM Miscellany Online.
2. 1816 John Taylor Environs of Dublin Map - Dublin Historic Maps, Boundaries and OSM Miscellany Online.
3. OSI 6 Inch Ordinance Survey Map 1829-43 - The Glucksman Library Trinity College Dublin.
4. 1851 Survey of Town & Lands of Malahide, Co. Dublin. The Estate of the Right Hon. Lord Talbot of Malahide. - Irish Architectural Archive.
5. 1869 OSI Ordinance Survey Map - The Glucksman Library Trinity College Dublin.
6. 1897 - 1913 25 inch OSI Map - GeoHive Map Viewer Online
7. 1940 Ordinance Survey Map - The Glucksman Library Trinity College Dublin.

### **Imagery**

1. National Architectural Archive Ireland
2. Fingal Co. Co. Local Studies Office
3. Malahide Library
4. National Library of Ireland



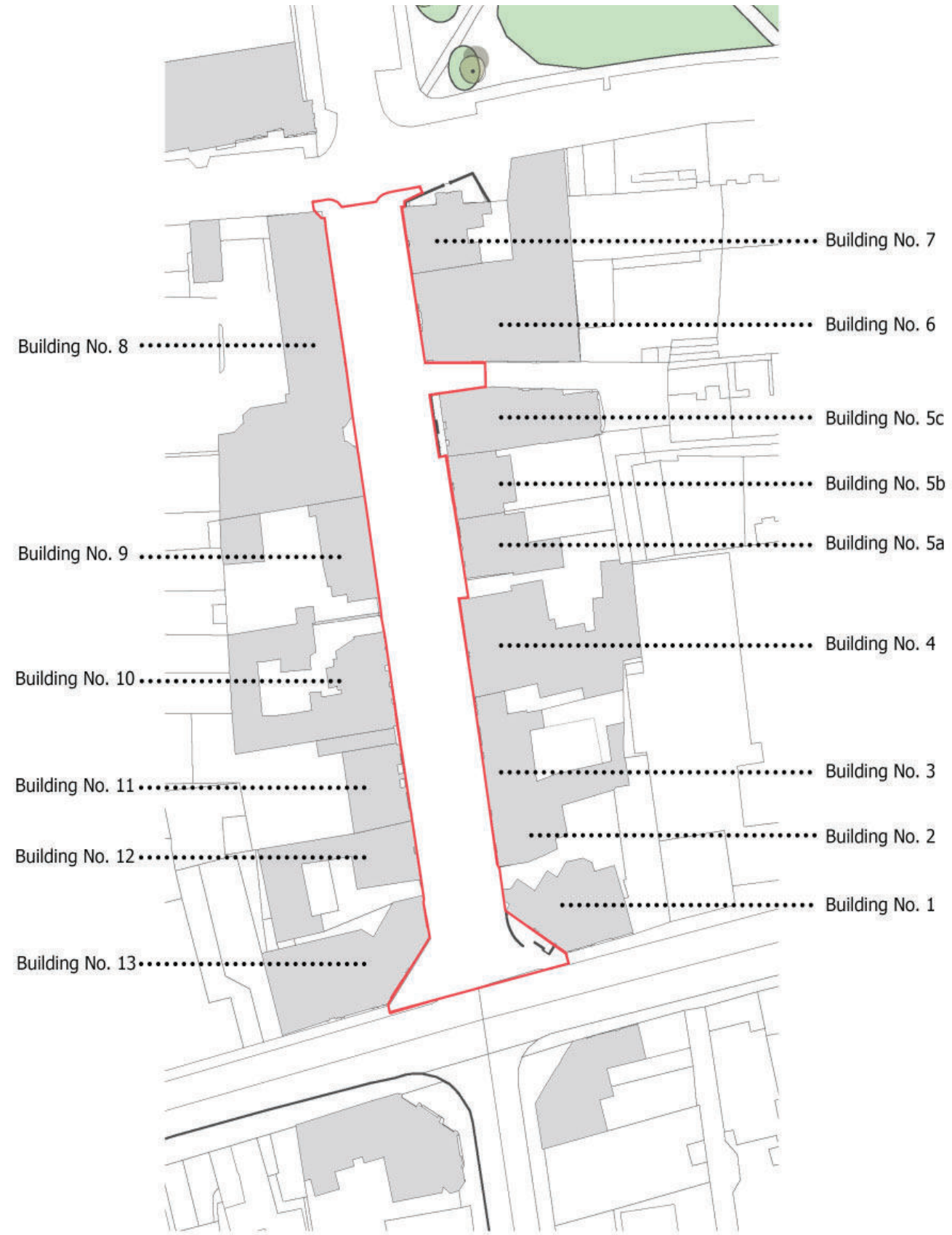


COADY  
ARCHITECTS

Appendix A

Photographic Study - New Street Elevations









Building 1





Building 1





Building 2





Building 3





Building 3





Building 3





Building 4





Building 5





Building 5





Ross Cottages (Laneway), Malahide





Building 6





Building 7





Building 8





Building 8





Building 8





Building 8





Building 9





Building 9





Building 10





Building 10





Building 11





Building 11





Building 12





Building 13





Building 13





Building 13





Ross Cottages



Ross Cottages



Ross Cottages



Ross Cottages





COADY  
ARCHITECTS

Appendix B

Point Cloud Survey Drawings - New Street & The Diamond

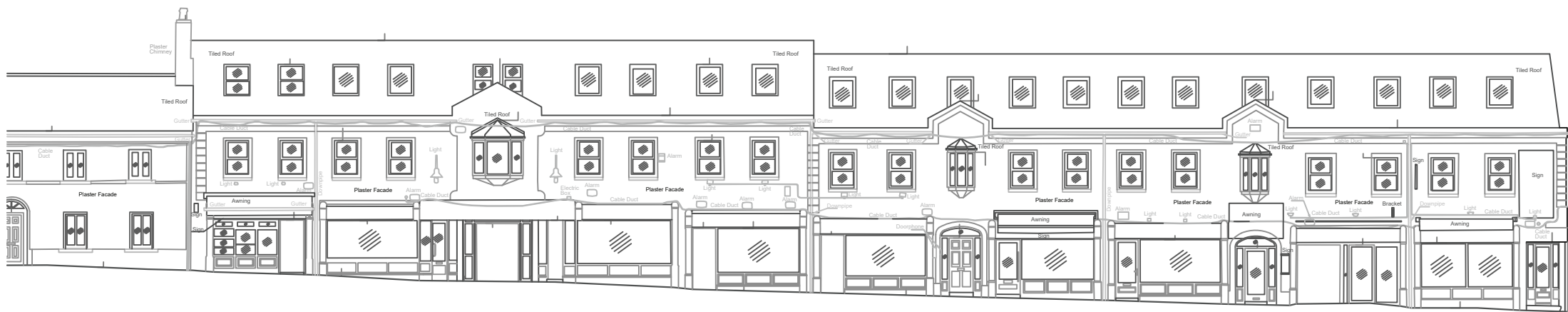




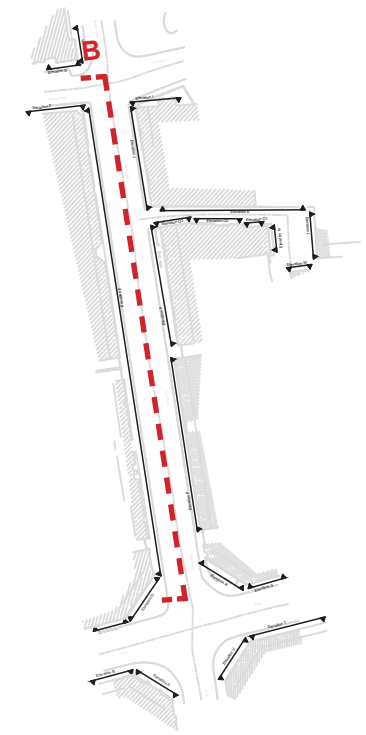




Elevation B - 1:200

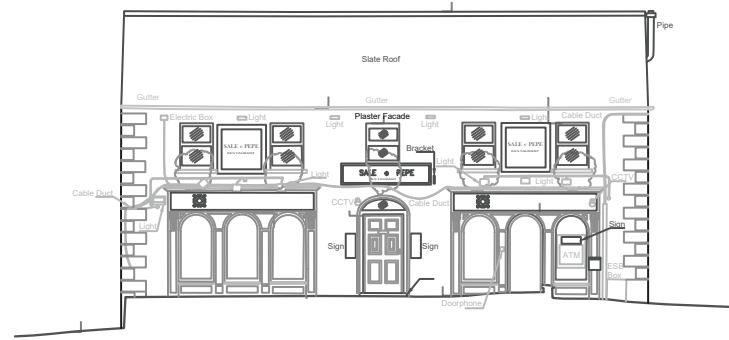


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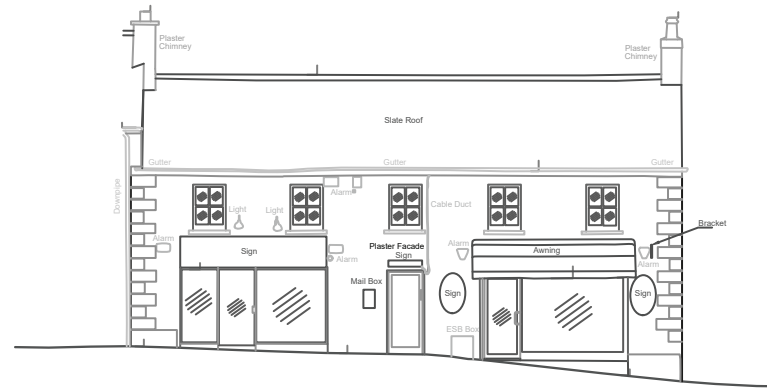


Key Map





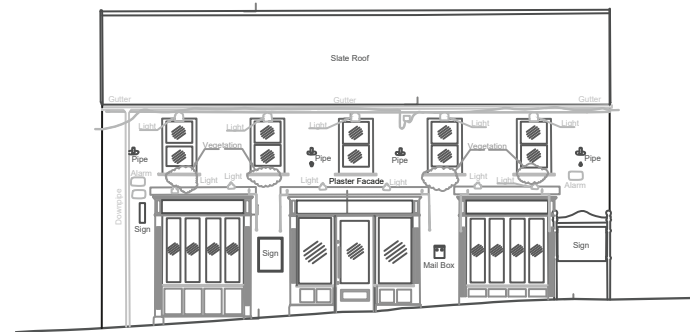
Elevation C - 1:200



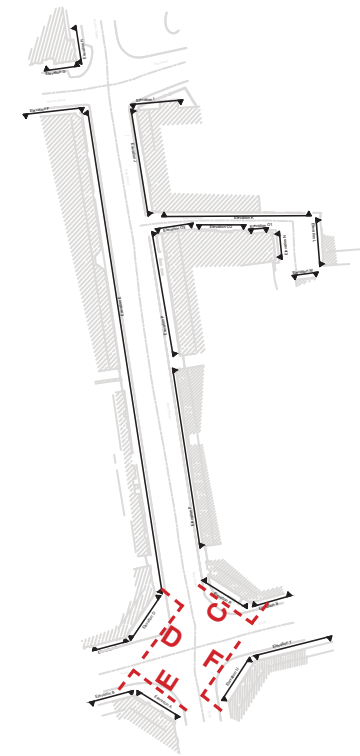
Elevation D - 1:200



Elevation E - 1:200



Elevation F - 1:200





**APPENDIX D. Design Rationale - Public Realm Improvements for a Pedestrianised New Street. DFLA.**



## DESIGN RATIONALE

Project: **PUBLIC REALM IMPROVEMENTS FOR  
A PEDESTRIANISED NEW STREET**

Project no.: **Fc.03**

Prepared on behalf of: **FINGAL COUNTY COUNCIL**

Prepared by: **DFLA**

Date of First Issue: **23.02.2023**

Revisions: **-**



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  - 2.2 Wider Physical Context
  - 2.3 Existing Trees
  
3. Consultation and Design Process
  - 3.1 Summary of Consultation Process
  - 3.2 Design Principles
  - 3.3 Landscape Design Strategy
  - 3.4 Conservation and Heritage
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## **Introduction**

### **1.1 General**

In 2022, *Fingal County Council (FCC) Architects Department*, in association with *FCC Environment Climate Action and Active Travel*, commissioned DFLA as part of a landscape architecture led multi-disciplinary team for public realm improvements for a pedestrianised New Street. The objective of this document, together with the overall pre-planning package, in line with the requirements of the Planning and Development Regulations, is to describe the nature and extent of the proposed development and the principal features thereof.

DFLA and the wider design team visited the site on several occasions from May 2022 to October 2022 in order to observe conditions on site, such as existing vegetation, layout, usage, materials and other items which would have a bearing on the design process. *The Tree File* arborists were commissioned before the design process began to carry out a Tree Survey and Tree Constraints Plan in compliance with BS 5837:2012. These documents are included separately as part of this pre-planning package.

During the design process, DFLA worked closely with *Connect the Dots (CtD)* and FCC to engage with a wide range of stakeholders and consultees, to arrive at a proposal which maximises the opportunities for high quality, usable and enjoyable public realm that, where possible, responds to the feedback obtained throughout the consultation process. The non-statutory consultation process is summarised in Section 3.1.

### **1.2 Planning Context**

A number of policy documents are relevant to the formulation of the public realm proposals for New Street. These include the *Fingal County Development Plan*, *Fingal Climate Action Plan*, as well as documents of a more specific or localised nature such as the *Malahide Public Realm Strategy*, *Malahide Historic Core Architectural Conservation Area (ACA)*, *The Forest of Fingal* and other policy documents of significance.

Please refer to the *Planning Report* produced by *BMA Planning* and included in the overall pre-planning package.

### **1.3 Documentation**

This document should be read in conjunction with other documentation included in this pre-planning package, by DFLA, as well as the inter-disciplinary design team which comprises *Punch Consulting Engineers*, *Axiseng Consulting Engineers*, *Coady Architects*, *BMA Planning*, *Faith Wilson Ecologist*, *Archaeology Plan*, *The Tree File*



arborists, supported by *Connect the Dots (CtD)* stakeholder and community engagement consultants. An EIA Screening Report has been prepared by BMA Planning and an AA Screening Report has been prepared by Faith Wilson Ecologist. The following documents produced by DFLA, additional to this document, are included as part of the overall planning package:

<b>No.</b>	<b>Scale</b>	<b>Size</b>	<b>Title</b>
2000	1:500	A1	<i>Site Location Map</i>
2001	1:200	A1	<i>Public Realm Plan</i>
2401	1:100	A2	<i>Landscape Sections 1</i>
2402	1:100	A1+	<i>Landscape Sections 2</i>
2500	1:20	A1	<i>Typical Landscape Details</i>



## Landscape Appraisal

### 2.1 The Site

The subject site is situated in the centre of Malahide Village. It is broadly rectangular in shape, approximately 14m wide and 150m in length, extending from the Diamond junction at the south end towards the Strand Street junction to the north. There is a broadly continuous slope with a level change of approximately 6m between the higher point at the southern end of the site and the northern end which then leads towards Malahide Green and the Marina.



*New Street, looking south, towards the Diamond.*

The existing public realm is predominantly hard-standing and impervious in nature. There is a line of medium to large size trees along the kerb edge of the footpath on the west side of the street. There are two trees on the eastern side, close to the junction with Strand Street.

Prior to the outbreak of Covid-19 in March 2020, New Street, Malahide accommodated two-way traffic movement. Following a government mandate to review road networks in urban areas to identify areas that could prioritise pedestrian and cycle movements, New Street was pedestrianised from June 2020 to December 2020. This arrangement was modified to a one-way system for vehicular traffic from December 2020 to June 2021. In June 2021, Fingal County Council pedestrianised New Street. As a result, there is currently time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Diamond to New Street and two-way access from Strand Street to Ross's Terrace via New Street.



New Street comprises a variety of uses including retail, café, restaurant, bar, health and financial or other business outlets. Outdoor dining is available on the street, with furniture provided by individual premises. A range of street furniture has been installed such as bollards, cycle parking, signage and planters which vary in terms of material and design.



*View from New Street, looking east, along the laneway to Ross Cottages.*



*A typical existing arrangement for outdoor dining on New Street.*



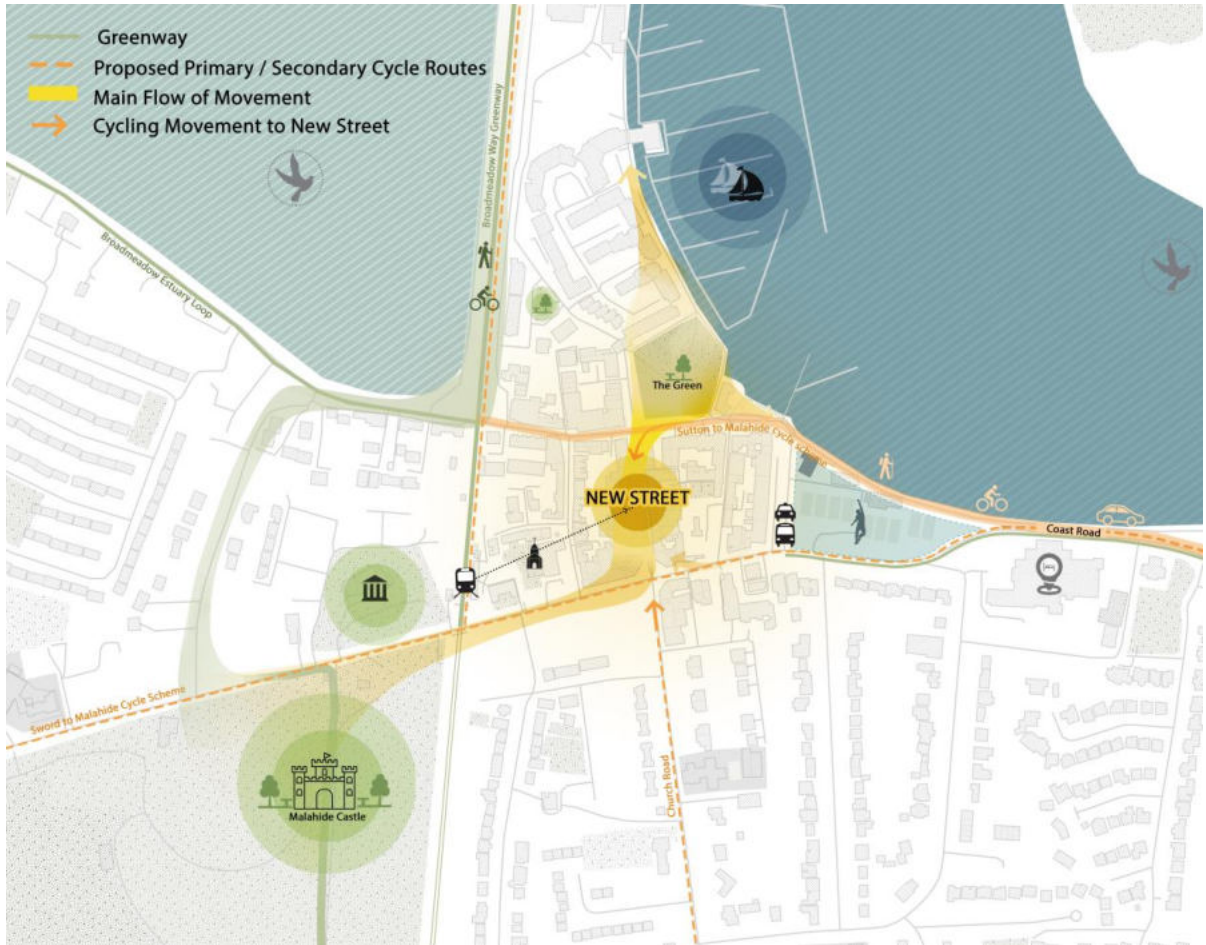


*An example of the range of street furniture currently on site.*

## **2.2 Wider Physical Context**

In its wider context, New Street is located in close proximity to Broadmeadow Estuary, recognised internationally as an environmentally important asset due to it being designated as a Special Area of Conservation, Special Protection Area and proposed Natural Heritage Area. The street is also located within the Architectural Conservation Area of Malahide (ACA), with protected structures and monuments located in the vicinity. New Street is served by good public transport links. It is close to many recreational and tourist amenities and commercial opportunities in Malahide. A number of planned cycle routes and strategic infrastructure interface with the site, including the Fingal Coastal Way and Sutton to Malahide Pedestrian and Cycle Scheme.





Plan diagram illustrating New Street in the wider context of Malahide. Not to Scale.



Photo taken at the south-western corner of Malahide Green, looking north, towards the Marina.



### 2.3 Existing Trees

Existing trees have been surveyed by *The Tree File* arborists in accordance with BS 5837:2012. BS 5837:2012 calls for a realistic assessment of the viability of retaining trees in the context of proposed construction. The British Standard has been used here to rigorously assess the stock of existing trees and to make recommendations which are realistic and represent a fair assessment of the quality and long-term viability of the trees on site.

The Tree Survey describes the physical condition of the trees and the way in which the trees are interacting with the surrounding urban environment. It highlights the conditions in which the trees have been planted and the consequent continuing damage to the adjacent paved surfaces. The survey identifies the particular issue of species selection and the expected future and ongoing maintenance requirements with regard to lifted and cracked paving surfaces.

A total of 11 Norway Maple (*Acer platanus*) trees exist on the site at New Street. Of the 11 trees, three have been identified as 'Category B2' and seven trees are noted as 'Category C2'. Tree no. 1782, to the north, has been classed as 'Category U'. This tree has been identified as unsuitable for retention, as a result of its poor condition, regardless of whether or not development is proposed. Excluding Tree no. 1782, a total of ten trees are considered for replacement.

The Tree Survey, the Tree Constraints Plan and the Arboricultural Impact Assessment, produced by *The Tree File* are included in the overall pre-planning package.

Refer to Section 3.7 of this document for tree replacement proposals.





*Existing trees at New Street. Black rubber surfacing has been installed locally to replace lifted and cracked paving.*



*Existing trees at New Street. Granite kerbs are pushed out of alignment at the base of the tree.*



### 3 Consultation and Design Process

#### 3.1 Summary of Non-Statutory Consultation Process

DFLA worked closely with *Connect the Dots (CtD)* and FCC in non-statutory stakeholder and public consultation as well early engagement with relevant statutory bodies. Meetings were held regularly, and feedback was received on the emerging design in relation to planning, traffic, civils, environment, public realm, heritage and conservation, operations, archaeology and waste. In addition to the regular meetings and workshops, the following lists include the main meetings that took place with internal FCC stakeholders and external stakeholders, as part of the consultation process:

<b>Date</b>	<b>Attendees/Purpose</b>
22.06.2022	<i>FCC Departmental Stakeholders</i>
29.06.2022	<i>FCC Councillors</i>
01.07.2022	<i>An Garda Siochana</i>
01.09.2022	<i>FCC Departmental Stakeholders</i>
22.09.2022	<i>FCC Councillors</i>
18.10.2022	<i>Workshop with Disability Representatives</i>
21.10.2022	<i>FCC Departmental Stakeholders</i>
27.10.2022	<i>Early Engagement with Statutory Bodies</i>

Two non-statutory public consultation events were held in Malahide Library, facilitated by CtD with support from DFLA. The events occurred on the following dates:

<b>Date</b>	<b>Attendees/Purpose</b>
09.07.2022	<i>Public Consultation Event 1</i>
24.09.2022	<i>Public Consultation Event 2</i>

These in-person non-statutory public consultation events were complemented by online submissions. During the design process a number of options were developed by the design team with FCC, in response to feedback from stakeholders. The proposals were considered in detail and revised to reflect comments during consultation where possible. For example, the locations of trees and other proposed planting was revised to allow for more direct lines of site, quantity and locations of public seating was revised and updated, kerb alignments and drainage strategy clarified and developed in detail.

The results from the non-statutory public consultation (in-person and online) were analysed and summarised in two reports, prepared by CtD and published online by FCC. Where possible, and in line with the overall brief and objectives for the proposed public realm



improvements, the feedback received at the events and from the online submissions was incorporated into the proposals.

### **3.2 Design Principles**

DFLA have developed a number of design principles which have helped to formulate the public realm proposals. The design principles have emerged following the period of consultation and after having gained an understanding of the context and setting of the project, through site visits and meetings with stakeholders. The design principles (DPs) are summarised below:

- **DP1. An understanding of the wider context:** recognising New Street as a key node within the overall urban and historic fabric of Malahide, as well as a hub for an emerging active travel network;
- **DP2. New Street as a destination:** realise the potential of the street as a destination and build on its existing positive qualities to create a distinct identity which would be attractive to locals and visitors alike;
- **DP3. Facilitate flexibility of use:** recognise and allow for future change while at the same time ensuring a recognisable, enjoyable and welcoming experience, in sympathy with the Architectural Conservation Area;
- **DP4. Promote material and aesthetic quality:** avoid clutter and develop a suite of site-specific interventions which help to create a coherent and legible space, with a sense of material unity.
- **DP5. Deploy innovative solutions:** use low tech (SuDS) as well as high tech (Smart) innovation to expand the functionality and added-value of public realm.

### **3.3 Public Realm Design Strategy**

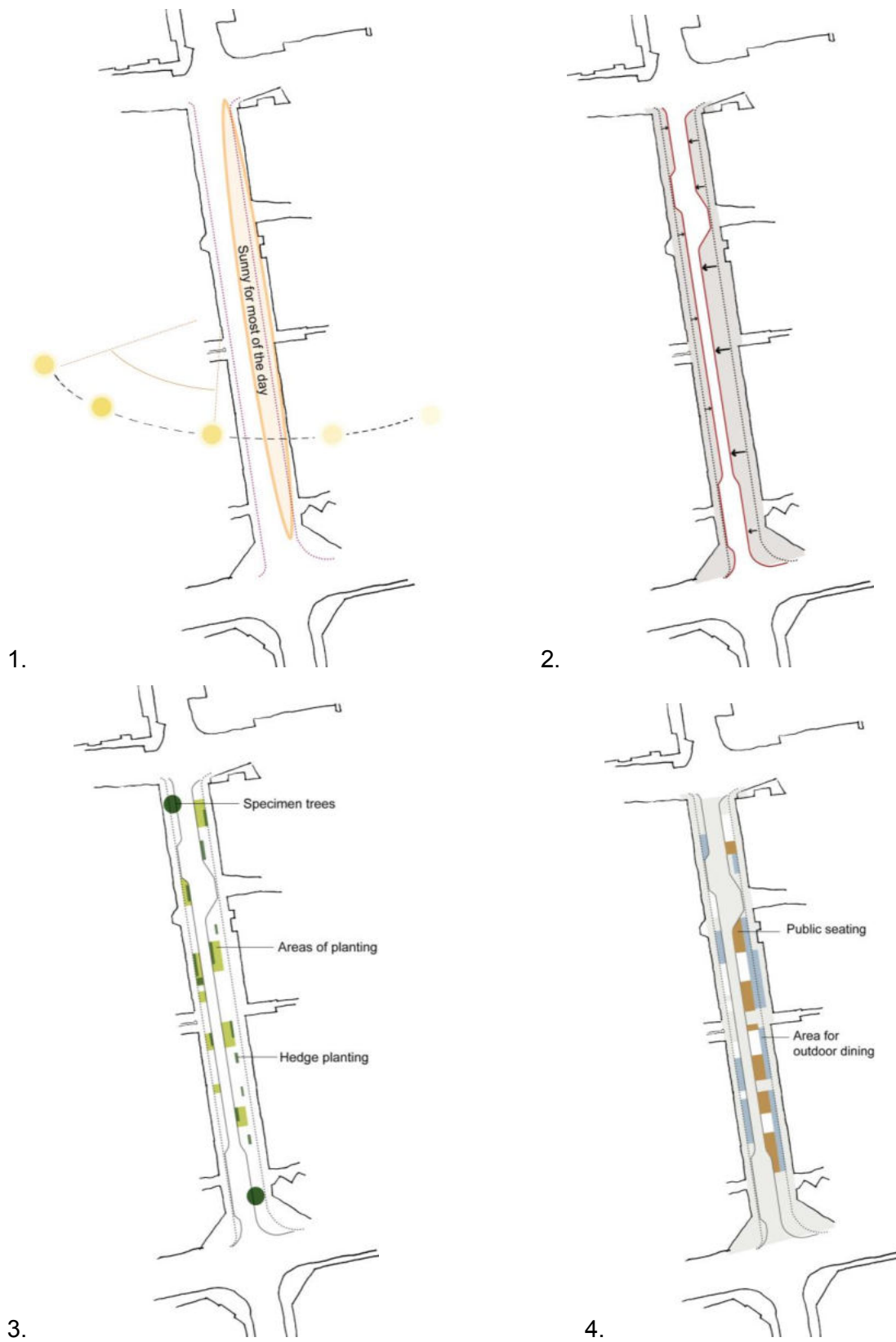
The design principles help to generate a strategy for the public realm improvements for a pedestrianised New Street, which was formulated in conjunction with FCC and the design team in order to integrate the existing site context, architecture, improved circulation and accessibility, traffic, civil engineering, lighting, archaeological and ecological considerations with the overarching public realm design and the key objectives of the brief. These include:



- Provision of a high-quality urban environment which enhances the 'sense of place' on the street and respects the context as part of Malahide's Historic Core Architectural Conservation Area;
- Consider accessibility and safety for people of all ages and abilities;
- Find a balance between existing and possible future proposed uses along the street in a way which is attractive to visitors and locals alike;
- Innovate, taking into account principles of sustainability and resilient public spaces;
- Ensure access for local residents, deliveries, fire tender, emergencies and refuse collection;
- Provide opportunities for resting and socialising to increase dwell time, while at the same time taking into consideration overall functionality;
- Provide trees and planting as well as incorporating sustainable drainage solutions.

New Street is a key node within Malahide's town centre. The public realm improvements increase the area provided for civic amenity along the thoroughfare and improve pedestrian priority and accessibility for the public. It creates new opportunities for visitors and passers-by to engage and enjoy the space by increasing the width of the footpath on either side of the street. The eastern side remains sunny for the majority of the day; therefore, an asymmetric layout is proposed, taking full advantage of the orientation. Large trees are proposed to 'book-end' the street and signify threshold, tying the public realm into its surrounding context. Areas of planting are proposed as the main organisational device, incorporating sustainable urban drainage (SuDS) and increasing biodiversity on site. Opportunities for seating, art and informal play installations are proposed to be located in between the areas of soft landscape. Some areas of planting are also proposed to be introduced to act as buffer zones between public use and existing residential buildings. Clearly marked zones for outdoor dining are proposed to be organised in linear strips on both sides of the narrowed central carriageway.





A range of plan diagrams was developed to inform the design and organisation of the proposed public realm. These include organisation as response to orientation (1), kerb alignment and drainage (2), soft landscape as an organisational and drainage device (3), delineation between civic space and outdoor dining (4).



### 3.4 Conservation and Heritage

New Street is located in the *Malahide Historic Core Architectural Conservation Area (ACA)* and the proposals for public realm have been developed as a direct response to the ACA and in conjunction with FCC Architects and FCC Architectural Conservation Officers. During the design process FCC Architectural Conservation Officers played a central role in determining the nature of the proposals.

The proposed public realm elements have been considered to be in sympathy with the historic context. The space is proposed to be substantially open to allow a fuller appreciation of the existing buildings. The existing granite kerbs are proposed to be re-laid in their existing alignment. New high-quality materials, including Irish stone paving, channels and other details are also proposed as part of the public realm design to complement the existing character of the street. These are outlined in further detail in Section 4. It is proposed that historic interpretation will form part of the materials palette and detailing for the street. Examples of material detailing for interpretation include the engraving of paving flags to tell the story of the street and disseminate the heritage of the place as part of the visitor experience.

The proposals are cognisant of, and seek to address, the Malahide Historic Core Architectural Conservation Area Statement of Character, in the area of declutter and views and specifically with regard to the following policies:

*Cluttered traffic signage and poles prevent proper appreciation of buildings and architectural spaces in the ACA. Fingal County Council will therefore seek to minimise clutter through the use of innovative integrated designs. Designs for lighting, signage and fittings such as parking meters, litter bins and bollards should be of a scale sympathetic to the character of the ACA. Where historic evidence of street furniture does not survive, new elements should be chosen to be high quality and low-key, and conspicuous arrays of lamp standards or bollards should be avoided. (p.54)*

*Trees have been planted along the Dublin Road, Old Street, New Street Church Road, The Mall and Diamond and while the trees provide welcome greenery, they have been planted in very limited space and consequently reduce the pavement widths and obscure proper views of the buildings. (p.55)*

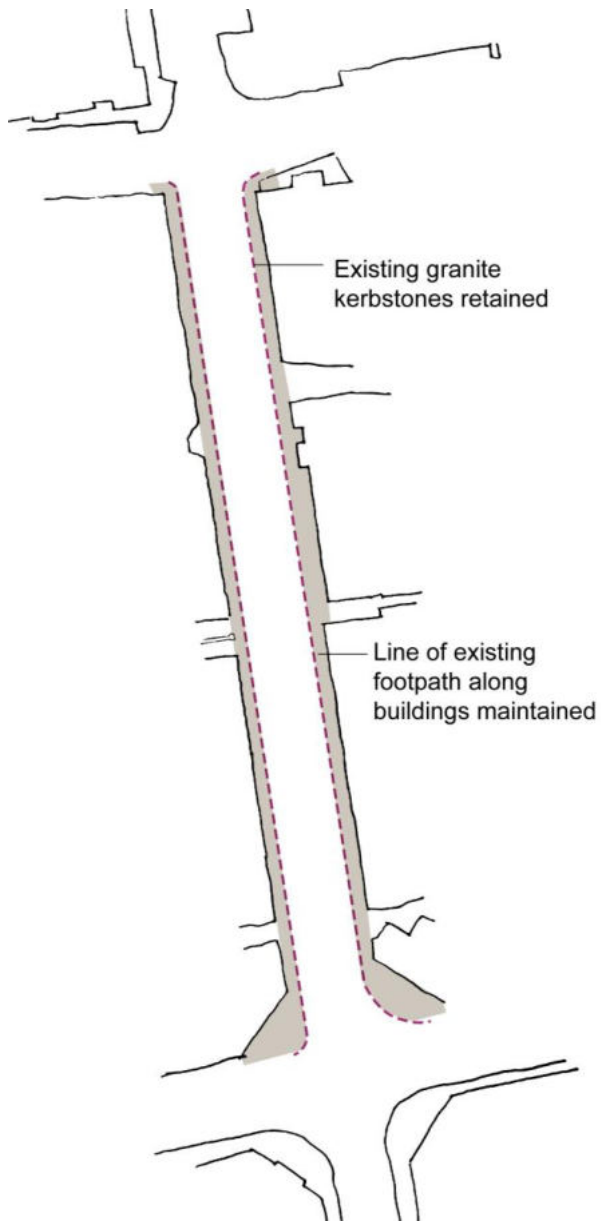


Please also refer to the *Architectural Heritage Assessment* produced by *Coady Architects* and included in the overall planning package.



*Examples of historic interpretation forming part of the surface materials palette.*





*Plan diagram to highlight the extent of the existing footpaths (grey brown) and the alignment of existing granite kerbs (dashed red line). The kerbs are proposed to be lifted, protected and re-laid in their current alignment. Not to Scale.*



### **3.5 Accessibility, Circulation and Access**

New Street has a generally uniform slope from the Diamond north down to Strand Road, with approximately six metres change in level. In that context the proposals have been designed to make the public realm as accessible as possible. Design tools of note that have been developed, either as part of the general design process, or specifically arising from consultation with relevant and interested parties include:

- A rational approach to the organisation of elements on the street
- The retention of the existing building fronts, or 'shoreline', clear of furniture
- Retractable bollards to limit traffic on the street
- Signage for cyclists to dismount
- The use of differential surfacing
- The use of dropped kerbs where appropriate at crossings
- Wall mounted public lighting to minimise the number of poles
- Pull-in areas for occasional loading
- Seating for resting and pausing
- Smart digital functionality throughout the street

The retention of the existing building frontage, provides two north-south zones for pedestrian circulation which follow the building line at its existing gradient. These zones are effectively the same as the existing footpaths, with the kerbs in the same alignment but re-laid flush where the footpath is extended into the area that is currently tarmac carriageway. They are proposed to be free from obstacles or clutter. Public seating is proposed at key locations along the street to provide opportunities for rest. 'Outside' the original kerb alignment differential surfacing is used to demarcate areas for planting, public seating, cycle stands and other street furniture. The 'carriageway' is reduced in width to allow for one-way use during certain times of the day (except at the north end of street where two-way is required locally for access to Ross Cottages at all times) and access for residents, emergency vehicles and deliveries.

The proposed public realm improvements include a time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and an unrestricted two-way access from Strand Street to Ross's Terrace via New Street. 2no. loading bays are proposed at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.

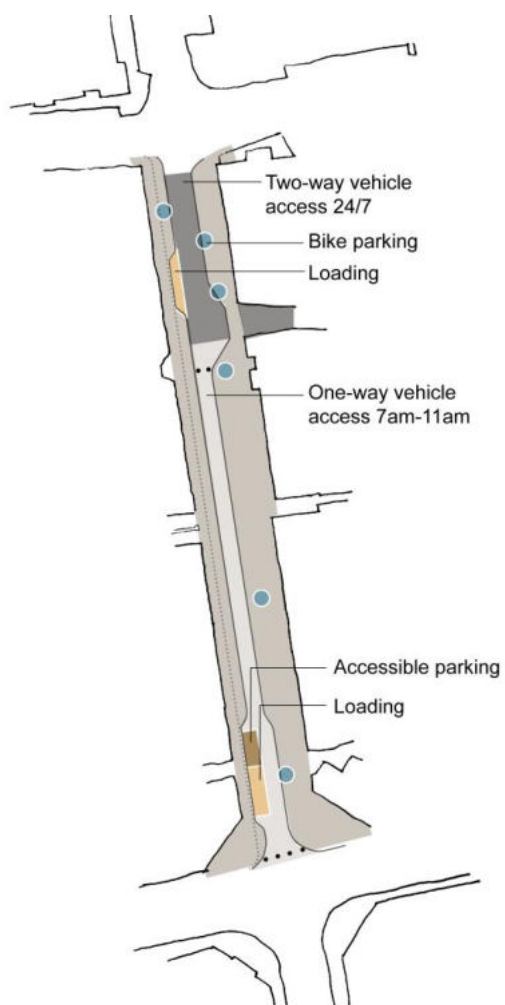
Cyclists will be required to dismount on entering the street. Cycle parking stands are proposed throughout, particularly at the northern and southern thresholds. Parking for

unusual or emerging bicycle formats and sizes such as cargo bikes and e-bikes is also catered for.

The proposed improvements shall be in accordance with the relevant accessibility regulations and best practice.



*Images illustrating examples of e-bike charging station and cargo bike parking.*



*Plan diagram – access and circulation. Not to Scale.*



### **3.6 Sustainability**

The public realm proposals include the use of locally sourced materials such as Irish stone, sustainably sourced timber for seating, indigenous plant species where possible, and Sustainable Urban Drainage Systems. Please refer to Section 4 for more detail on proposed materials.

The proposed public realm improvements for a pedestrianised New Street will bring positive impacts in terms of enhancing the streetscape at New Street and promoting active travel modes with improved facilities for pedestrians and cyclists. Other significant considerations include minimising the use of steel poles and signage as well as the use of cowled and energy efficient light fittings to minimise light pollution and reduce carbon emissions.

A separate *Mechanical and Electrical Services Installations* report is produced by *Axiseng Consulting Engineers* and included in the overall planning package.

### **3.7 Tree Replacement**

Historically, the spatial impact of trees on New Street has varied. For extensive periods of time there were no trees on the street. Today, the spatial character of the street is generally asymmetrical with trees remaining on the western side of the street, and most of the trees that were on the eastern side now removed. Please refer to Section 2.3 for a brief description of the existing trees and reference to the technical documents that form part of the overall pre-planning package.

As part of the public realm improvements at New Street it is proposed that the existing trees are replaced with new trees which will increase the number of trees on the street, broaden the diversity of tree species, and therefore the resilience of the street, increase the potential for biodiversity, facilitate sustainable urban drainage (SuDS), planted in more extensive green areas with larger soil volumes. The new trees will be less deleterious to existing building fabric, requiring less maintenance in the form of pruning, cleaning gutters and repairs to pavements, and will improve pedestrian safety. The proposal for tree planting has taken the ACA into consideration, in that it opens up the street spatially, allowing a better appreciation of the historic buildings and shop fronts. It is also considered in an integrated fashion with the proposed provision of improved below ground services and drainage infrastructure.

As described in Section 2.3 the existing trees have been surveyed by *The Tree File* arborists in accordance with BS 5837:2012. The British Standard has been used to rigorously assess the stock of existing trees and to make recommendations which are realistic and represent a fair assessment of the quality and long-term viability of the trees on site. In addition to the

arboricultural assessment, the existing trees were also visually assessed by DFLA and by representatives of Fingal County Council (FCC), including The *FCC Tree Officer* and landscape architects from *FCC Parks & Landscape*. As part of the assessment of trees, an on-site meeting and site walk was carried out in September 2022 with *FCC Tree Officer*, *FCC Parks and Landscape*, *FCC Architects*, *FCC Environment Climate Action and Active Travel*, and DFLA, during which the trees were inspected and the wider area, micro-climate and ground conditions were noted and discussed, with a view to understanding which species could be used to replace the existing trees.

Collectively, the existing trees are recognised by *The Tree File* as being relatively young trees, of fair health, which have achieved less than 20% of their ultimate species mass. Due to the fact that they have yet to grow significantly, thereby exacerbating the issue of lifting, cracked paving and associated safety, operations and maintenance requirements, as well as the context within which they are planted with unsuitable ground conditions, *The Tree File* has recommended that they should be replaced with new trees of more contextually compatible species with sustainable, purposely designed underground conditions.

Proposals for the planting of new trees planting and their integration with the overall proposed works, using constructed tree pits where required with the requisite volume of soil, as well as how trees are used as part of the Sustainable Urban Drainage System (SuDS), are described in Section 4. The proposals for tree planting are integrated with the overall proposals in the sense that the narrowing of the carriageway provides space for new trees to be planted in a more central location, somewhat removed from the buildings.

In addition to the proposed new trees on New Street, *FCC Parks & Landscape* shall organise the planting of new trees at Malahide Green, which is outside the subject site, but which complements the proposals for New Street, by increasing the canopy cover overall and specifically at Malahide Green, while at the same time allowing for a spatial proposal which is sympathetic to the ACA and the architectural heritage of New Street. Furthermore, it is proposed to upcycle and reuse the trunks of the tree to be removed, as timber beams as part of a unique climbable sculpture at Malahide Green.

Generally, the proposal for tree replacement is driven by, or assists FCC in achieving, the objectives of policies 3, 4, 5, 6, 8, 9 of *The Forest of Fingal*.

Please refer to the Tree Survey, Tree Constraints Plan and Arboricultural Impact Assessment produced by *The Tree File* and included in the overall planning package.





early 1900s



early 1900s



1930s



1940s



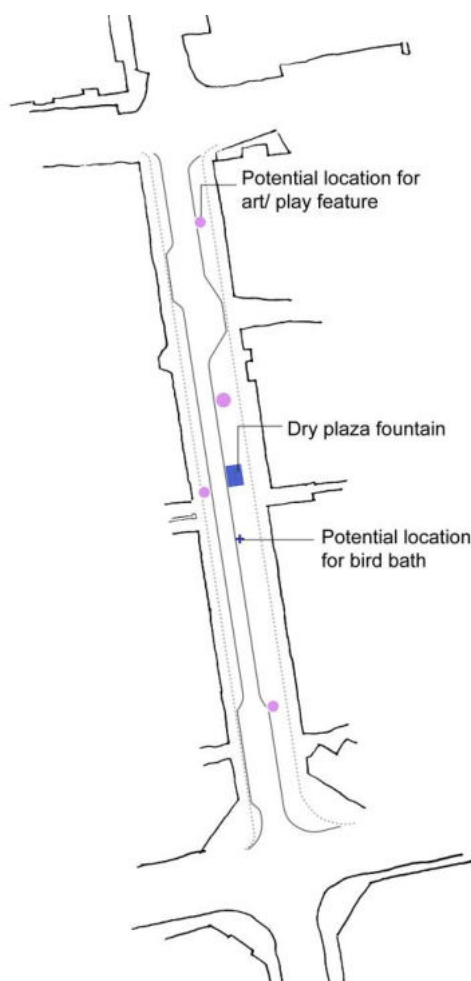
1987

*Various photographs of New Street illustrating the lack of trees historically.*

### 3.8 Unique Elements and Loose Furniture

A number of unique elements are proposed, such as art/play features and a dry plaza fountain. While the detail of these elements is subject to a more detailed design process, their proposed locations are illustrated in the diagram below. They are generally located within the proposed north-south strip that accommodates sustainable urban drainage (SuDS), public seating and other street furniture.

The management of loose, or movable, outdoor furniture for dining which may be used by premises has been considered in terms of the layout of the street, with loose furniture proposed to be located in secondary strips of space running north-south parallel to the main north-south strip as described above.



*Plan diagram illustrating the locations of unique features. Not to scale.*



## 4. Proposed Materials

*Drawing 2001 Public Realm Plan*, includes a legend and schedule of proposed materials including soft landscape and hard landscape finishes. It illustrates the location and extent of surface materials and furniture, groundcover and herbaceous planting, hedge and tree planting.

### 4.1 Tree planting

The design proposals include significant new tree planting throughout the site area. Trees are proposed to replace the existing trees, but also generally improve the species mix on site. The proposed tree species are selected for suitability to local conditions and microclimate, biodiversity and where required suitability for close proximity to buildings.

The proposed tree planting, of varying species and size, has been carefully considered in three distinct arrangements: trees on the west side of the street, trees and shrubs in bioretention areas on the east side of the street and specimen trees at each end of the street.

Large specimen trees are proposed to 'book-end' the street to the north and south. These are the native Scot's pine (*Pinus*) at the Malahide Green end and London plane (*Platanus orientalis* 'Minaret') at the Diamond end. On the west side of the street, an informal alignment of multi-stem snowy mespilus (*Amelanchier lamarkii*) is proposed. Tree planting to the east consists of a variety of species planted in bio-retention areas such as the native downy birch (*Betula pubescens*) and snowy mespilus for continuity across the carriageway to the snowy mespilus on the west. A total of 37 new individual trees is proposed.

In addition the native guelder rose (*Viburnum opulus*) is proposed for texture and leaf colour.

All proposed trees shall be planted in large below ground planting pits with substantial volumes of growing medium.



*Images illustrating examples of the typical proposed tree species. Left; Scot's pine, Right; right snowy mespilus.*

#### **4.2 Hedge, Herbaceous, Groundcover**

The proposed planting is conceived as subtle layering of greens within the open spaces, giving way to flower and foliage colour seasonally. The planting is proposed to be layered as follows; lowest - bulb planting, mid-height groundcover planting, highest - clipped hedge planting.

The landscape design proposals proactively address the issue of biodiversity on the site both in terms of the primary design intent and in terms of management of the planting over time. Education and information are also an important factor with regard to for example sustainable drainage, given the diversity of use and user type at New Street, with the possibility of small information panels integrated into the edges of the bio-retention areas. Typical low groundcover and hedge planting is illustrated below.





*Images illustrating examples of the typical spatial effect of the low planting proposed.*

#### **4.3 Sustainable Urban Drainage Systems (SuDS)**

*Punch Consulting Engineers* and DFLA have collaborated to integrate proposed SuDS elements within the overall public realm proposals. The proposed system comprises a series of bio-retention areas which are located centrally in a north-south arrangement along the street. The bio-retention areas are proposed to help clean and slow down the rate of storm water run-off. They also provide an important opportunity to introduce planting onto the street.

For more detail on the storm water drainage proposals please refer to documentation produced by *Punch Consulting Engineers* which is included in the overall planning package.



*Proposed moisture tolerant groundcover and herbaceous planting (from left to right): Astilbe, Juncus (sedge).*

#### **4.4 Hard Landscape Materials and Street Furniture**

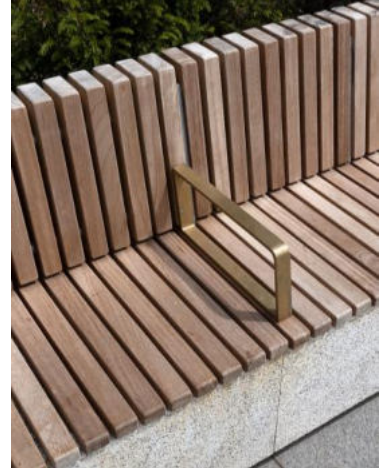
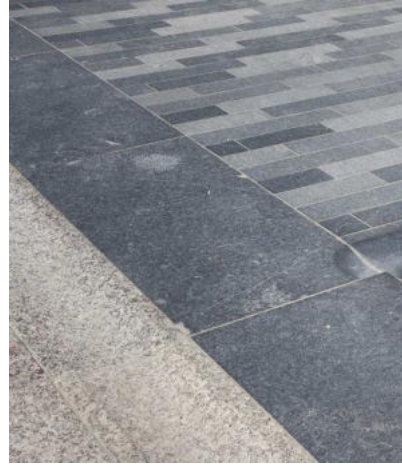
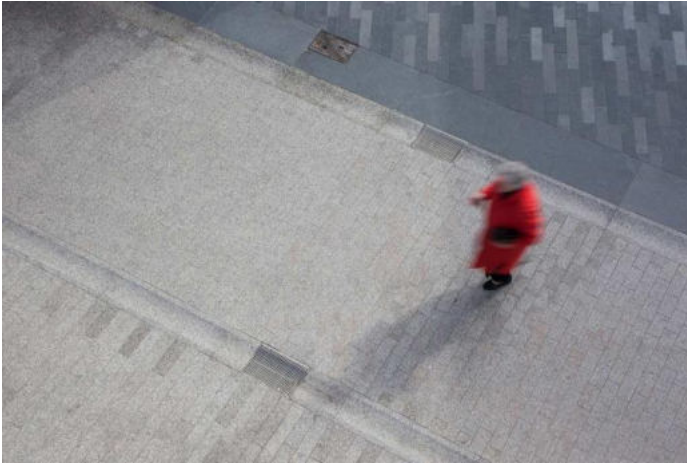
The proposed public realm facilitates ease of day-to-day use and encourages informal interaction along the street. It incorporates a full range of public realm functions. These include resting, play, circulation, accessible parking, bicycle parking, access for delivery and emergency vehicles. The selection of hard landscape materials is determined by function but also to provide a cohesive palette of materials across the site. The materials palette has been developed to build on the existing character of Malahide. In keeping with the principles established in FCC's Malahide Historic Core Architectural Conservation Area Statement of Character, the public realm has been designed in way that is sympathetic to the character of the street, minimising clutter and establishing a palette of high-quality materials with a low-key, consistent design, colour and style. In addition, durability, robustness and the specific nature of how the materials are proposed to be detailed is of critical importance to the success of the proposals. The selection of both surfacing and furniture is also proposed to provide cohesion and contrast throughout the public realm. Irish limestone and Leinster granite, in a variety of formats and finishes as differential surfacing are proposed for the pedestrian and vehicular areas. These are also proposed for finishes to the low retaining walls forming the edges to the bio-retention areas along the eastern side of the street.

#### **4.5 Public Lighting**

In order to minimise clutter and reduce the number of poles on the street, light fittings are proposed to be wall-mounted where possible. The proposals for public lighting allow for an uninterrupted space in the centre of the street which will benefit from the character of the planted bio-retention areas as well as the civic spaces with public seating, modest incidental play or art pieces and parking facilities for cyclists.

For more detail on the lighting proposals please refer to documentation produced by *Axiseng Consulting Engineers* which is included in the overall pre-planning package.





*Images illustrating the expected effects of the palette of hard landscape materials proposed, including Irish limestone and Leinster granite in variety of formats and finishes, heritage and conservation interpretation and a variety of seating elements that take into consideration day-to-day maintenance and management (from top to bottom): Waterford Viking Triangle by GMKD Architects, Peace Park Dublin by DFLA and Wolfe Tone Square Dublin by DFLA.*

**END.**

**RE: PUBLIC REALM IMPROVEMENTS  
FOR A PEDESTRIANISED NEW  
STREET, MALAHIDE**



**ENVIRONMENTAL IMPACT  
ASSESSMENT SCREENING  
REPORT**

February 2023

**BMA** PLANNING



## Contents

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## 1.0 INTRODUCTION

### 1.1 PURPOSE OF THE REPORT

This report is the Environmental Impact Assessment (EIA) Screening Report for proposed public realm improvements for a pedestrianised New Street at Malahide, Co. Dublin (hereafter the “**proposed public realm improvements**”). This report has been prepared in accordance with the applicable provisions of Directive (2011/92/EU) of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 (the “**EIA Directive**”) and the Planning and Development Regulations 2001 (as amended) (the “**2001 Regulations**”).

This EIA Screening Report has been prepared so as to enable the Competent Authority to consider whether the proposed public realm improvements are likely to have significant effects on the environment such that an EIA is required, in accordance with the provisions of the EIA Directive.

### 1.2 OVERVIEW OF THE PROPOSED PUBLIC REALM IMPROVEMENTS

The proposed public realm improvements are typical of works undertaken in urban areas throughout Ireland with the purpose of enhancing public streetscapes and in promoting sustainable transport modes and encouraging walking and cycling as priorities over the private car. The National Planning Framework (NPF), for example, sets out 10 National Strategic Outcomes and 75 National Policy Objectives to enable all parts of Ireland, urban and rural to accommodate growth and change. National Policy Objective 27 seeks to “*ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages*”. The proposed public realm improvements for a pedestrianised New Street, Malahide represent a positive example of this national policy being given local effect by Fingal County Council throughout the County, but in particular in “Town and District Centres” such as Malahide.

Public realm improvement works of this kind generally fall well below relevant EIA thresholds due to the localised nature and limited scale of the works and because they are located within the existing built environment.

Prior to the outbreak of Covid-19 in March 2020, New Street, Malahide accommodated two-way traffic movement. Following a government mandate to review road networks in urban areas to identify areas that could prioritise pedestrian and cycle movements, New Street was pedestrianised from June 2020 to December 2020. This arrangement was modified to a one-way system for vehicular traffic from December 2020 to June 2021. In June 2021, Fingal County Council pedestrianised New Street. As a result, there is currently time limited one-way



access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Diamond to New Street and two-way access from Strand Street to Ross's Terrace via New Street.

The proposed public realm improvements are now being brought forward for a pedestrianised New Street to enhance the public realm in line with local, regional and national land use planning and transportation policies. The proposed public realm improvements for a pedestrianised New Street will bring positive impacts in terms of enhancing the streetscape at New Street and promoting active travel modes with improved facilities for pedestrians and cyclists. This EIA Screening Report considers whether the pedestrianisation and proposed public realm improvements to New Street are likely to have significant effects on the environment compared with the position in 2019 when there was two-way traffic on New Street. In addition, and for completeness, as is evident from table 4.2 below, this EIA Screening Report has also considered whether there are any likely significant effects arising when comparing the proposed public realm improvements for a pedestrianised New Street with the current position on New Street today.

The proposed public realm improvements involve the widening of footpaths and provision of new kerb edges to the widened footpaths and public spaces on New Street, Malahide (c.150m in length, 0.22ha). The trafficable section of New Street will be realigned and narrowed and control measures will be inserted to provide for revised traffic flow routes, restrictions, car parking and loading arrangements.

All street surfaces will be upgraded and existing street trees replaced with new trees and added soft landscaping. Outdoor dining zones will be identified and new street furniture installed. New public lighting will be provided and the water services and utilities networks within the street will be upgraded.

### **1.3 QUALIFICATIONS**

This report has been compiled by BMA Planning under the direction of John Murphy. John Murphy is a qualified town planner with BMA Planning, Planning and Development Consultants since 2004. He has an undergraduate degree from the University of Galway and a Masters in Regional and Urban Planning (MRUP) from University College Dublin. He is a corporate member of the Irish Planning Institute and operates in accordance with their code of professional conduct.

As a planning consultant for over 18 years, he has extensive experience in major urban development and infrastructure projects throughout Ireland, including the preparation of multiple Environmental Impact Assessment Screening Reports and Environmental Impact Assessment Reports for residential, commercial and infrastructure projects.

### **1.4 TECHNICAL SUPPORTING DOCUMENTS**

This EIA Screening Report has been prepared with the benefit of the information and technical reports from the project design team contained within the appendices to this report.

#### List of Appendices

- A. Site Location and Site Layout Plans prepared by DFLA
- B. Archaeological Assessment by Archaeology Plan
- C. Architectural Heritage Assessment by Coady Architects
- D. Report for Screening for Appropriate Assessment by Faith Wilson Ecological Consultant
- E. Engineering Planning Report by Punch Consulting Engineers
- F. Construction Management Plan by Punch Consulting Engineers
- G. Construction & Demolition Waste Management Plan by Punch Consulting Engineers
- H. Site Specific Flood Risk Assessment by Punch Consulting Engineers
- I. Traffic & Transport Assessment by Punch Consulting Engineers
- J. Arboricultural Report by the Tree File Consulting Arborists.
- K. List of Planning Permissions (see Section 3.1.4 below).



## 2.0 LEGISLATION, GUIDELINES, AND REQUIREMENTS FOR EIA SCREENING

### 2.1 RELEVANT LEGISLATION & GUIDELINES

The EIA Directive requires that projects likely to have significant effects on the environment are made subject to an assessment with regard to their effects on the environment before development consent is given for such projects.

Projects listed in Annex I of the EIA Directive (as transposed in Part 1 of Schedule 5 to the Planning and Development Regulations 2001 (as amended)), and projects listed in Annex II of the EIA Directive (as transposed in Part 2 of Schedule 5 to the 2001 Regulations) that equal or exceed the thresholds set out in Part 2 of Schedule 5 to the 2001 Regulations, require a mandatory EIA.

Projects listed in Annex II, that do not equal or exceed the thresholds set out in Part 2 of Schedule 5 to the 2001 Regulations, require screening to determine whether an EIA is required.

Therefore in order to determine whether an EIA is required, it is necessary to:-

- 1) Review the proposed public realm improvements against the classes of projects set out in Annex I of the EIA Directive, as transposed into Irish law by Part 1 of Schedule 5 to the 2001 Regulations. Annex I projects require mandatory EIA and, as such, there is no screening determination required; and
- 2) Review the proposed public realm improvements against the classes of projects and thresholds set out in Annex II to the EIA Directive (as transposed in Part 2 of Schedule 5 to the 2001 Regulations) and Part 2 of Schedule 5 to the 2001 Regulations. Where a proposed development falls into a class of project set out in Annex II to the EIA Directive (as transposed in Part 2 of Schedule 5 to the 2001 Regulations) and the relevant thresholds set out in Part 2 of Schedule 5 to the 2001 Regulations are met or exceeded, EIA is mandatory and no screening determination is required.
- 3) However, for “sub-threshold” development (that is, development falling within a class of project identified in Annex II to the EIA Directive (as transposed in Part 2 of Schedule 5 to the 2001 Regulations) but below the relevant threshold set out in Part 2 of Schedule 5 to the 2001 Regulations), a screening determination is required to be undertaken in order to ascertain whether by virtue, inter alia, of its nature, size or location, that development would be likely to have significant effects on the environment such that an EIA is required.

This EIA Screening Report has been prepared having regard to the following documents:-

- *Interpretation of Definitions of Project Categories of Annex I and II of the EIA Directive (European Commission, 2015)*

- *Environmental Impact Assessment of Projects: Guidance on Screening (European Commission, 2017)*
- *Ministerial Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning, and Local Government, 2018).*
- *OPR Practice Note PN02: Environmental Impact Assessment Screening (Office of the Planning Regulator, 2021).*
- *Guidelines on Information to be contained in Environmental Impact Assessment Reports (Environmental Protection Agency, 2022).*

As set out in the “Ministerial Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment” (2018), screening is the initial stage in the EIA process and determines whether or not specified public or private developments are likely to have significant effects on the environment and, as such, require EIA to be carried out prior to a decision on a development consent application being made. A screening determination is a matter of professional judgement, based on objective information relating to the proposed project and its receiving environment. Environmental effects can, in principle, be either positive or negative.

The Environmental Protection Agency’s *Guidelines on Information to be contained in Environmental Impact Assessment Reports* provide a flow diagram of the screening process, which is the process that has been followed in the preparation of this EIA Screening Report, as follows:-



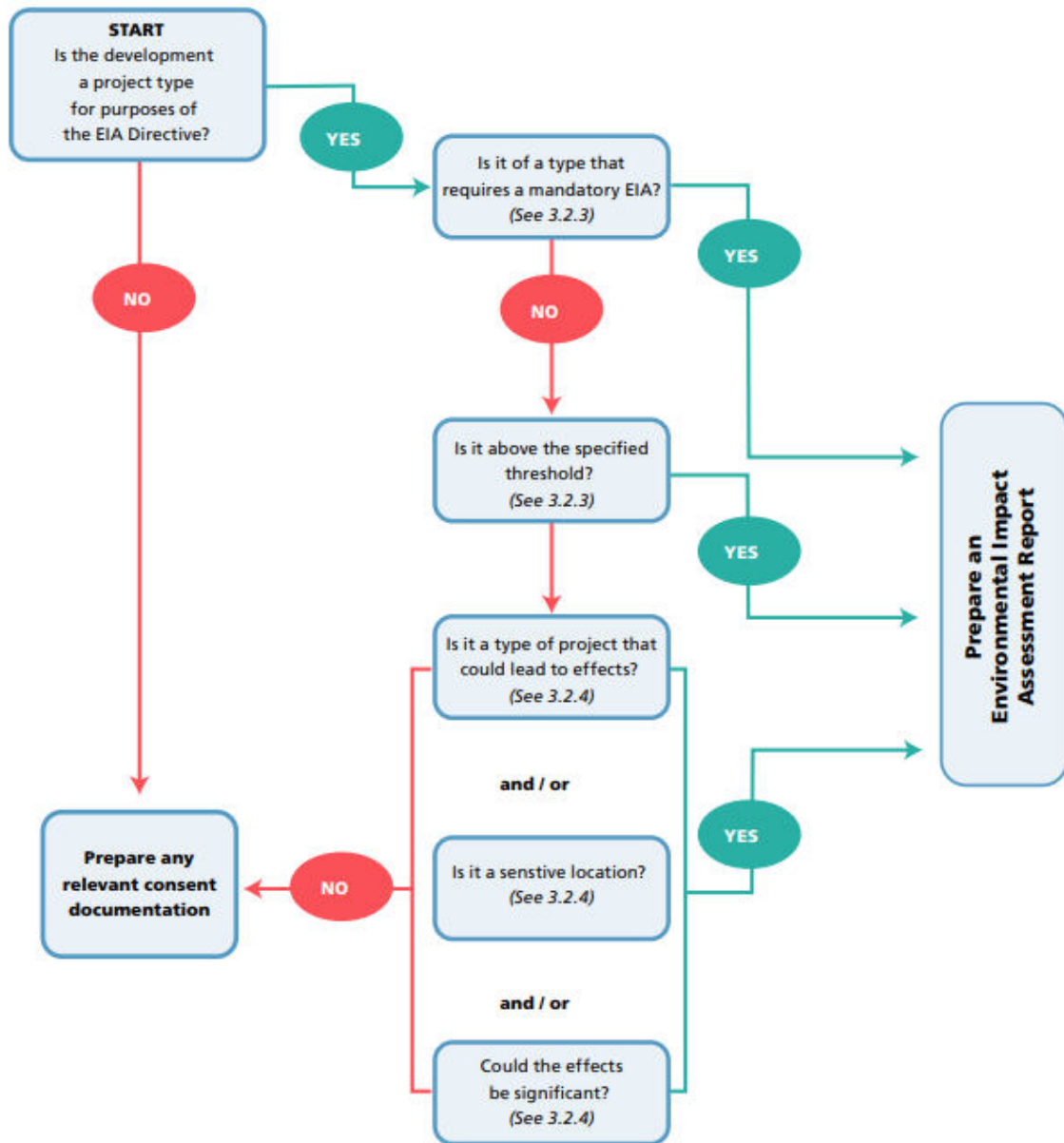


Figure 3.2 Screening

(Source: *Guidelines on Information to be contained in Environmental Impact Assessment Reports* (Environmental Protection Agency, 2022)).

## 2.2 REQUIREMENT FOR MANDATORY EIA

The proposed public realm improvements do not fall within any of the classes of projects identified in Annex I to the EIA Directive and listed in Part 1 of Schedule 5 to the 2001 Regulations, which require a mandatory EIA.

Furthermore, the proposed public realm improvements do not meet or exceed the thresholds set out in Part 2 of Schedule 5 to the 2001 Regulations for any of the classes of projects identified in Annex II to the EIA Directive (as transposed in Part 2 of Schedule 5 to the 2001 Regulations).

The class of project set out in Part 2 of Schedule 5 to the 2001 Regulations which is most relevant to the proposed public realm improvements is Class 10(b)(iv), which appears under the heading "Infrastructure Projects" and is:-

*10. Infrastructure projects*

*(a) .....*

*(b) (i) Construction of more than 500 dwelling units.*

*(ii) Construction of car-parks providing more than 400 spaces, other than a car-park provided as part of, and incidental to the primary purpose of, a development.*

*(iii) Construction of shopping centres with a gross floor space exceeding 10,000 square metres*

*(iv) **Urban development which would involve an area greater than 2 hectares in the case of a Business District, 10 hectares in the case of other parts of a built-up area, and 20 hectares elsewhere.** (In this paragraph "business district" means a district within a city or town in which the predominant land use is retail or commercial use.)*

**(emphasis added)**

The proposed public realm improvements are located in a business district and therefore the relevant threshold for the purposes of Class 10(b)(iv) is "an area greater than 2 hectares."

The proposed public realm improvements, being a street of 150m in length with a site area of 0.22ha, fall well below this threshold and therefore do not trigger a requirement for a mandatory EIA.



## 2.3 SUB-THRESHOLD EIA

As set out above, the proposed public realm improvements fall into Class 10(b)(iv) of Annex II to the EIA Directive, as transposed in Part 2 of Schedule 5 to the 2001 Regulations, and do not exceed the relevant threshold of 2 hectares. Therefore the proposed public realm improvements are considered “sub-threshold development” and an EIA Screening is required.

The information to be provided by the developer for the purpose of screening for sub-threshold development is set out in Annex IIA to the EIA Directive, as transposed in Schedule 7A of the 2001 Regulations as follows:

1. *A description of the proposed development, including in particular—*
  - (a) *a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works, and*
  - (b) *a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.*
2. *A description of the aspects of the environment likely to be significantly affected by the proposed development.*
3. *A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from—*
  - (a) *the expected residues and emissions and the production of waste, where relevant, and*
  - (b) *the use of natural resources, in particular soil, land, water and biodiversity.*
4. *The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.*

Further, Annex III to the EIA Directive (as transposed in Schedule 7 to the EIA Directive) sets out the criteria to determine where a project (i.e. sub-threshold development) should be subject to EIA. The criteria for assessing sub-threshold development under the EIA Directive are grouped under three headings, namely (i) Characteristics of Proposed Development, (ii) Location of Proposed Development and (iii) Characteristics of Potential Impacts.

Competent authorities must have regard to these criteria in making a determination as to whether or not a sub-threshold development is likely to have significant effects on the environment by virtue inter alia of its nature, size or location and should be subject to EIA.

Schedule 7 to the 2001 Regulations (which transposes Annex III to the EIA Directive and includes an additional criterion over and above Annex III namely: “*the nature of any associated demolition works*”, which criterion has been considered as appropriate in this EIA Screening Report) states as follows: -

*‘CRITERIA FOR DETERMINING WHETHER DEVELOPMENT LISTED IN PART 2 OF SCHEDULE 5 SHOULD BE SUBJECT TO AN ENVIRONMENTAL IMPACT ASSESSMENT*

*1. Characteristics of proposed development*

*The characteristics of proposed development, in particular—*

- (a) the size and design of the whole of the proposed development,*
- (b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,*
- (c) the nature of any associated demolition works,*
- (d) the use of natural resources, in particular land, soil, water and biodiversity,*
- (e) the production of waste,*
- (f) pollution and nuisances,*
- (g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge, and*
- (h) the risks to human health (for example, due to water contamination or air pollution).*

*2. Location of proposed development*

*The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to—*

- (a) the existing and approved land use,*
- (b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground,*
- (c) the absorption capacity of the natural environment, paying particular attention to the following areas:*
  - (i) wetlands, riparian areas, river mouths;*
  - (ii) coastal zones and the marine environment;*
  - (iii) mountain and forest areas;*
  - (iv) nature reserves and parks;*
  - (v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;*
  - (vi) areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;*
  - (vii) densely populated areas;*



(viii) *landscapes and sites of historical, cultural or archaeological significance.*

3. *Types and characteristics of potential impacts*

*The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of ‘environmental impact assessment report’ in section 171A of the Act, taking into account—*

- (a) *the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected),*
- (b) *the nature of the impact,*
- (c) *the transboundary nature of the impact,*
- (d) *the intensity and complexity of the impact,*
- (e) *the probability of the impact,*
- (f) *the expected onset, duration, frequency and reversibility of the impact,*
- (g) *the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and*
- (h) *the possibility of effectively reducing the impact.’*

The following Sections 3.0 and 4.0 provide the information required by Schedule 7 and 7A to the 2001 Regulations as set out in the table below:-

<b>Schedule 7A to the 2001 Regulations</b>	<b>Relevant Section</b>
<p>1. <i>A description of the proposed development, including in particular—</i></p> <ul style="list-style-type: none"> <li>(a) <i>a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works, and</i></li> <li>(b) <i>a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.</i></li> </ul>	<p>Section 3.1 and Table 4.1</p> <p>Section 3.2 and Table 4.1</p>
<p>2. <i>A description of the aspects of the environment likely to be significantly affected by the proposed development.</i></p>	<p>Section 3.2 and Table 4.2</p>

<b>Schedule 7A to the 2001 Regulations</b>	<b>Relevant Section</b>
<p>3. <i>A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from—</i></p> <p><i>(a) the expected residues and emissions and the production of waste, where relevant, and</i></p> <p><i>(b) the use of natural resources, in particular soil, land, water and biodiversity.</i></p>	<p>Section 3.1 and Table 4.1</p> <p>Section 3.2 and Table 4.1</p>
<p>4. <i>The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.</i></p>	<p>Section 3 and Table 4.1</p>



## **3.0 DESCRIPTION OF THE PROJECT**

### **3.1 CHARACTERISTICS OF PROPOSED DEVELOPMENT**

This section provides a description of the physical characteristics of the proposed public realm improvements for a pedestrianised New Street.

#### **3.1.1 Development Description**

The proposed public realm improvements will comprise: -

- (i) Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
- (ii) Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
- (iii) Upgrade of all street surfaces.
- (iv) Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
- (v) Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
- (vi) Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
- (vii) Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
- (viii) Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
- (ix) New public lighting.
- (x) Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.
- (xi) Provision of ducting for existing and future utilities and piped infrastructure.
- (xii) All associated site and development works.

Fingal County Council will be providing regulatory traffic signs (including regulatory signs which give effect to a pedestrianisation of New Street) in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

### 3.1.2 Site Context and Location

New Street is generally characterised by two storey terraced buildings incorporating a mix of residential dwellings, shops, restaurants and public houses. The street slopes down from south to north and incorporates footpaths on the eastern and western sides, street trees and a roadway that previously accommodated two-way traffic movement. Pedestrian crossings are provided at the northern and southern ends of the street.

Prior to the outbreak of Covid-19 in March 2020, New Street, Malahide accommodated two-way traffic movement. Following a government mandate to review road networks in urban areas to identify areas that could prioritise pedestrian and cycle movements, New Street was pedestrianised from June 2020 to December 2020. This arrangement was modified to a one-way system for vehicular traffic from December 2020 to June 2021. In June 2021, Fingal County Council pedestrianised New Street. As a result, there is currently time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Diamond to New Street and two-way access from Strand Street to Ross's Terrace via New Street.

The proposed public realm improvements are now being brought forward for a pedestrianised New Street to enhance the public realm in line with local, regional and national land use planning and transportation policies. This EIA Screening Report considers whether the pedestrianisation and proposed public realm improvements to New Street are likely to have significant effects on the environment compared with the position in 2019 when there was two-way traffic on New Street. In addition, and for completeness, as is evident from table 4.2 below, this EIA Screening Report has also considered whether there are any likely significant effects arising when comparing the proposed public realm improvements for a pedestrianised New Street with the current position on New Street today.

The lands to the rear of the existing buildings on New Street comprise a mixture of rear gardens/ courtyards used for amenity and servicing purposes and are accessed either directly through the buildings or via laneways. There is an additional side street off New Street known as Ross Terrace, providing access to Ross Cottages to the rear (east) of New Street. New Street Mall is located on the western edge of New Street and comprises a pedestrian mall space with shop and office units at ground and first floor levels. A car park is also located to the rear of New Street Mall and the vehicular entrance to this car park is provided from Strand Street.

The surrounding land uses comprises a mix of retail, commercial and residential uses accommodated within a series of streets including Old Street and Railway Avenue to the west, Townyard Lane and James Terrace Upper to the east and Main Street, The Mall and Church Road to the south.

New Street connects to The Green which is located north through the junction with Strand Street and links to Malahide Marina Village. The western side of The Green comprises a development of 3 to 4 storeys with ground floor units accommodating Starbucks and Tesco. The eastern side of this street is the site of a large landscaped urban space completed in 2021,



incorporating passive green spaces, seating and pathways leading to Malahide Estuary wall to the east.

**Figure 3.1** illustrates the location and extent of the site at New Street, Malahide.

### **3.1.3 Size and Design**

The site comprises New Street, Malahide, a street of c.150m in length, c.14m wide with an area of 0.22ha.

The proposed public realm improvements include widening of footpaths and provision of new kerb edges. The existing granite kerbstones will be retained, realigned and protected within the widened footpaths and public spaces.

The trafficable section of New Street will be realigned and narrowed along New Street (c.150m in length). All street surfaces will be upgraded including new carriageway surfacing and natural stone paving to the widened footpaths.

#### Access and Parking

Control measures will be inserted to provide for traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and an unrestricted two-way access from Strand Street to Ross's Terrace via New Street. Signage will be installed to give effect to a pedestrianised New Street.

The proposed public realm improvements include the provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.

Cycle parking is provided for standard cycles, cargo bikes and ebikes within cycle stands at 6no. locations on New Street. Provision is made for 23no. cycle parking spaces.

#### Landscaping

Hard and soft landscaping improvements are proposed along the full length of New Street. These include the removal and replacement of 11no. existing trees with species appropriate to the location and environment. Additional soft landscaping and green infrastructure comprises planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas. Outdoor dining zones including tables and chairs and other ancillary moveable structures are identified on the proposed New Street with street furniture provided including seating, benches, litter and recycling bins and a water feature.

### Services Infrastructure

Available records and survey information confirms that the existing stormwater drainage network on New Street comprises a 225mm stormwater piped concrete sewer flowing south to north connecting to a 225mm stormwater piped concrete sewer flowing west to east on Strand Street. As part of the public realm improvements, interception measures will be provided to reduce and treat surface generated on site. Stormwater on site will be routed to road gullies and channels to inspection chambers with inlets to bioretention areas. These bioretention areas will then connect into the existing 225mm stormwater sewer which will be diverted clear of all bioretention areas.

Existing foul drainage comprises a 225mm foul sewer running west to east on the street connecting to Ross Cottages to the south of the site, a 300mm foul sewer running east to west along Strand Street and a 225mm foul sewer running west to east along Main Street. As part of the public realm improvements a new gravity design network is proposed within a relocated 300mm diameter foul sewer proposed along New Street and connecting to the existing 300mm foul sewer on Strand Street.

Watermain infrastructure in the area comprises 3" and 200mm watermains on New Street and 3" watermains on both Strand Street and Main Street. As part of the public realm improvements, the existing 3" watermain on New Street will be replaced with a 150mm watermain.

Regarding mechanical and electrical Services, the proposed public realm improvement works will provide for new services, relocating of existing services and removal of redundant infrastructure. 110mm ducts will be provided to accommodate existing and future services. New public lighting fixtures will be provided.

#### **3.1.4 Cumulation of Effects**

EIA screening requires consideration of the potential cumulation of effects with other existing and/or approved projects.

To understand the potential cumulative effects of the proposed development with other existing and/or approved projects, firstly a review of the Fingal County Council online database for recent planning permissions (in the past 5 years) within the site and within the buildings adjoining the subject site has been undertaken.

There are no planning permissions for other developments within the application site red line at New Street.

As described above, New Street comprises a mix of residential dwellings, shops, restaurants and public houses. **Appendix K** contains a list of the planning permissions granted within the buildings on New Street. These permissions generally relate to development (e.g. extension,



reconfiguration, change of use, signage) that typically occurs within an established and developed urban village and comprise works that do not give rise to any likely significant cumulative effects with the proposed public realm improvements.

In addition, a review of recent permissions within the wider '*TC – Town and District Centre*' zoned area of Malahide Village was also completed. Landscape improvements to The Green, located directly to the north of the site, were granted in 2017 (Ref. Part XI/007/17) and completed in 2021 and included layout revisions, installation of paving, street furniture and recontouring of the open space, and do not give rise to any likely significant cumulative effects with the proposed public realm improvements. Also of note is the permitted Broadmeadow Greenway, granted permission by An Bord Pleanála (Bord Ref. YA06F.304624) in May 2020 and comprising a greenway between Malahide Demesne and Newbridge Demesne. The route of the permitted greenway is located c.150m to the west of the New Street/ Strand Street junction. The permitted Broadmeadow Greenway, like the existing Baldoyle Portmarnock Greenway, is part of a wider network of greenways proposed for Fingal and includes the planned Sutton to Malahide Greenway, all of which will promote and facilitate Active Travel within Malahide and the wider county and does not give rise to any likely significant cumulative effects with the proposed public realm improvements.

Outside of the village area, it is possible that other projects, including proposed Strategic Housing Developments (SHDs) in the Malahide Road and Back Road areas of Malahide, will be under construction at the same time as the current project. These projects will be at a remove from the site at New Street and are a significant distance away from it. The primary cumulative impact would likely relate to construction traffic, however construction traffic relating to these other projects would not need to enter or travel through Malahide Village and so is unlikely to give rise to any likely significant cumulative effects with the proposed New Street public realm improvements.

### 3.1.5 Associated Demolition Works

No buildings are proposed to be demolished. The development includes the removal and disposal of the existing surface treatments and trees which will to be undertaken in accordance with best practice and recycled and reused where possible. Refer to **Construction and Demolition Waste Management Plan** [Punch Consulting Engineers] where this is clearly set out.

### 3.1.6 Use of Natural Resources

The works are proposed to the existing hardstanding surfaces within New Street. Ground disturbance during the construction phase will be kept to a minimum with removal of existing surfaces and service diversions requiring excavation of some soils.

There are 11no. existing trees on New Street. All are proposed to be removed. The existing trees have been surveyed and are considered to be contextually incompatible and it is the project arborist's view that retention of the existing trees would lead to irreparable damage and trip hazards. A total of 37no. new trees are proposed and the proposed tree species are selected for suitability to local conditions and microclimate, biodiversity and where necessary suitable for close proximity to buildings. Refer to **Arboricultural Report** [The Tree File] where this is set out.

### 3.1.7 Production of Waste

The development will involve localised excavation with the main waste type generated being soil/ stones and existing surface treatments. Table 3.1 below is extracted from the **Construction and Demolition Waste Management Plan** [Punch Consulting Engineers] and provides estimates of the construction and demolition wastes/ material surpluses that are likely to arise.



Construction Waste Material	Quantity	Actions
Metal	2t	Not envisaged at this stage of the project*
Concrete	50t	50% of any waste concrete to be recycled and 50% to be properly disposed of
Paper & Cardboard	1t	100% of any waste packaging to be recycled
Plastic		100% of any waste packaging to be recycled
Wood	2t	100% of any waste timber to be recycled
Mixed Waste	15t	Waste materials will be recycled where possible or disposed of appropriately
Mineral (bricks, gypsum)	5t	100% of any waste masonry to be recycled
Soil/Stones	840t	100% of any soil or stones to be recycled and reuse on site subject to suitability of material
Residues	10t	Any other waste materials will be recycled where possible or disposed of appropriately
<b>TOTAL Arisings</b>	<b>925t</b>	

**Table 3.1: Estimated C&D Waste Arisings on Site (Source: Construction and Demolition Waste Management Plan by Punch Consulting Engineers.)**

Where waste materials are moved off site, it is the intention to engage specialist waste service contractors, who will possess the requisite authorisations, for the collection and movement of waste off-site, and to bring the material to a facility which currently holds a Waste Licence/ Waste Permit/ Certificate of Registration. Waste management will to be undertaken in accordance with best practice. Refer to **Construction and Demolition Waste Management Plan** [Punch Consulting Engineers] where this is set out. The **Traffic and Transport Assessment** (hereafter TTA) [Punch Consulting Engineers] has considered the volumes of traffic that will be generated during the construction phase and concludes that these will be small in comparison to existing traffic flows in the general area and therefore there are no likely significant effects arising.

### **3.1.8 Pollution and Nuisances**

Due to the nature, scale and character of the proposed development, the potential for pollution and nuisances is limited and would be confined primarily to the construction phase.

During construction, there is some potential for short-term negative impacts related to dust to occur, however this will be limited to the works area. Potential short-term noise/ vibration impacts may arise during construction activities and will also be limited to the works area. Best practice construction site management will minimise dust and noise/ vibration emissions during the short construction phase and therefore any effects on the environment are not likely to be significant.

There is potential for silt run off or accidental spillage of fuels, construction materials etc. during the construction phase. Due to the limited nature and scale of works involved however, the potential effects are not considered to be likely or significant on this project.

The TTA concludes that the small volumes of construction stage traffic will be absorbed within the network and the effects of construction related traffic in terms of pollution and nuisances are not likely to be significant.

### **3.1.9 Risk of Major Accidents or Disasters**

The northern end of the site is located within Flood Zone A for fluvial flooding. The proposed public realm improvements are classified as a Water Compatible Development under the '*The Planning System and Flood Risk Management Guidelines 2009*' and as such are appropriate for this location. Refer to ***Site Specific Flood Risk Assessment*** [Punch consulting Engineers] which says that the proposed development is considered appropriate for this location and will not increase the flood risk elsewhere.

### **3.1.10 Risks to Human Health**

Storm Water interception measures are proposed to reduce and treat surface water generated on New Street during the operational phase of the development. The introduction of a dedicated foul sewer as part of the project will allow for foul connections directly from premises along New Street, thereby reducing the foul sewer effluent in the pre-existing stormwater system.



## 3.2 LOCATION OF THE PROPOSED DEVELOPMENT

This section provides a description of the location of the proposed development with particular regard to the environmental sensitivity of geographical areas likely to be affected.

### 3.2.1 Existing and Approved Land Use

The site is located within Malahide Village Centre which is zoned 'TC – Town and District Centre' in the *Fingal Development Plan 2017 - 2023*. This zoning objective is proposed to be retained in the *Draft Fingal Development Plan 2023 – 2029*.

All lands adjoining the site carry the same zoning objective except for The Green, located to the north and comprising a large landscaped urban space completed in 2021, incorporating passive green spaces, seating and pathways leading to Malahide Estuary wall to the east. These lands are zoned 'OS – Open Space'.

**Figure 3.2** illustrates the site in the context of the Fingal Development Plan Zoning Objectives Map 2017 – 2023.

The proposed public realm improvements are compatible with the existing established land use.

### 3.2.2 Natural Resources

#### Land & Soils

The site comprises an existing urban street with pavements and street trees. The proposed public realm improvements have been designed in response to the existing site contours and there will be no significant land reprofiling or movement arising from the proposed development. Excavated soils and stone arising from works to services infrastructure will insofar as is possible, be recycled and reused on site in accordance with the **Construction and Demolition Waste Management Plan** [Punch Consulting Engineers] which provides for the overall management of construction and demolition waste across the project in accordance with best practice.

#### Water

The existing hydrological environment is characterised by the presence of water associated with the Broadmeadow River and the Broadmeadow/ Malahide Estuary. The Geological Survey of Ireland data shows that the site is located within an area of extreme ground water vulnerability.

The *Strategic Flood Risk Assessment* prepared to accompany the *Draft Fingal Development Plan 2023 – 2029* provides flood risk maps for the area. This mapping demonstrates that the majority of the site is not at risk of flooding however, a small section of New Street towards the northern edge of the site at the junction with Strand Street is within Flood Zone A. Refer to ***Site Specific Flood Risk Assessment*** [Punch Consulting Engineers] which says that the proposed development is considered appropriate for this location and will not increase the flood risk elsewhere.

### **3.2.3 Absorption Capacity of Natural Environment**

This subsection relates to the absorption capacity of the natural environment, paying particular regard to: -

- (i) wetlands, riparian areas, river mouths;*
- (ii) coastal zones and the marine environment;*
- (iii) mountain and forest areas;*
- (iv) nature reserves and parks;*
- (v) areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;*
- (vi) areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;*
- (vii) densely populated areas;*
- (viii) landscapes and sites of historical, cultural or archaeological significance.'*

#### Landscape Character

The site is characterised as an established urban street framed by two storey terraced buildings. The street slopes down from south to north and incorporates footpaths on the eastern and western sides, street trees, parking and a roadway.

The proposed public realm improvements have been informed by the existing site context, the policies and objectives of the *Fingal Development Plan 2017 -2023* and *Draft Fingal Development Plan 2023 – 2029* and the location of the site within Malahide Historic Core Architectural Conservation Area.

#### Appropriate Assessment

The lands at New Street, Malahide are not designated for any nature conservation purposes.

Malahide Estuary SAC (Site Code: 000205) and Malahide Estuary SPA (Site Code: 004025) are located within 200m of New Street. Surface waters from New Street currently provide a



hydrological link (using the source – pathway – receptor criteria) from New Street to these sites.

**Figures 3.3 and 3.4** are extracts from the **Report for Screening for Appropriate Assessment (2022)** for the project prepared by Faith Wilson Ecological Consultant and illustrate New Street in the context of the above listed sites.

The AA Screening Report concludes, for reasons set out therein, on the basis of objective information and in view of best scientific knowledge and applying the precautionary principle, that the proposed development, either individually or in combination with other plans or projects, and without relying on any mitigation measures, is not likely to have a significant effect on any European Site(s), in view of the sites conservation objectives, and that there is no reasonable scientific doubt in relation to this conclusion.

### Built Heritage

A review of the Development Plan Record of Protected Structures confirms that there are no Protected Structures within the New Street site.

New Street is located in the Malahide Historic Core Architectural Conservation Area (ACA). Objective CH32 of the Development Plan provides guidance in relation to works within ACA's:

#### **Objective CH32**

Avoid the removal of structures and distinctive elements (such as boundary treatments, street furniture, paving and landscaping) that positively contribute to the character of an Architectural Conservation Area.

The National Inventory of Architectural Heritage (see **Figure 3.5**) includes two entries relating to New Street, Malahide: -

- Lamp Standard (Reg. No. 11344035): - *'Freestanding cast-iron gas lamp standard, c.1900, comprising chamfered square pedestal with foliated shaft, decorative double lamp fitting above'*.
- Shop/ Retail Outlet (Reg. No. 11344046): - *'Corner-sited end-of-terrace five-bay two-storey former house, c.1835, retaining original fenestration to first floor. Single-bay single-storey extension to east c.1890. Ground floor remodelled c.1975 with pair of aluminium shopfronts. Now in use as retail outlet. ROOF: Double-pitched; slate; concrete ridge tiles; nap rendered chimney stacks; yellow clay pots; cast-iron rainwater goods; half-pyramidal to end bay; slate; red clay ridge tiles; nap rendered chimney stack. WALLS: Roughcast; painted; raised nap rendered quoins; nap rendered to end bay and to gable end. OPENINGS: Square-headed window openings to first floor; stone sills; 2/2 timber sash windows; square-headed door openings to centre ground floor; replacement glazed aluminium door; timber shopfront, c.1890, to end*

*bay; panelled pilasters, decorative consoles, fascia and moulded cornice; replacement timber fixed-pane windows; pair of shopfronts to ground floor; aluminium fixed-pane display window; plastic fascia.'*

The lamp standard referred to within the National Inventory of Architectural Heritage has since been removed from the streetscape due to corrosion of fixtures and the potential for a danger to pedestrians from falling debris.

### Cultural Heritage

There are no recorded archaeological sites and monuments within the New Street site.



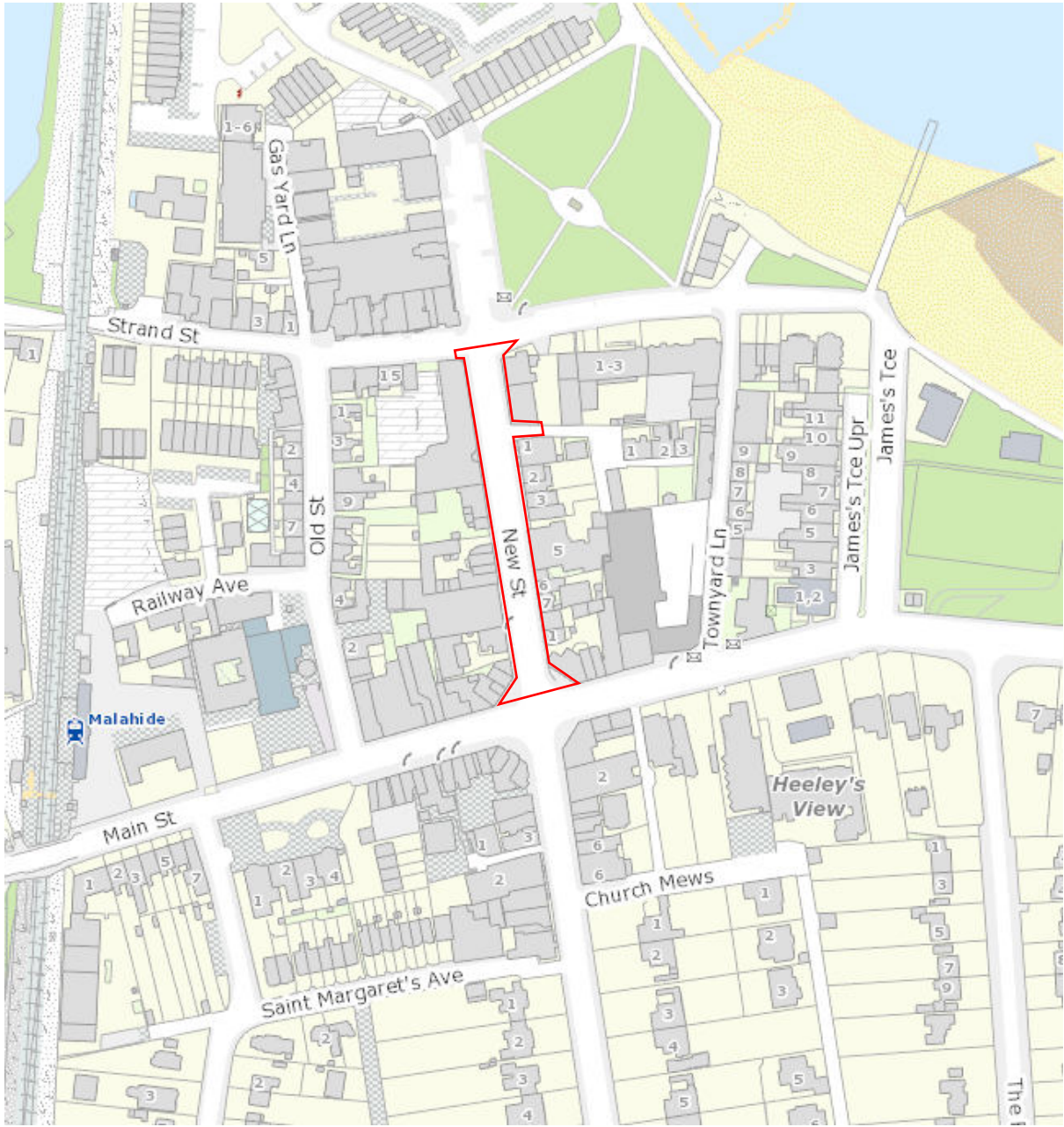













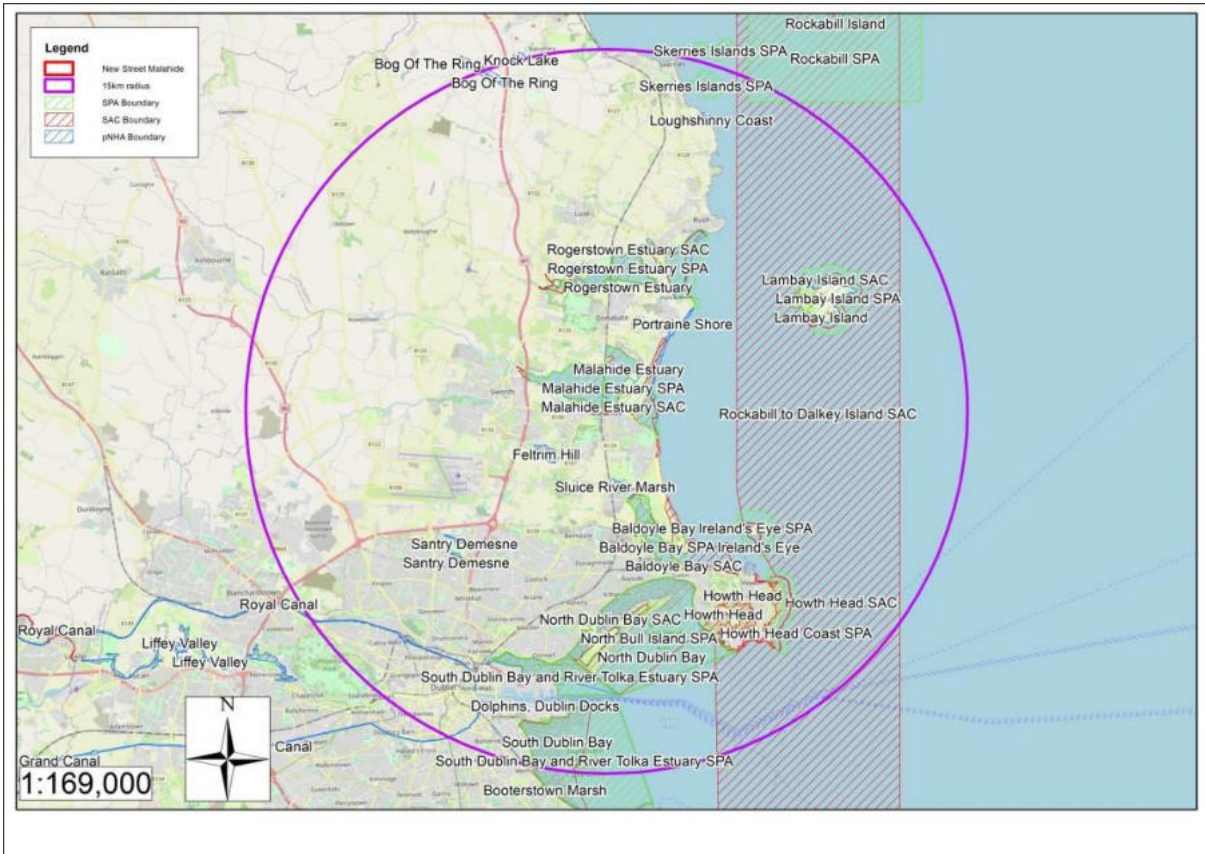
Figure 3.1: Location and Extent of the Site at New Street, Malahide



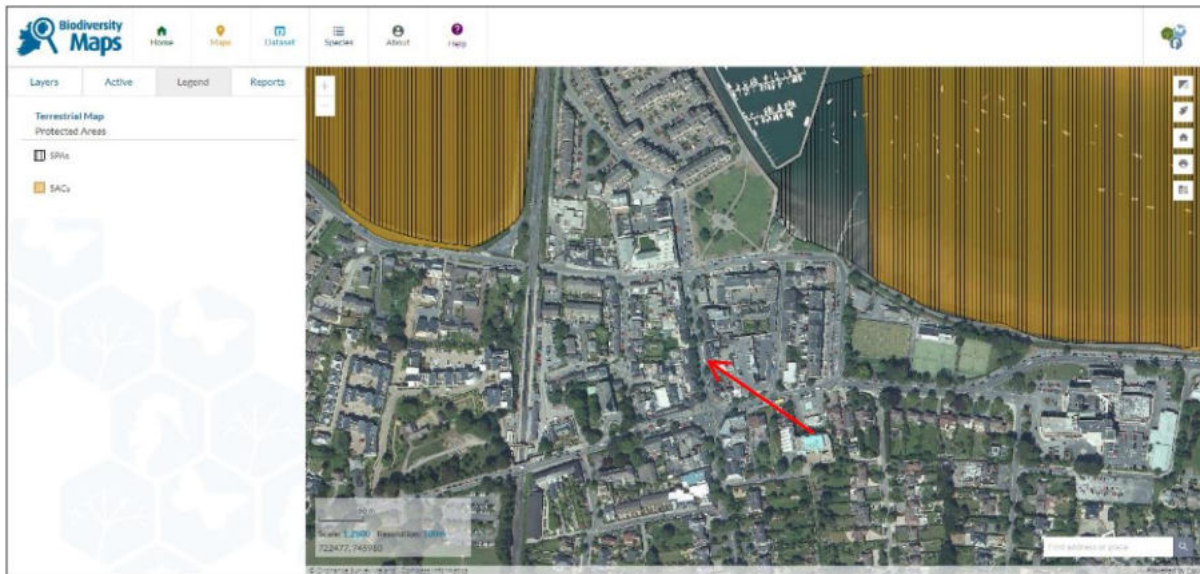
**Figure 3.2: Development Plan Zoning Objectives Map - Malahide Village Insert**  
 (Source: Fingal Development Plan 2017 – 2023)

Zoning Objectives	
	CI - Community Infrastructure Provide for and protect civic, religious, community, education, health care and social infrastructure
	GB - Greenbelt Protect and provide for a Greenbelt
	GE - General Employment Provide opportunities for general enterprise and employment
	HA - High Amenity Protect and enhance high amenity areas
	LC - Local Centre Protect, provide for and/or improve local centre facilities
	OS - Open Space Preserve and provide for open space and recreational amenities
	RA - Residential Area Provide for new residential communities subject to the provision of the necessary social and physical infrastructure
	RC - Rural Cluster Provide for small scale infill development serving local needs while maintaining the rural nature of the cluster
	RS - Residential Provide for residential development and protect and improve residential amenity
	RV - Rural Village Protect and promote the character of the Rural Village and promote a vibrant community in accordance with an approved Local Area Plan, and the availability of physical and community infrastructure
	TC - Town and District Centre Protect and enhance the special physical and social character of town and district centres and provide and/or improve urban facilities





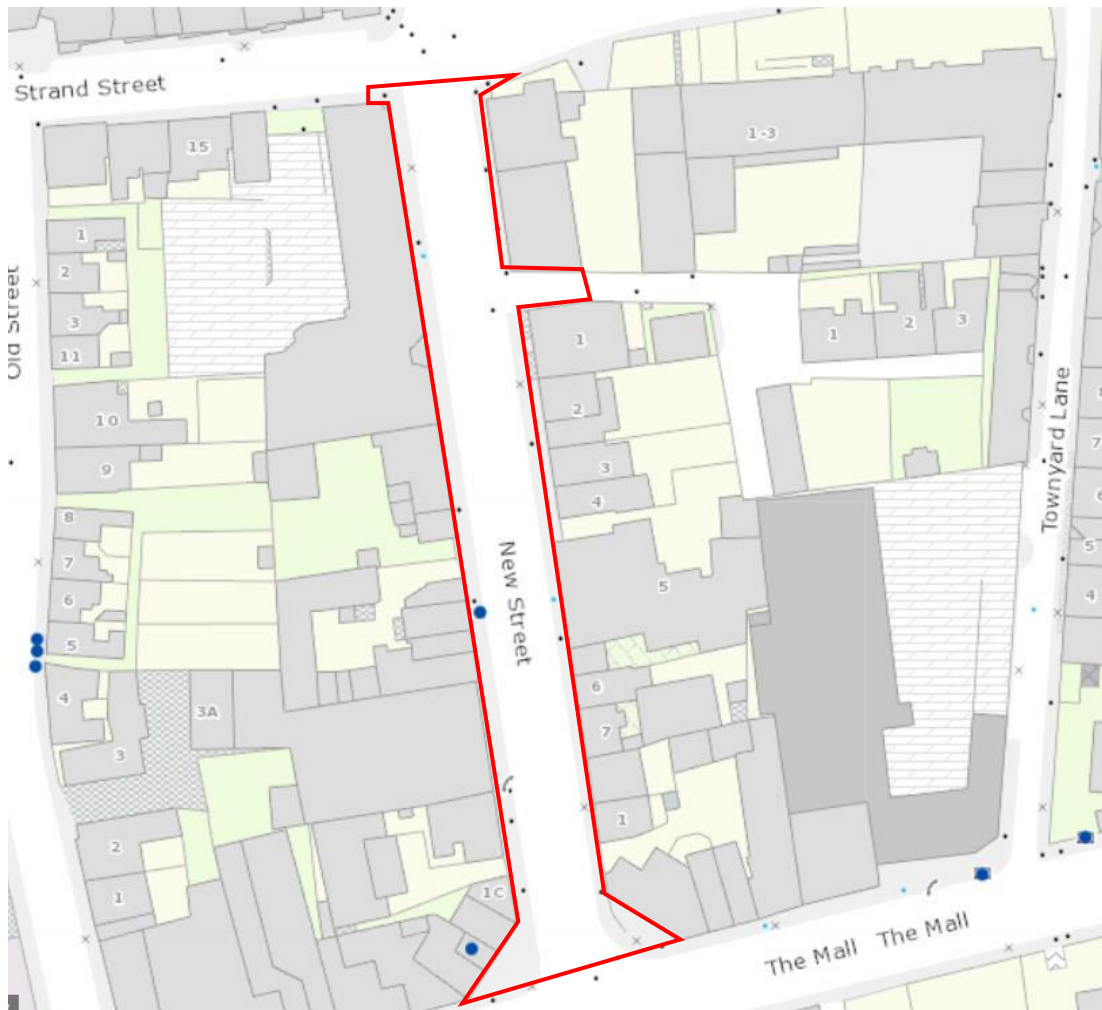
**Figure 3.3 Natura 2000 sites and pNHAs within the zone of influence of the New Street Development**  
 Source: Report for Screening for Appropriate Assessment (2022) for the project prepared by Faith Wilson Ecological Consultant



**3.4 Malahide Estuary SAC (Site Code: 000205) (shown in orange hatching) and Malahide Estuary SPA (Site Code: 004025) (shown in black hatching) are in close proximity to and downslope of New Street (indicated by the red arrow).**

Source: *Report for Screening for Appropriate Assessment (2022)* for the project prepared by Faith Wilson Ecological Consultant





**Figure 3.5: Historic Environment Viewer – NIAH Structures Shown with Blue Dot**

Source: Government of Ireland Historic Environment Viewer

## 4.0 SCREENING ASSESSMENT

To determine whether the project described in Section 3.0 above should be subject to an EIA, an assessment is undertaken utilising a series of checklists as follows: -

1. Table 4.1: Checklist of Criteria for Evaluating the Significance of Environmental Impacts
2. Table 4.2: Checklist of Potential Impacts by EIA Topic
3. Table 4.3: Screening Checklist.

Table 4.1 considers a series of screening questions based on the criteria listed under each grouped heading in Schedule 7.

Table 4.2 considers whether there are any likely significant effects arising under a number of environmental disciplines including those set out in Article 3 of the EIA Directive.

Table 4.3 utilises the Screening Checklist contained in the *Environmental Impact Assessment of Projects: Guidance on Screening (European Commission, 2017)*.

**Table 4.1: Checklist of Criteria for Evaluating the Significance of Environmental Impacts**

Questions	Comment
<b>Characteristics of the Proposed Development</b>	
<i>Is the scale of the project considered to be significant?</i>	No. The scale of the proposed public realm works on a site of 0.22ha and street length of 150m, is in keeping with the existing/ emerging pattern of development within Malahide Village in terms of size and design, and therefore there are no likely significant effects arising.
<i>Is the size of the project considered significant when considered cumulatively with other adjacent developments?</i>	No. Based on a review of other planning permissions granted on New Street and its vicinity there are no existing and/or approved developments which are likely to give rise to significant environmental effects or likely to give rise to significant cumulative environmental impacts with the New Street public realm improvements. The cumulative impacts of the completed development at The Green and permitted Broadmeadow Greenway project have been considered and cumulatively it is considered that these projects and the New Street improvements will have a positive impact on the environment in terms of promoting and facilitating Active Travel. It is therefore considered that there are no likely significant cumulative effects with other existing and/or approved projects.
<i>Will the project utilise a significant quantity of natural resources, in particular land, soil, water or biodiversity?</i>	No. The subject site is zoned 'TC – Town & District Centre' and is an established street within the centre of Malahide Village. The lands comprise an urban streetscape and there will be no meaningful



	diminution of natural resources in terms of land, soil, water or biodiversity and therefore there are no likely significant effects.
<i>Will the project produce a significant quantity of waste?</i>	<p>No.</p> <p>During the construction phase, small quantities of construction waste, as estimated in Table 3.1 above, will be collected by a suitably licensed contractor and sent to appropriately permitted waste or materials recovery facilities. The waste management hierarchy will be implemented onsite, which prioritises prevention and minimisation of waste, followed by re-use and recycling and therefore there will be no likely significant effects arising.</p> <p>Refer to Construction &amp; Demolition Waste Management Plan (Punch Consulting Engineers) which provides for the overall management of construction and demolition waste in accordance with best practice.</p>
<i>Will the project create a significant amount or type of pollution?</i>	<p>No.</p> <p>No significant water, air-borne or noise pollution is envisaged as a result of the proposed development. The proposed development is not a project type that will give rise to any likely significant emissions or pollution.</p>
<i>Will the project create a significant amount of nuisance?</i>	<p>No.</p> <p>The nature, scale and short-term duration of the works is not of a type that would give rise to significant nuisance. Implementation of best practice construction management measures will mitigate any nuisance such that there will be no likely significant effects. Refer to Construction Management Plan (Punch Consulting Engineers) which sets out the general construction approach and best practice management for the project.</p>
<i>Will there be a risk of major accidents?</i>	<p>No.</p> <p>The development site is not regulated or connected to or close to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations i.e. SEVESO and so there is no likely significant effects arise from this source. The proposed development involves public realm improvements within an urban street and is not at risk of major accidents, nor is the development as designed likely to increase the risk of a major accident in this location. The proposed construction works will employ best practice and be subject to the contractor's health and safety statements and other obligations under the relevant codes such that there will be no likely significant effects.</p>
<i>Will there be a risk of natural disasters, including those caused by climate change?</i>	<p>The potential natural disasters that may occur are likely limited to flooding. The potential for flooding arising from the New Street public realm improvement has been assessed within the Site Specific Flood Risk Assessment [Punch consulting Engineers]. It was determined that the northern end of New Street is located within Flood Zone A for fluvial flooding. The proposed public realm works are classified as a Water Compatible Development under the 'The Planning System and Flood Risk Management Guidelines 2009' and as such are appropriate for this location. The Site Specific Flood Risk Assessment concludes that the proposed development will not</p>

	increase flood risk on site or elsewhere. Therefore there are no likely significant effects arising.
<i>Will there be a risk to human health (for example due to water contamination or air pollution)?</i>	No. There is the limited potential for negative effects on human health during the construction phase as a result of potential emissions to air of dust, or potential emissions to land and water of hydrocarbons. Best construction site practices will be implemented which will prevent (i) any risk of pollution running off the site and (ii) the potential for airborne nuisance such that there will be no likely significant effects.
<i>Is the combination of the above factors likely to have significant effects on the environment?</i>	No. There are no factors above which when combined would result in the proposed development, due to its characteristics, having a likely significant effect on the environment.
<b>Location of the Proposed Development</b>	
<i>Has the proposed development the potential to impact directly or indirectly on any site designated for conservation interest (e.g. SAC, SPA, pNHA)?</i>	A Report for Screening for Appropriate Assessment has been prepared by Faith Wilson, Ecologist, and concludes on the basis of objective information and in view of best scientific knowledge and applying the precautionary principle, that the proposed development, either individually or in combination with other plans or projects, and without relying on any mitigation measures, is not likely to have significant effect on any European Site(s), in view of the sites conservation objectives, and that there is no reasonable scientific doubt in relation to this conclusion.
<i>Has the proposed development the potential to impact directly or indirectly on any habitats listed as Annex I in the EU Habitats Directive?</i>	No. There will be no negative direct or indirect impacts to or reduction in habitats lists as Annex I.
<i>Has the proposed development the potential to impact directly or indirectly on any habitats listed as Priority Annex I in the EU Habitats Directive?</i>	No. There will be no negative direct or indirect impacts to or reduction in habitats lists as Priority Annex I.
<i>Has the proposed development the potential to impact directly or indirectly on any species listed as Annex II in the EU Habitats Directive?</i>	No. There will be no negative direct or indirect impacts to or reduction to any species listed as Annex II.
<i>Has the proposed development the potential to impact directly or indirectly on any species listed as Annex IV in the EU Habitats Directive?</i>	No. There will be no negative direct or indirect impacts on any species lists as Annex IV.
<i>Has the proposed development the potential to impact directly or indirectly on any species listed as Annex I of the EU Birds Directive?</i>	No. There will be no negative direct or indirect impacts on any species listed as Annex I of the EU Birds Directive.
<i>Has the proposed development the potential to impact directly or indirectly on the breeding places of any species protected under the Wildlife Act?</i>	No. There will be no negative direct or indirect impacts on any breeding places of any species protected under the Wildlife Act.



<i>Has the proposed development the potential to impact directly or indirectly on the existing or approved land use?</i>	No. Malahide Village is zoned 'TC – Town & District Centre' in the Development Plan. From a land use planning perspective, the development is consistent with Development Plan zoning and policy objectives and the established pattern of development in the area and can be assimilated into the receiving environment without any likely significant effects on the environment.
<i>Has the proposed development the potential to significantly impact directly or indirectly the relative abundance, availability, quality or regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground?</i>	No. The proposed development can be accommodated on this site with no potential for significant negative effects on the abundance, availability, quality or regenerative capacity of the receiving natural environment and therefore no likely significant effects on the environment.
<i>Has the proposed development the potential to impact directly or indirectly on any protected structures or Recorded Monuments and Places of Archaeological Interest?</i>	No. There are no protected structures located within the proposed development site. There are no Recorded Monuments directly affected. New Street is located within an Architectural Conservation Area and the proposed public realm works are designed to enhance the streetscape and contribute positively to the character of the ACA. Refer to Architectural Heritage Assessment [Coady Architects] which says that the proposed public realm improvements are necessary and appropriate to enhance the setting of the historic buildings and consolidate and support the established character of the street. Therefore, there are no likely significant effects arising.
<i>Has the proposed development the potential to impact directly or indirectly on listed or scenic views or protected landscapes as outlined in the County Development Plan?</i>	No. The proposed development does not affect any listed or scenic views or protected landscapes and therefore there are no likely significant effects arising.
<b>Type and Characteristics of Potential Impacts</b>	
<i>Would a large geographical area be impacted as a result of the proposed development?</i>	No. The geographic extent of the proposed works is confined to the proposed development site at New Street which is a street of 150m in length, with an area of 0.22ha and therefore there are no likely significant effects arising.
<i>Would a large population of people be affected as a result of the proposed development?</i>	No. The proposed development site is within the existing urban area of Malahide and is consistent with the land use pattern in the general area and therefore there are no likely significant effects arising.
<i>Are any transboundary impacts likely to arise as a result of the proposed development?</i>	No. The proposed development is not likely to have significant effects on the environment in a transboundary State.
<i>Would the magnitude of impacts associated with the proposed development be considered significant?</i>	No. Having regard to the characteristics of the proposed development and the location of the site, there are no likely significant negative effects associated with the proposed project.

<i>In considering the various aspects of the environment, would the impacts of the proposed development be considered complex?</i>	No. The development is a typical urban development of a type common to urban centres and streetscapes in Fingal and the wider Dublin region and therefore there are no likely significant effects arising.
<i>Is there a high probability that the effects will occur?</i>	No. No likely significant negative effects are identified.
<i>Will the effects continue for a long time?</i>	No. No likely significant negative effects on the environment have been identified as a result of the proposed development. Long term potential positive effects have been identified in the areas of biodiversity, air & climate, material assets: transportation and material assets: utilities – see Table 4.2 below.
<i>Will the effects be permanent rather than temporary?</i>	No likely significant negative effects on the environment have been identified. The project will have a positive impact with regard to the provision of an enhanced public realm and streetscape within Malahide Village in accordance with the Development Plan zoning and policy objectives for Malahide. The public realm improvements will make Malahide Village more accessible for Active Travel modes with enhanced facilities for pedestrians and cyclists within the pedestrianised New Street.
<i>Will the impacts be irreversible?</i>	No likely significant negative effects on the environment arise as a result of the proposed development.
<i>Will there be significant cumulative impacts with other existing and/or approved projects?</i>	No. Cumulatively, it is considered that the permitted Broadmeadow Greenway project and the proposed public realm improvements at a pedestrianised New Street will have a positive impact on population and human health, material assets transportation and air quality and climate change by encouraging cycling and walking trips to and from Malahide and providing improved facilities and urban spaces and routes for these transport modes.
<i>Will it be difficult to avoid, or reduce or repair or compensate for the effects?</i>	No. The construction process will avoid any likely significant effects through the implementation of standard best practice construction methodologies.



**Table 4.2: Potential Impacts by EIA Topic**

EIA Topic	Comment on Potential Impacts
<p><b>Population and Human Health</b></p>	<p>The proposed development involves public realm improvements for a pedestrianised New Street, Malahide consistent with the thrust of local and national land use and transportation planning policies and guidelines.</p> <p>The potential likely negative effects on population and human health during the construction phase will include impacts arising from construction traffic, noise, dust, vibration and spillage or leakages. These risks will be limited due to the small scale and localised nature of the works and the potential for any adverse environmental effects will be further minimised by the measures contained in the Construction Management Plan and Construction &amp; Demolition Waste Management Plan [both Punch Consulting Engineers]. Construction phase environmental effects are likely to be negative, short-term and not significant.</p> <p>The TTA concludes that the small volumes of construction stage traffic will be absorbed within the network. On this basis, the effects of construction traffic on population and human health is not likely to be significant.</p> <p>During the operational phase, the public realm improvements will have positive effects as the enhanced public realm will strengthen the attraction of Malahide Village as a place to live, work and visit. The enhanced public realm and alteration of vehicular circulation patterns arising from the pedestrianisation will have an overall positive effect on the safety and movement of pedestrians and cyclists in and around Malahide. Having regard to the nature and scale of the development and the population likely to be effected, the operational effects are likely to be permanent, positive and not significant.</p> <p>The main impact of the operational phase of the New Street project will be the impact on the movement of people by private car, particularly when compared to the previous two-way traffic system. These include :</p> <ul style="list-style-type: none"> <li>(i) the residents of New Street and Ross Terrace ;</li> <li>(ii) the general public, including shoppers and customers of businesses on New Street</li> <li>(iii) those servicing businesses on New Street.</li> </ul> <p>Residents of New Street and Ross Terrace are provided with alternative access arrangements from the north of New Street which retains two way traffic movement for their benefit.</p> <p>The general public (including shoppers and customers of businesses on New Street) can no longer drive or park on New Street, however, alternative parking is available within walking distance.</p> <p>In terms of the servicing / deliveries to New Street businesses, alternative arrangements are provided on a time restricted basis as is commonplace in similar locations.</p>

	<p>The TTA has considered the implications of the project and the removal of the previous two-way traffic flow on the road network. Inevitably, there is an increase in traffic volumes on the streets in the immediate vicinity. In this regard, the TTA has assessed impacts on traffic flow and concludes that the network has the ability to absorb the redistribution of traffic arising from the New Street project.</p> <p>Overall, in terms of population and human health, it is considered that the effects on the environment are not likely to be significant. Where effects are identified they are counter-balanced by the benefits of the public realm enhancements for pedestrians and cyclists and the wider sustainable transportation benefits to the community.</p>
<p><b>Biodiversity / Species and Habitats</b></p>	<p>The potential likely negative effects from an Environmental Impact Assessment perspective on biodiversity / Species and Habitats during the construction phase will include noise, dust and spillage of construction related materials and fuels. Due to the limited nature and scale of works involved however, the potential effects are not considered to be likely or significant on this project. Construction phase environmental effects are therefore not likely to be significant.</p> <p>The pedestrianisation of New Street (current and as part of the public realm improvements) with associated removal of vehicles from the streetscape will also reduce the risk of contaminants and pollutants such as vehicle fuel, and other hydrocarbons from reaching Malahide Estuary which will have the positive effects. During the operational phase of the public realm improvements, the upgraded storm and foul water infrastructure and installed soft landscaping and more appropriate tree species will give rise to positive effects on biodiversity which will be long term and positive.</p>
<p><b>Land and Soils</b></p>	<p>During the construction phase potential likely negative effects arise from the excavations required for works to service infrastructure and runoff of silt. These effects will be localised to the works area and limited due to the small scale of the development and limited extent of subsurface interventions. The Construction &amp; Demolition Waste Management Plan provides measures for the reuse and recycling of surplus excavated soils and stone which will further minimise these effects. Effects on land and soil during the construction phase are likely to be temporary in duration and negative in quality, but are not likely to be significant.</p> <p>Having regard to the limited subsurface interventions, small scale of areas affected and the absence of any additional traffic generation at the operational stage, the likely effects of the operational phase of the development on land or soil are neutral in quality, permanent in duration and not likely to be significant. Therefore, there are no likely significant effects.</p>
<p><b>Water</b></p>	<p>There is potential for silt run off or accidental spillage of fuels, construction materials etc. during the construction phase. Due to the limited nature and</p>



	<p>scale of works involved however, the potential effects are not considered to be likely or significant on this project.</p> <p>At the operational stage, surface water from the site will be attenuated and filtered through bioretention areas. The development includes an upgraded foul sewer system for New Street. The Site Specific Flood Risk Assessment [Punch Consulting Engineers] concludes that the public realm uses in the area of the site vulnerable to flooding are compatible with such areas. There is no likely significant increase in risk of flooding to the site or other areas as a result of the development. The pedestrianisation of New Street and removal of vehicles from the streetscape will reduce the risk of contaminants and pollutants such as vehicle fuel and other hydrocarbons from reaching Malahide Estuary which will be a long term positive effect. On that basis, the operational phase of the development will give rise to permanent effects on water, which will be positive in nature and are not likely to be significant.</p>
<p><b>Air &amp; Climate, Noise &amp; Vibration</b></p>	<p>During the construction phase, there is the potential for noise, vibration and dust impacts to arise from the construction works taking place on site. Noise and vibration impacts will be minimised by the measures contained in the Construction Management Plan [Punch Consulting Engineers] such that there are no likely significant effects. Dust emissions will be localised to the works area and also controlled by measures set out in the Construction Management Plan such that there are no likely significant effects.</p> <p>In terms of climate impacts, construction traffic will generate emissions during the construction phase of the development. Vehicle engines and other equipment will cause emissions of CO<sub>2</sub> and N<sub>2</sub>O. As confirmed within the TTA [Punch Consulting Engineers], the volumes of construction stage traffic will be small. Construction related emissions will be short term and therefore not likely to be significant in relation to climate. In relation to the operational phase of the development, the proposed development includes measures to encourage Active Travel through walking and cycling, thereby leading to a reduction in greenhouse gas emissions as required by the actions and targets contained within the Climate Action Plan 2023. The pedestrianisation of New Street and subsequent removal of vehicles from the streetscape will also reduce noise and vibration and the positive impacts experienced since pedestrianisation post-2019, will continue. These impacts will likely cause a positive and long term effect on air quality and climate quality and reduced noise and vibration on New Street during the operational phase of the development.</p>
<p><b>Material Assets: Utilities</b></p>	<p>Having regard to the nature, scale and location of the development within the existing built environment, the predicted construction effects upon foul sewer, surface water drainage, potable water and electrical utilities are considered to be neutral, imperceptible and short term in nature and are not likely to be significant. Arising from the proposed upgrades of water services and electrical utilities to be completed as part of the proposed</p>

	<p>development, the effects on the operational phase of the development on these utilities will be positive, long term and are not likely to be significant.</p>
<p><b>Material Assets: Transportation</b></p>	<p>The TTA [Punch Consulting Engineers] assesses the impact of the proposed New Street pedestrianisation on the existing local transport network in comparison with the pre-pedestrianised scenario.</p> <p>During the construction phase of the development, the TTA states that volumes of traffic generated will be small in comparison to existing traffic volumes in the area. On that basis, the construction stage traffic will be absorbed within the network and the effect on the existing road network is not likely to be significant.</p> <p>Implementation of the construction traffic management requirements provided within the Construction &amp; Demolition Waste Management Plan [Punch Consulting Engineers] will minimise effects on the existing road network.</p> <p>The assessment of operational impacts was undertaken with regard to the pre-pedestrianised baseline position with two-way traffic on New Street (2019). The TTA undertook capacity analysis for 12no. junctions in 2019, 2020 and 2023 and confirms that there will be no traffic generated by the proposed development.</p> <p>As cars can no longer use New Street, vehicular traffic will be redistributed to other junctions in the area and this redistribution of traffic was considered on a junction-by-junction basis.</p> <p>The analysis of the modelling results contained within the TTA concludes that the pedestrianisation of New Street has had little impact on the operational capacity of the surrounding network of roads and junctions. When comparing the 2023 post-pedestrianisation with the 2019 pre-pedestrianisation scenarios, there are minimal effects on the capacity for surrounding road network and junctions.</p> <p>In assessing the current situation in 2023, the TTA also confirms that the existing traffic arrangements do not give rise to any likely significant effects. These traffic arrangements will be the same when the pedestrianisation with public realm improvements is implemented and therefore will not give rise to any likely significant effects.</p> <p>The likely significant effects of both the construction and operational phases of the public realm improvements are also assessed under the headings within this table (Table 4.2) and confirm that there are no likely significant effects arising from the public realm improvements for a pedestrianised New Street. On the contrary, the pedestrianisation and proposed public realm improvements insofar as they discourage use of the private car in Malahide village, will promote modal shift towards public transport, walking and cycling.</p>



	<p>Overall and as demonstrated in the TTA, there is sufficient resilience in the network to absorb this redistribution and the impact on those streets is not likely to be significant. This is borne out by the experience from June to December 2020 and since June 2021, when pedestrianised arrangements were put in place.</p>
<b>Waste Management</b>	<p>Having regard to the nature and scale of the proposed development, essentially enhancement of the public realm on New Street, and the use of licensed waste disposal facilities and contractors as set out within the Construction &amp; Demolition Waste Management Plan, the construction phase of the development is not likely to have significant effects in terms of resources or waste generation. The environmental effects will be short term, neutral and are not likely to be significant. The operational phase of the development will generate modest volumes of waste to be collected in on-street litter bins and will be managed to reduce waste arising, optimise recycling and segregate into waste streams for collection by a licensed waste contractor. Accordingly, there will be no likely significant effects on the environment arising from waste management during the operational phase.</p>
<b>Cultural Heritage</b>	<p>Having regard to the nature, extent and short term duration of the construction works to the public realm, the construction phase will have a slight, short term negative effect on the setting of the ACA which is not likely to be significant. Having regard to the limited subsurface interventions and taking account of the monitoring proposed in the Archaeological Assessment [Archaeology Plan], including monitoring under license of areas of moderate or deep sub-surface impact, it is not likely that there will be significant effects in terms of archaeological heritage. Therefore, the construction phase of the development is not likely to have any significant effect on cultural heritage. The impact of the proposed public realm improvements has also been assessed within the Architectural Heritage Assessment [Coady Architects] and concludes that the proposed public realm upgrading of New Street represents a change from its current (and historic) configuration of a central carriageway with footpaths on both sides but that this change is necessary and appropriate to enhance the setting of the historic buildings. Therefore, there are no likely significant effects of the operational phase on cultural heritage.</p>
<b>Landscape</b>	<p>There will be a moderate short term, negative effects on the landscape arising from the construction operations on site. The effects are not likely to be significant as the duration of the change will have a short term effect. The landscape effects of the completed public realm improvements will comprise a positive and permanent change to the appearance and presentation of New Street which will include an improved public realm with compatible hard and soft landscaping including new trees. In summary, the effects of the operational phase on landscape will be positive, permanent and are not likely to be significant.</p>

<b>Interactions &amp; Cumulative Impacts</b>	<p>There is potential for interaction between land, soil and water during development works and potential for emissions to give rise to interaction between human health and air &amp; climate and noise &amp; vibration. Due to the limited nature and scale of works involved however, the potential effects are not considered to be likely or significant on this project. Therefore there will be no likely significant effects during the construction phase as a result of interactions.</p> <p>In relation to cumulative impacts, existing and/or approved projects in the area, including the Broadmeadow Greenway, are subject to conditions attached to planning permissions, which incorporate appropriate measures to minimise environmental impacts and, as a result, to prevent any likely significant cumulative effects. The proposed development has been designed to minimise any impacts on the environment, including on adjoining and adjacent lands. No likely significant cumulative effects were identified in the Traffic &amp; Transportation Assessment [Punch Consulting Engineers] at construction or operational stages of the public realm improvements. Similarly, no cumulative effects have arisen since implementation of the pedestrianisation in 2021 or are predicted to arise with the pedestrianisation and public realm improvements in place.</p> <p>Overall, it can be concluded that there will be no likely significant cumulative effects on the environment.</p> <p>Having regard to the nature, scale and location of the proposed development, there is no likelihood of significant transboundary effects on the environment.</p>
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**Table 4.3. Screening Checklist**

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
<b>Brief Project Description:</b> Proposed Public Realm Improvements for a Pedestrianised New Street, Malahide		
1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc)?	Yes. The proposed development involves hard and soft landscaping and upgrading of the water services and utilities infrastructure.	No. The proposed construction and operation of the project involves works that are typical within an urban setting and will occur without significantly altering the existing topography or significantly changing the land use or any waterbodies.
2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?	Yes. The project will use small quantities of soil, land, water, energy and natural materials.	No. Due to the small scale of the project and small quantities of resources required to complete the works, the project is not likely to have a significant effect on natural resources.



Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?	Yes. The construction stage of the project will involve the use of small quantities of building materials and aggregates. Dust may be generated by on site construction activities.	No. The quantities of materials used will be small and the use and application of these materials will be managed in accordance with best practice construction management.
4. Will the Project produce solid wastes during construction or operation or decommissioning?	Yes. Small quantities of waste will be generated during construction phase as estimated within Table 3.1 above.	No. The waste management hierarchy will be implemented onsite, which prioritises prevention and minimisation of waste, followed by re-use and recycling. The small quantities of residual waste that arise will be collected and managed in accordance with best practice construction and demolition waste management.
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?	No.	No. The proposed development is not a project type that will give rise to any likely significant emissions or pollution.
6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	Yes. Localised noise and vibration will occur within the works area during the construction phase.	No. Due the small scale and localised nature of the works, the levels of noise and vibration will be low and short term in duration.
7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal waters or the sea?	No. The nature and scale of the proposed development is such that it will not give rise to any significant discharges or emissions.	No.
8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?	No. The proposed development involves public realm improvements within an urban street and is not at risk of major accidents, nor is the development as designed likely to increase the risk of a major accident in this location.	No.

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?	Yes. The proposed development will promote Active Travel and the increased use of New Street by pedestrians and cyclists.	No. The proposed development is likely to encourage a shift to more sustainable travel modes which is positive and in accordance with national transport and climate policy.
10. Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?	Yes. The potential for cumulation of effects with other existing and or approved activities is set out within Section 3.1.4 of this Report and concludes that there is no likely significant effect in this regard.	No.
11. Are there any areas on or around the location which are protected under international or national or local legislation for their ecological, landscape, cultural or other value, which could be affected by the project?	Yes. Malahide Estuary is located to the north of the site.	No. The nature and scale of the proposed development is such that it will not give rise to any significant discharges or emissions which would likely have a significant effect on Malahide Estuary. See Appropriate Assessment Screening Report prepared by Faith Wilson Ecological Consultant.
12. Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands, watercourses or other waterbodies, the coastal zone, mountains, forests or woodlands, which could be affected by the project?	Yes. Malahide Estuary is located to the north of the site.	No. The nature and scale of the proposed development is such that it will not give rise to any significant discharges or emissions which would likely effect the coastal zone of Malahide Estuary. See Appropriate Assessment Screening Report prepared by Faith Wilson Ecological Consultant.



Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
13. Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the project?	Yes. Malahide Estuary is located to the north of the site.	No. The nature and scale of the proposed development is such that it will not give rise to any significant discharges or emissions which would likely effect protected, important or sensitive species of fauna or flora in Malahide Estuary. See Appropriate Assessment Screening Report prepared by Faith Wilson Ecological Consultant.
14. Are there any inland, coastal, marine or underground waters on or around the location which could be affected by the project?	Yes. Malahide Estuary is located to the north of the site.	No. The nature and scale of the proposed development is such that it will not give rise to any significant discharges or emissions which would likely effect coastal or marine waters at Malahide Estuary. See Appropriate Assessment Screening Report prepared by Faith Wilson Ecological Consultant.
15. Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?	No. There are no features of high landscape or scenic value on New Street.	No.
16. Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?	Yes. New Street is an urban route providing north south access through Malahide, access to Ross Terrace and access to various premises and residences on New Street.	No. Access for vehicles to New Street is maintained where necessary and enhanced for pedestrians and cyclists. Access to the wider area is not significantly effected by the proposed works.
17. Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?	Yes. New Street is connected to a series of streets including The Mall, Strand Street and Ross Terrace as well as a wider network of streets within Malahide.	No. An assessment of traffic impacts including as assessment of 12no. junctions in the vicinity of the site confirms that there are minimal effects on the capacity of surrounding junctions.
18. Is the project in a location where it is likely to be highly visible to many people?	Yes. The site is located within Malahide urban core.	No. The proposed works will enhance the visual context and New Street streetscape.

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
19. Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?	Yes. The site is located within Malahide Historic Core Architectural Conservation Area (ACA).	No. The proposed public realm improvements will enhance the setting and context of the existing buildings.
20. Is the project located in a previously undeveloped area where there will be loss of greenfield land?	No. The site is located within Malahide Village.	No.
21. Are there existing land uses on or around the location e.g. homes, gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying which could be affected by the project?	Yes. The site is located within the urban core of Malahide which is a typical mixed use urban centre.	No. The proposed development will enhance the public realm within New Street which is considered positive and there are no likely significant effects arising.
22. Are there any plans for future land uses on or around the location which could be affected by the project?	Yes. There are existing and/or approved projects within the vicinity as detailed in Section 3.1.4 of this report.	No. The proposed development has been designed to minimise any impacts on the environment, including on adjoining and adjacent lands.
23. Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?	Yes. Malahide is a densely populated urban area.	No. The proposed development is consistent with the established land use pattern.
24. Are there any areas on or around the location which are occupied by sensitive land uses e.g. hospitals, schools, places of worship, community facilities, which could be affected by the project?	Yes. The site is an urban street incorporating a mix of commercial and community facilities.	No. The project comprises enhancements to the public realm adjoining existing buildings and will serve to improve the setting and accessibility to these buildings.
25. Are there any areas on or around the location which contain important, high quality or scarce resources e.g. groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, which could be affected by the project?	Yes. Malahide Estuary is located to the north of the site.	No. The nature and scale of the proposed development is such that it will not give rise to any significant discharges or emissions which would likely effect Malahide Estuary. See Appropriate Assessment Screening Report prepared by Faith Wilson Ecological Consultant.
26. Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?	No. The site is an urban street and no known legal environmental standards are exceeded.	No.



Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
27. Is the project location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?	Yes. A small area within the northern boundary of the site is susceptible to flooding.	No. A Site Specific Flood Risk Assessment for the proposed development confirms that the development is appropriate for the location and will not increase the risk of flooding elsewhere.

**Summary of features of project and of its location indicating the need for EIA:**

None.

On the basis of the above description of the project and the screening exercise undertaken, including with the input of the various experts as described above, it can be concluded that having regard to the nature, scale and location of the proposed development, the proposed public realm improvements for New Street, by itself or in combination with other projects, is not likely to have significant effects on the environment, and that accordingly, an Environmental Impact Assessment is not required.

## **5.0 CONCLUSION**

The proposed public realm works for a pedestrianised New Street do not trigger a requirement for a mandatory EIA under the EIA Directive and/ or under the 2001 Regulations, and have been considered and assessed using the appropriate criteria. This EIA Screening Report has concluded, as set out in detail above, that the proposed public realm improvements are not likely to have significant effects on the environment due to the nature, scale and size of the proposed development, the location of the proposed development relative to areas of environmental sensitivity and consideration of the type of potential impacts that are likely to arise. The proposed public realm improvements will bring positive impacts in terms of enhancing the streetscape at New Street and promoting active travel modes with improved facilities for pedestrians and cyclists.

Therefore, for the reasons set out in detail in this EIA Screening Report, it can be concluded, that the proposed public realm improvements for a pedestrianised New Street, by itself or in combination with other projects, are not likely to have significant effects on the environment, and that accordingly, an Environmental Impact Assessment is not required.

The information provided in this EIA Screening Report can be used by the competent authority, to assist with its determination of the need or otherwise for an Environmental Impact Assessment for the proposed development.

**BMA PLANNING**  
**February 2023**



# APPENDIX A

SITE LOCATION AND SITE LAYOUT PLANS BY DFLA

# APPENDIX B

Archaeological Assessment by Archaeology Plan



# APPENDIX C

Architectural Heritage Assessment by Coady Architects

# APPENDIX D

Report for Screening for Appropriate Assessment by Faith Wilson Ecological Consultant



# APPENDIX E

Engineering Planning Report by Punch Consulting Engineers

# APPENDIX F

Construction Management Plan by Punch Consulting Engineers



# APPENDIX G

Construction & Demolition Waste Management Plan by Punch Consulting Engineers

# APPENDIX H

Site Specific Flood Risk Assessment by Punch Consulting Engineers



# APPENDIX I

Traffic & Transport Assessment by Punch Consulting Engineers

# APPENDIX J

Arboricultural Report by the Tree File Consulting Arborists.



# APPENDIX K

## List of Planning Permissions

**Planning reference** **F18A/0446**  
Application type Permission  
Proposal description Change of use from retail to estate agency branch, replacement of existing fascia lighting, new shopfront finishes and new external signage.  
Location/Address/Eircode Unit 6 New Street Mall, New Street, Malahide, Co. Dublin  
Applicants name Sherry Fitzgerald  
Registration date 31 Jul 2018  
Decision date 19 Sep 2018  
Decision GRANT PERMISSION  
Final grant date 22 Oct 2018

**Planning reference** **F21A/0174**  
Application type Permission  
Proposal description Change of use from retail premises to food retail premises/coffee shop and new shop front.  
Location/Address/Eircode 12 New Street (ground floor level), Malahide, Co Dublin  
Applicants name Barry Gibney  
Registration date 29 Mar 2021  
Decision date 17 May 2021  
Decision GRANT PERMISSION  
Final grant date 23 Jun 2021

**Planning reference** **F21A/0611**  
Application type Permission  
Proposal description Planning permission is being sought for previously approved development (planning ref F11A/0344) which is for the partial demolition reconstruction and change of use of existing two storey building from dwelling house to retail premises, works to include a two storey extension to rear, new shop front.  
Location/Address/Eircode 1 & 11 New Street, Malahide, Co. Dublin, K36 NV07  
Applicants name Thomas Wright  
Registration date 15 Nov 2021  
Decision date 11 Jan 2022  
Decision GRANT PERMISSION  
Final grant date 15 Feb 2022

**Planning reference** **F20A/0559**  
Application type Permission and Retention  
Proposal description Permission for construction of extension to existing first floor kitchen (additional floor area 24.25sq. metres), & change of use of part of existing first floor office (5.0 sq. metres) to kitchen store, retention of revised location for wheelchair accessible toilet, increase in floor area of landscaped roof garden & sun terrace for customer use (additional floor area 17.80 sq. metres) and all associated ancillary works, removal of requirement for annual noise monitoring review, change to permitted opening hours for landscaped roof garden & sun terrace for



customer use to normal 7-day licence hours with closing time 11:30pm Monday to Thursday, 12:30am Friday & Saturday & 11:00pm Sunday.  
rear of existing licensed premises at, Gibney's Bar, 5, 6 & 7 New Street, Malahide, Co. Dublin

Location/Address/Eircode  
Applicants name  
Registration date  
Decision date  
Decision  
Final grant date  
Appeal lodged date  
Appeal decision date  
ABP Reference  
Appeal decision

Gibney Limited  
05 Nov 2020  
17 Dec 2020  
GRANT PERMISSION & GRANT RETENTION  
17 May 2021  
18 Jan 2021  
17 May 2021  
ABP-309228-21  
Grant Permission

**Planning reference**

Application type  
Proposal description

**F20A/0633**

Permission  
New timber bi-fold sliding glazed windows to replace existing glazing in timber shopfront, new backlit signage and paint to existing timber shopfront and all associated site works. Bi-fold windows when opened are to provide access for hot food takeaway service served to customers on New Street.

Add Info received  
Location/Address/Eircode  
Applicants name  
Registration date  
Decision date  
Decision  
Final grant date

12th March 2021.  
2 Ross Terrace, New Street, Malahide, Co Dublin  
Aileen Dignam  
12 Mar 2021  
08 Apr 2021  
GRANT PERMISSION  
19 May 2021

**Planning reference**

Application type  
Proposal description

**F21A/0491**

Permission  
Change of use to first floor (former hairdressers) from shop to residential accommodation and all associated site works.

AI received  
Location/Address/Eircode  
Applicants name  
Registration date  
Decision date  
Decision  
Final grant date

15/12/21  
2 Ross Terrace, New Street, Malahide, Co Dublin  
Aileen Dignam  
15 Dec 2021  
19 Jan 2022  
GRANT PERMISSION  
22 Feb 2022

**Planning reference**

Application type  
Proposal description

**F22A/0134**

Permission  
The development will consist of 1. The reconfiguration of the entrance area to provide 10sqm additional external dining area for use as sale of hot food and drinks for consumption on and off the premises incorporating the extension of the low level glass screen to the boundary and landscaping to create a new entrance to the store. 2.

Construction of new external bin store to the existing boundary wall and associated site works. 3. New infill wall in place of existing entrance door to cafe with new sliding door internally.

Location/Address/Eircode Site at Junction to New Street and The Green, Malahide, Co. Dublin  
Applicants name Donnybrook Fair Malahide Ltd  
Registration date 16 Mar 2022  
Decision date 10 May 2022  
Decision GRANT PERMISSION  
Final grant date 15 Jun 2022

**Planning reference**

**F18A/0260**

Application type

Permission

Proposal description

Permission for (1) change of use of the existing market space to combined market space/retail with sale of hot food and drinks for consumption on and off premises. with glazed screen and sliding doors. (2) Change of use for existing bin store to retail use. (3) Provision of new vent in external wall to facilitate ventilation to relocated internal bin store and new roof across hatch.

Location/Address/Eircode

Junction of New Street, and The Green, Malahide, Co Dublin

Applicants name

Donnybrook Fair Malahide Ltd.

Registration date

18 May 2018

Decision date

27 Jun 2018

Decision

GRANT PERMISSION

Final grant date

30 Jul 2018



**APPENDIX F. Engineering Planning Report by Punch Consulting Engineers.**

**Public Realm Improvements for a  
Pedestrianised New Street**

**Engineering Services Report**

**222126-PUNCH-XX-XX-RP-C-0001**

**February 2023**



## Document Control

Document Number: 222126-PUNCH-XX-XX-RP-C-0001

Status	Rev	Description	Date	Prepared	Checked	Approved
S3	P01	Pre-Planning Issue	22/02/2023	D Moreton	MC Daly	P Casey

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# 1 Introduction

## 1.1 Background

This report is prepared to accompany a pre-planning consultation for the proposed public realm improvements to a pedestrianised New Street, located in Malahide, Co. Dublin. This report deals specifically with the Surface Water, Foul Water, and Watermain design associated with the site.

## 1.2 Existing Site

The site is approximately 0.22 hectares in area located on New Street in Malahide. The existing site consists of an established town street with retail, commercial and residential development throughout. The topography of the street falls from its highest point at the southern extents of the site (The Mall) towards the lowest point at the northern extents of the site (Strand Street).

The site is bounded by retail, commercial and residential developments to the west and east, a junction on Strand Street to the north, and a junction on The Mall (R106) to the south. The junctions on either end of New Street are both signalised. New Street is approximately 100m southwest of the marina. The street is pedestrianised with restricted vehicular access to enable deliveries allowed between 7am and 11 am only, refuse collection and emergency vehicles. The northern end of New Street allows two-way traffic for access to Ross Cottages at all times. The site is accessed via The Mall (R106) to the south and via Strand Street to the north.

Please refer to Figure 1-1 below illustrating the site boundary.

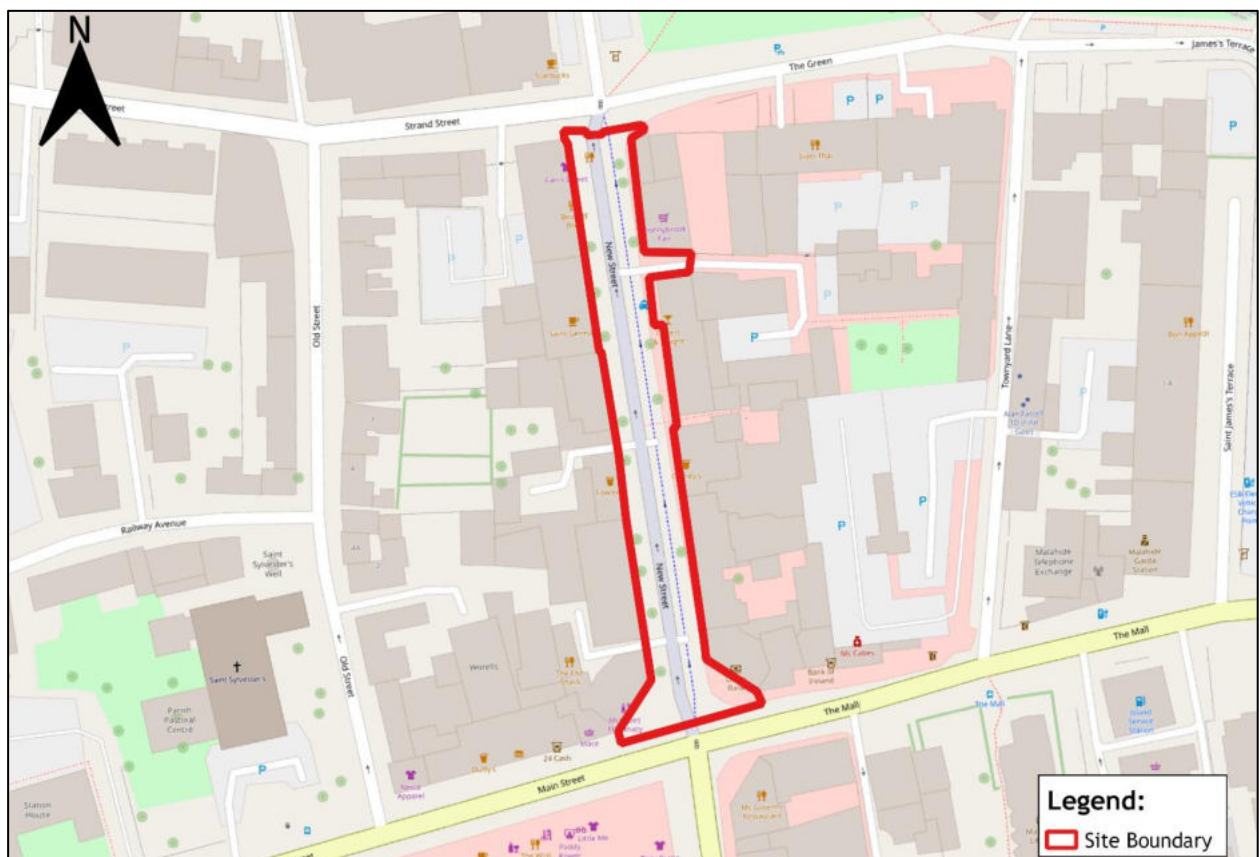


Figure 1-1: Site Location Plan.

### 1.3 Proposed Development

The proposed public realm improvements will comprise: -

- i. Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
- ii. Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
- iii. Upgrade of all street surfaces.
- iv. Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
- v. Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
- vi. Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
- vii. Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
- viii. Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
- ix. New public lighting.
- x. Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.
- xi. Provision of ducting for existing and future utilities and piped infrastructure.
- xii. All associated site and development works.

Fingal County Council will be providing regulatory traffic signs in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

The proposed public realm improvements are outlined in a series of architectural drawings prepared by DFLA, and engineering drawings prepared by PUNCH Consulting Engineers supplied as part of the pre-planning submission pack.

The proposed architectural site layout is shown in Figure 1-2 below. Please refer to Architectural Documents for full proposed site layout.



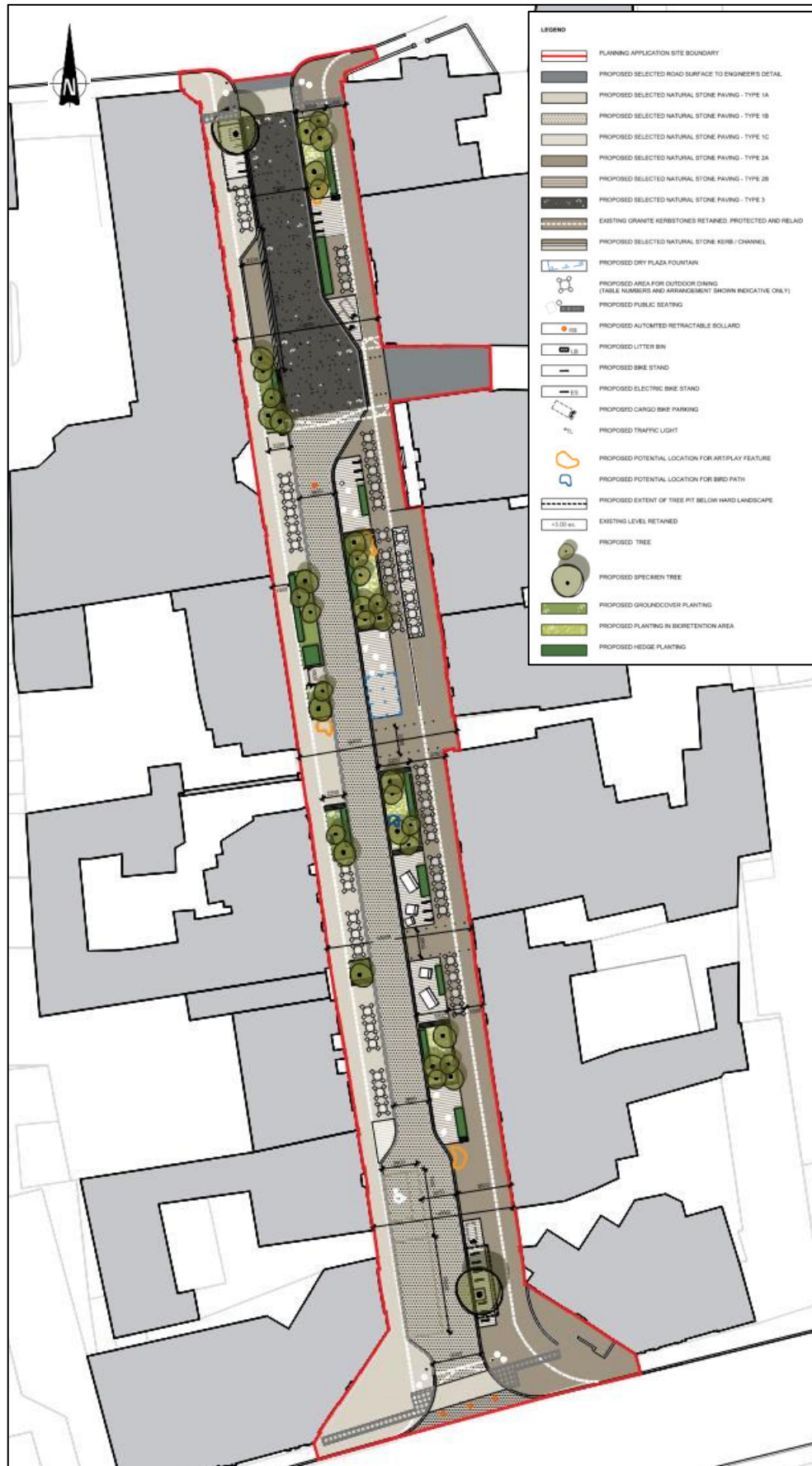


Figure 1-2: Proposed Site Layout (refer architectural documentation by Dermot Foley Landscape Architects).

## 2 Stormwater Drainage Design

### 2.1 Existing Stormwater Drainage

On the basis of available records provided by Irish Water / Fingal County Council, the following stormwater drainage networks are present within the development site:

1. 225mm stormwater piped concrete sewer flowing south-north on New Street.

The following stormwater drainage exists adjacent to the development site:

1. 225mm stormwater piped concrete sewer flowing west-east on Strand Street

As built records and Ground Penetrating Radar Survey information is available for the site, which has confirmed the existing drainage arrangements in detail.

Please refer to Appendix A for Existing Record Drawings illustrating the existing stormwater drainage arrangement. An extract is shown in Figure 2-1 below.

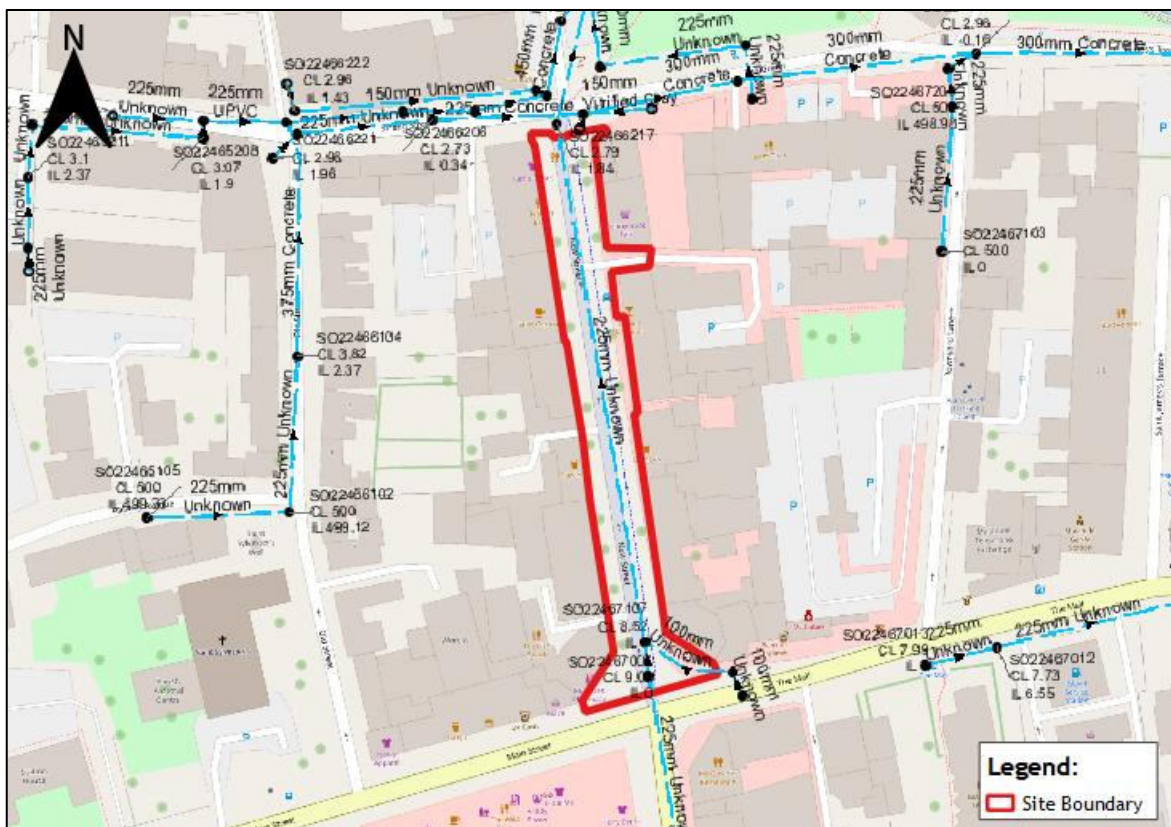


Figure 2-1: Existing stormwater drainage surrounding the site.



## 2.2 Proposed Stormwater Drainage

### 2.2.1 General

In order to facilitate the ease of maintenance of surface water infrastructure without the compromising of SuDS features, the existing surface water pipe running along New Street will be diverted clear of all bioretention areas. It is proposed to connect all new proposed road gullies and SuDS overflow gullies into the diverted surface water pipe on New Street.

All surface water generated from the development street areas is designed to be collected by a by gravity diverted surface water pipe network. The diverted surface water pipe will be designed with reference to the following documents:

- “Recommendations for Site Development Work for Housing Areas” - Department of the Environment and Local Government
- “Greater Dublin Strategic Drainage Study” (GSDSDS)
- CIRIA Publications C644 - “Building Greener”
- Fingal Development Plan 2017 - 2023

### 2.2.2 Site Stormwater Drainage Overview

Interception measures will be provided to reduce and treat surface water generated on site. Stormwater on site will be routed towards road gullies via channel drainage kerbs. Gullies will be connected to inspection chambers which provide an inlet into bioretention areas. The bioretention areas will store stormwater until it overflows into SuDS overflow gullies which then connect back into the diverted existing 225mm localised stormwater piped concrete sewer running south to north on New Street. Please refer to Section 2.2.4 and Section 2.3.1 for details relating to the proposed bioretention areas.

The stormwater drainage proposals are illustrated in PUNCH Drawings 222126-PUNCH-XX-XX-DR-C-0100 and 222126-PUNCH-XX-XX-DR-C-0200.

Please note that the proposed new 225mm diameter stormwater line is to be installed in parallel with the existing stormwater line running south to north along New Street. This arrangement will facilitate continued operation of the stormwater network while facilitating connection and activation of the diverted section of new stormwater pipe. This arrangement will also facilitate effective stormwater management by the appointed Contractor during the proposed public realm improvements as per the standard requirements of proper construction management.

### 2.2.3 Stormwater Drainage Model

The proposed diverted existing surface water pipe has been modelled using Causeway Flow software. The Software was used to ensure sufficient cover depths, and self-cleansing velocities were achieved.

### 2.2.4 Bioretention Areas

Stormwater collected from the site via the drainage network is proposed to cascade between a number of bioretention areas prior to being discharged. Guidance is taken from the UK SuDS manual with regard to the design of the bioretention areas.

Bioretention areas are proposed along the eastern side of New Street. Surface water from the street will be directed towards the bioretention areas, where it then ponds on the surface and then filters through the vegetation and underlying soils. The filtered runoff is then collected in an underdrain system before being directed back to the main surface water sewer. In the event where the volume of the bioretention system has been exceeded, a SuDS Overflow Gully will be used to direct flow downstream to the main surface water sewer.

Please refer to Figure 2-2 for an illustration of a bioretention system.

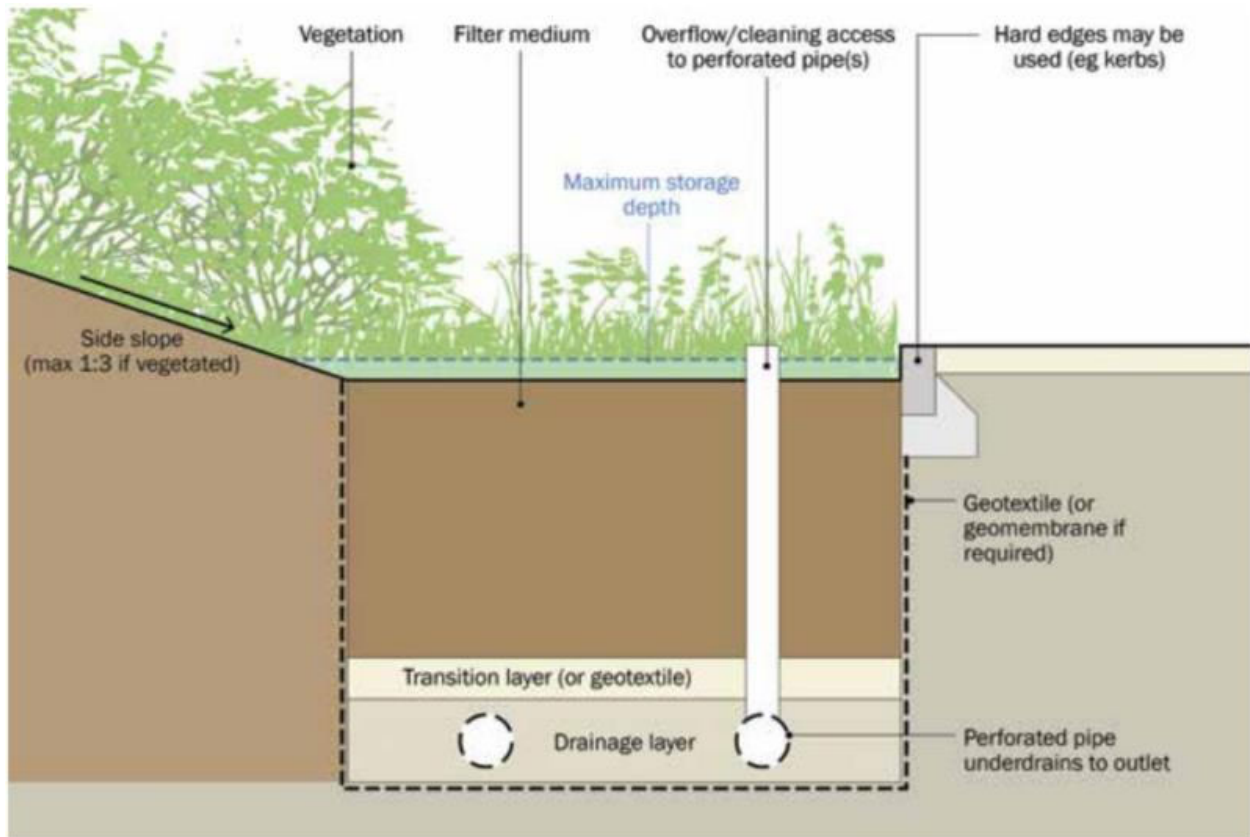


Figure 2-2: Bioretention System Diagram (Source:SuDS Manual Figure 18.1)

Please see PUNCH drawing 222126-PUNCH-XX-XX-DR-C-0100 for the proposed surface water drainage layout.



## **2.3 SUDs Proposals**

The proposed development has been assessed in relation to Sustainable Urban Drainage Systems (SuDS). All SuDS measures are to be implemented with reference to the UK Suds Manual and Fingal County Council (FCC) drainage requirements.

It is noted that the proposed SuDS measures represent a baseline requirement and do not represent a mitigation measure in relation to avoiding or reducing harmful effects on a Natura 2000 site. The SuDS measures are integral to the proposed public realm improvements and simply follow a standard best-practise approach to stormwater management.

Relatively small volumes of rainwater collected on the respective SuDS devices will enter the public sewer network during typical low intensity storms. This is because the proposed SuDS measures will retain rainwater until it is either used via evapotranspiration in the green areas or reused within the development via the rainwater harvesting system.

The SuDS processes decrease the impact of the hard landscaping of the streetscape by providing amenity and biodiversity in many cases. Regular maintenance of the SuDS proposals is required to ensure they are operating to their optimal level throughout their design life.

### **2.3.1 Bio Retention Areas/Modified Planters**

The bio-retention areas/modified planters will incorporate drainage stone/subsoil and will provide a level of additional attenuation within the bio-retention areas/modified planters. Bioretention systems allow the stormwater to filter downwards through a filter medium removing finer contaminants along the way. Depending on the particle size of the filter media different qualities can be achieved from the bioretention system. The base and sides of the system will be lined and a high-level overflow to the drainage network within the build-up will accommodate removal of water.

CIRIA C753 (The SuDS Manual) Table 24.6 notes that regarding interception design of bio retention areas/modified planters, pavements drained by bio retention areas/modified planters can be considered to provide Interception, i.e. it can be assumed that there will be zero runoff from the first 5 mm rainfall for 80% of events during the summer and 50% in winter.

Please refer to Figure 2-3 for a typical bioretention area detail.

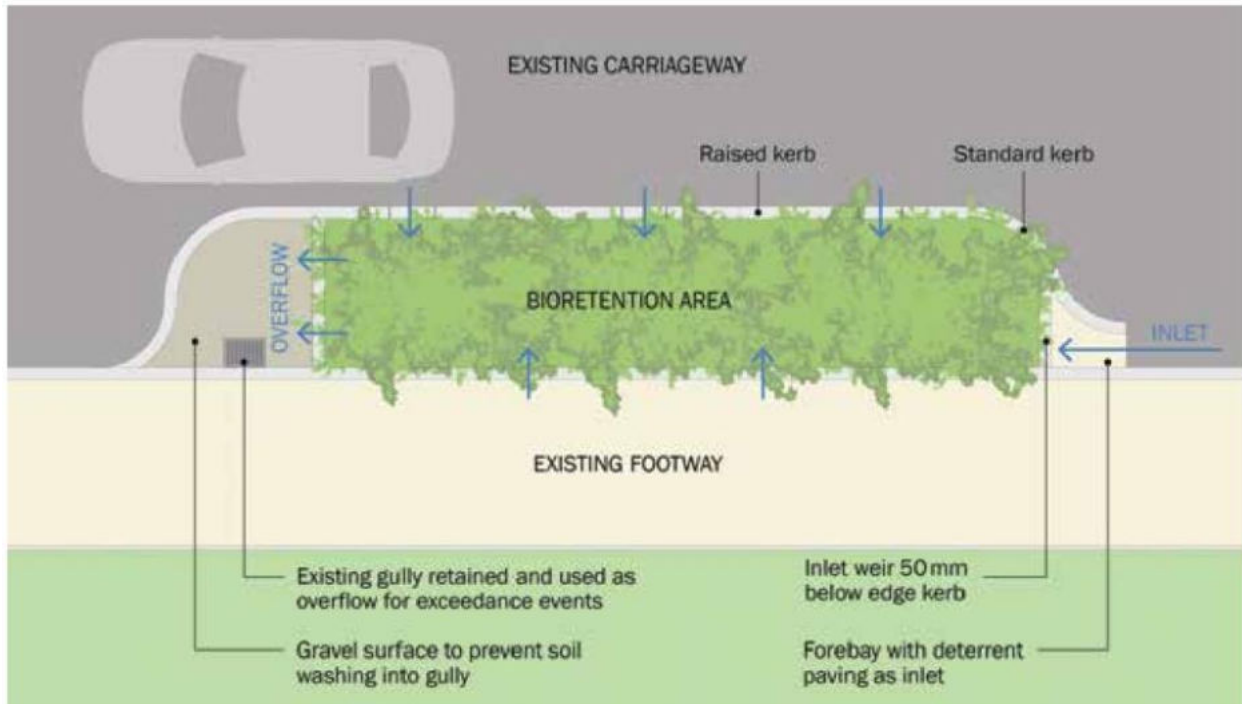


Figure 2-3: Typical Bioretention Area Detail (Source SuDS manual Figure 10.11)



### 3 Foul Water Drainage Design

#### 3.1 Existing Foul Water Drainage

On the basis of available records provided by Irish Water / Fingal County Council there is foul sewer drainage present within the development site, including the following:

1. 225mm dedicated foul sewer running west-east on the street connecting to Ross Cottages to the south of the site.

The following stormwater drainage exists adjacent to the development site:

1. 300mm concrete dedicated foul sewer running east-west along Strand Street to the north.
2. 225 vitrified clay dedicated foul sewer flowing west-east along The Mall (R106) to the south of the site.

As built records and Ground Penetrating Radar Survey information is available for the site, which has confirmed the existing drainage arrangements in detail.

Please refer to Appendix A for Existing Record Drawings illustrating the existing foul water drainage arrangement. An extract is shown in Figure 3-1 below.

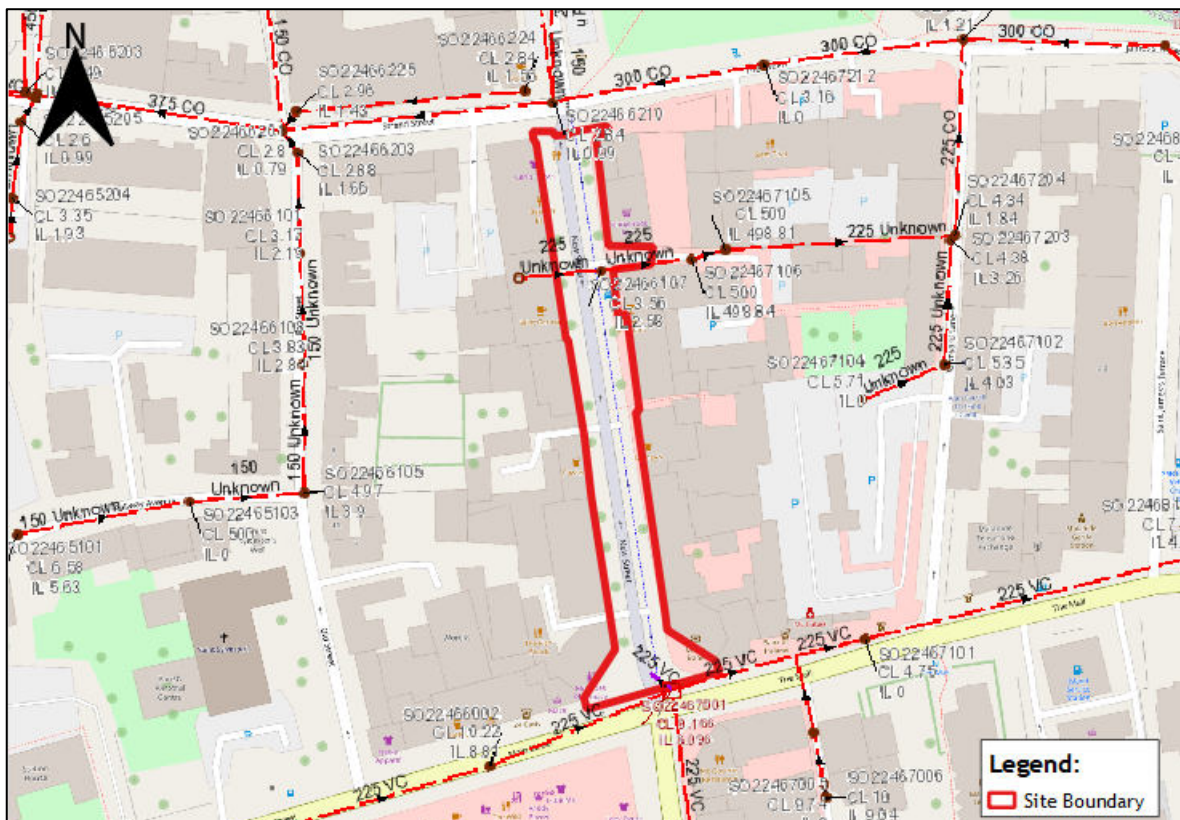


Figure 3-1: Existing foul water drainage surrounding the site.

### **3.2 Proposed Foul Water Drainage**

The development is to be serviced by a gravity design network. A dedicated 300mm diameter foul sewer is proposed along New Street in parallel with the proposed stormwater drainage line. This section of foul sewer will connect via an existing manhole to the 300mm concrete dedicated foul sewer running east-west along Strand Street. The introduction of this dedicated foul sewer will allow for foul connections directly from premises along New Street, thereby reducing the foul sewer effluent in the pre-existing stormwater system.

Foul sewer drainage capacity is provided in accordance with Section 3.6 of Code of Practice for Wastewater Infrastructure. The proportional velocity is designed to provide the minimum self-cleansing velocity.

The 300mm diameter foul sewer pipe is designed to carry in excess of wastewater volume of between 4.5 and 6 times the dry weather flow relative to the number of dwellings serviced along New Street. The foul sewer pipe is purposely provided with excess capacity to cater for further foul loading in the future to avoid the need to replace/upgrade the sewer following the establishment of the new public realm.

Please see PUNCH drawing 222126-PUNCH-XX-XX-DR-C-0100 for the proposed foul water drainage layout.



## 4 Watermain Design

### 4.1 Existing Watermain

Irish Water record drawings indicates the following watermain infrastructure to exist within the site boundary:

- 1) 3" cast iron watermain located on New Street.
- 2) 200mm ductile iron watermain located on New Street.

The following watermain infrastructure exists adjacent to the development site:

- 1) 3" cast iron watermain located on Strand Street.
- 2) 3" cast iron watermain located on The Mall (R106).

As built records and Ground Penetrating Radar Survey information is available for the site, which has confirmed the existing watermain arrangements in detail.

Please refer to Appendix A for Existing Record Drawings illustrating the existing watermain infrastructure arrangement. An extract is shown in Figure 4-1 below.

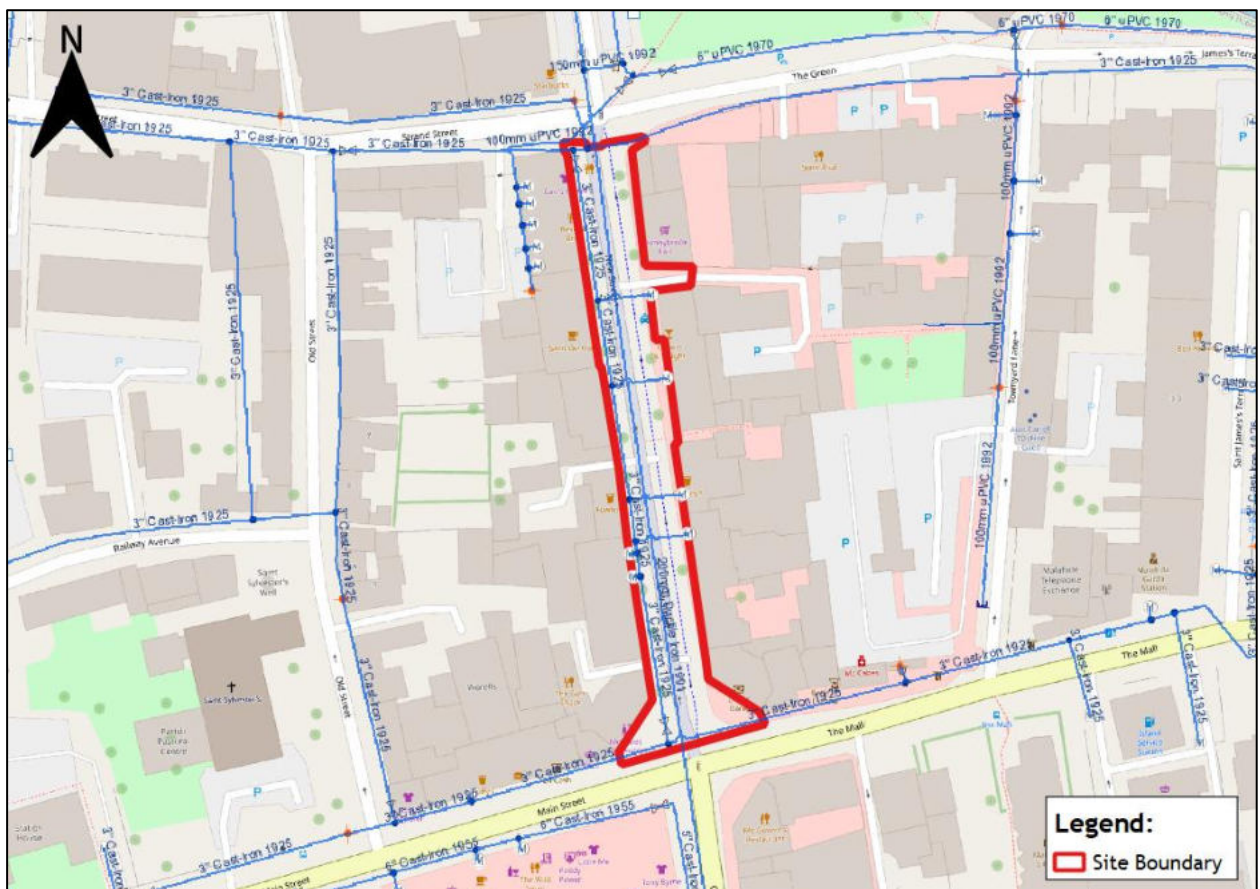


Figure 4-1: Existing watermain infrastructure.

## **4.2 Proposed Watermain**

The existing 3” cast iron watermain (installed in 1925) running along New Street will be replaced/renewed with a modern 150mm diameter ductile iron watermain.

The renewal of this watermain asset is provided to cater for possible increases in watermain loading demands in the future and to avoid the need to replace/upgrade the sewer following the establishment of the new public realm.

The watermain layout has been designed in accordance with “Irish Water Code of Practice for Water Infrastructure”. All watermains are to be constructed in accordance with Irish Water Code of Practice and the Local Authority’s requirements.

Please see PUNCH drawing 222126-PUNCH-XX-XX-DR-C-0100 for the proposed watermain layout.



**Appendix A Existing Record Drawings**

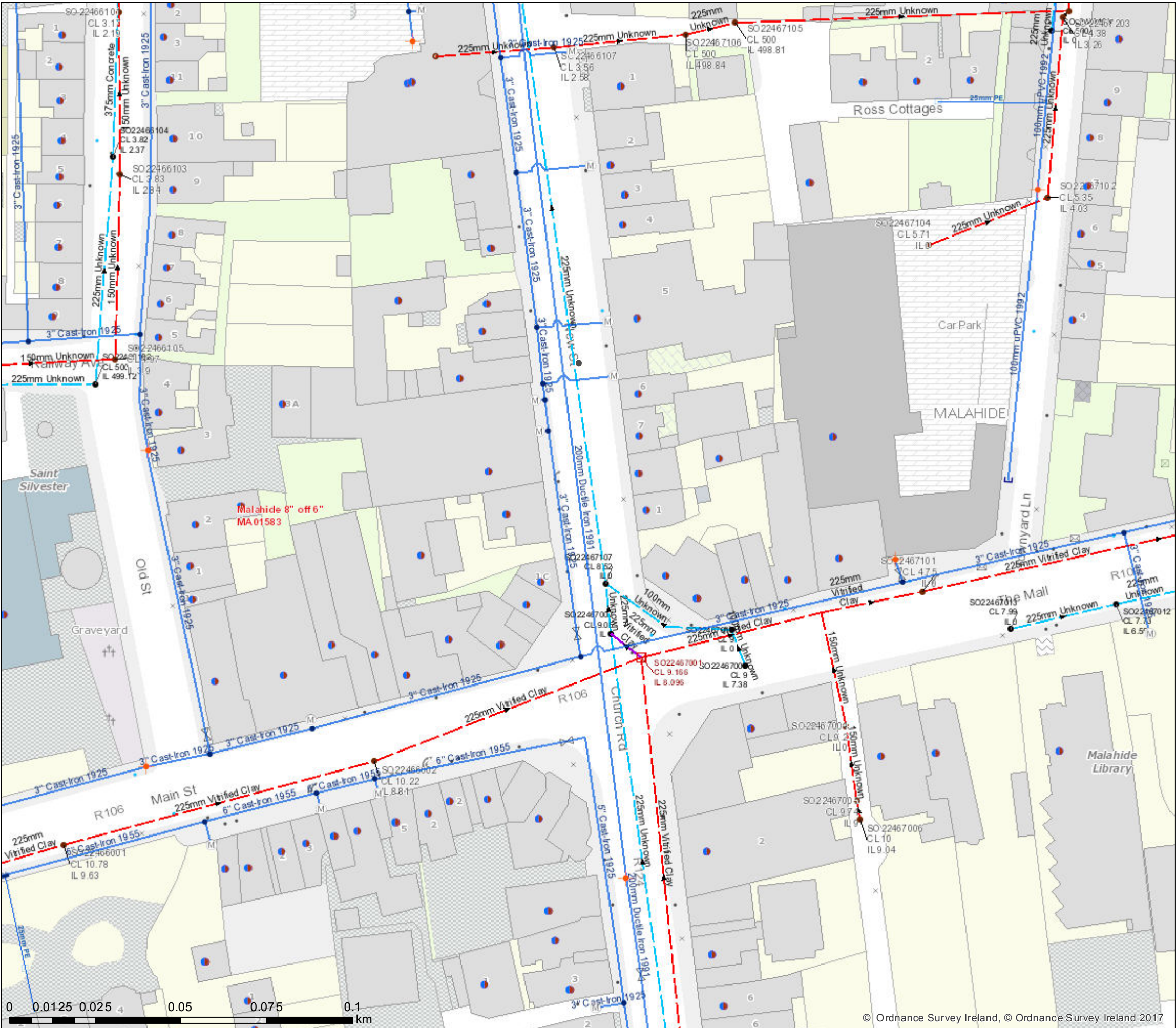


# SR165-2022 New Street Malahide Map 1



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Water Distribution Network	Sewer Foul Combined Network	Storm Water Network
Water Treatment Plant	Waste Water Treatment Plant	Surface Water Mains
Water Pump Station	Waste Water Pump Station	Surface Gravity Mains
Storage Cell/Tower		Surface Gravity Mains Private
Dosing Point	Sewer Mains Irish Water	Surface Water Pressurised Mains
Meter Station	Gravety - Combined	Surface Water Pressurised Mains Private
Abstraction Point	Gravety - Foul	Inlet Type
Telemetry Kiosk	Gravety - Unknown	Gully
Reservoir	Pumping - Combined	Standard
Potable	Pumping - Foul	Other Unknown
Raw Water	Pumping - Unknown	Storm Manholes
Water Distribution Mains	Syphon - Combined	Standard
Irish Water	Syphon - Foul	Backdrop
Private	Overflow	Cascade
Trunk Water Mains	Sewer Mains Private	Catchpit
Irish Water	Gravety - Combined	Bifurcation
Private	Gravety - Foul	Hatchbox
Water Lateral Lines	Gravety - Unknown	Lampole
Irish Water	Pumping - Combined	Hydrobrake
Non IW	Pumping - Foul	Other Unknown
Water Casings	Syphon - Combined	Storm Culverts
Water Abandoned Lines	Syphon - Foul	Storm Clean Outs
Boundary Meter	Overflow	Stormwater Chambers
Bulk/Check Meter	Sewer Lateral Lines	Discharge Type
Group Scheme	Sewer Casings	Outfall
Source Meter	Sewer Manholes	Overflow
Waste Meter	Standard	Soakaway
Non-Return	Backdrop	Other; Unknown
PRV	Cascade	Gas Networks Ireland
PSV	Catchpit	Transmission High Pressure Gasline
Sluice Line Valve Open/Closed	Bifurcation	Distribution Medium Pressure Gasline
Butterfly Line Valve Open/Closed	Hatchbox	Distribution Low Pressure Gasline
Sluice Boundary Valve Open/Closed	Lampole	ESB Networks
Butterfly Boundary Valve Open/Closed	Hydrobrake	ESB HV Lines
Scour Valves	Other; Unknown	HV Underground
Single Air Control Valve	Discharge Type	HV Overhead
Double Air Control Valve	Outfall	HV Abandoned
Water Stop Valves	Overflow	ESB MVLV Lines
Water Service Connections	Soakaway	MV Overhead Three Phase
Water Distribution Chambers	Standard Outlet	MV Overhead Single Phase
Water Network Junctions	Other; Unknown	LV Overhead Three Phase
Pressure Monitoring Point	Cleanout Type	LV Overhead Single Phase
Fire Hydrant	Rodding Eye	MVLV Underground
Fire Hydrant/Washout	Flushing Structure	Abandoned
Water Fittings	Other; Unknown	Non Service Categories
Cap	Sewer Inlets	Proposed
Reducer	Catchpit	Under Construction
Tap	Gully	Out of Service
Other Fittings	Standard	Decommissioned
	Other; Unknown	Water Non Service Assets
	Sewer Fittings	Water Point Feature
	Vent/Col	Water Pipe
	Other; Unknown	Water Structure
		Waste Non Service Assets
		Waste Point Feature
		Sewer
		Waste Structure

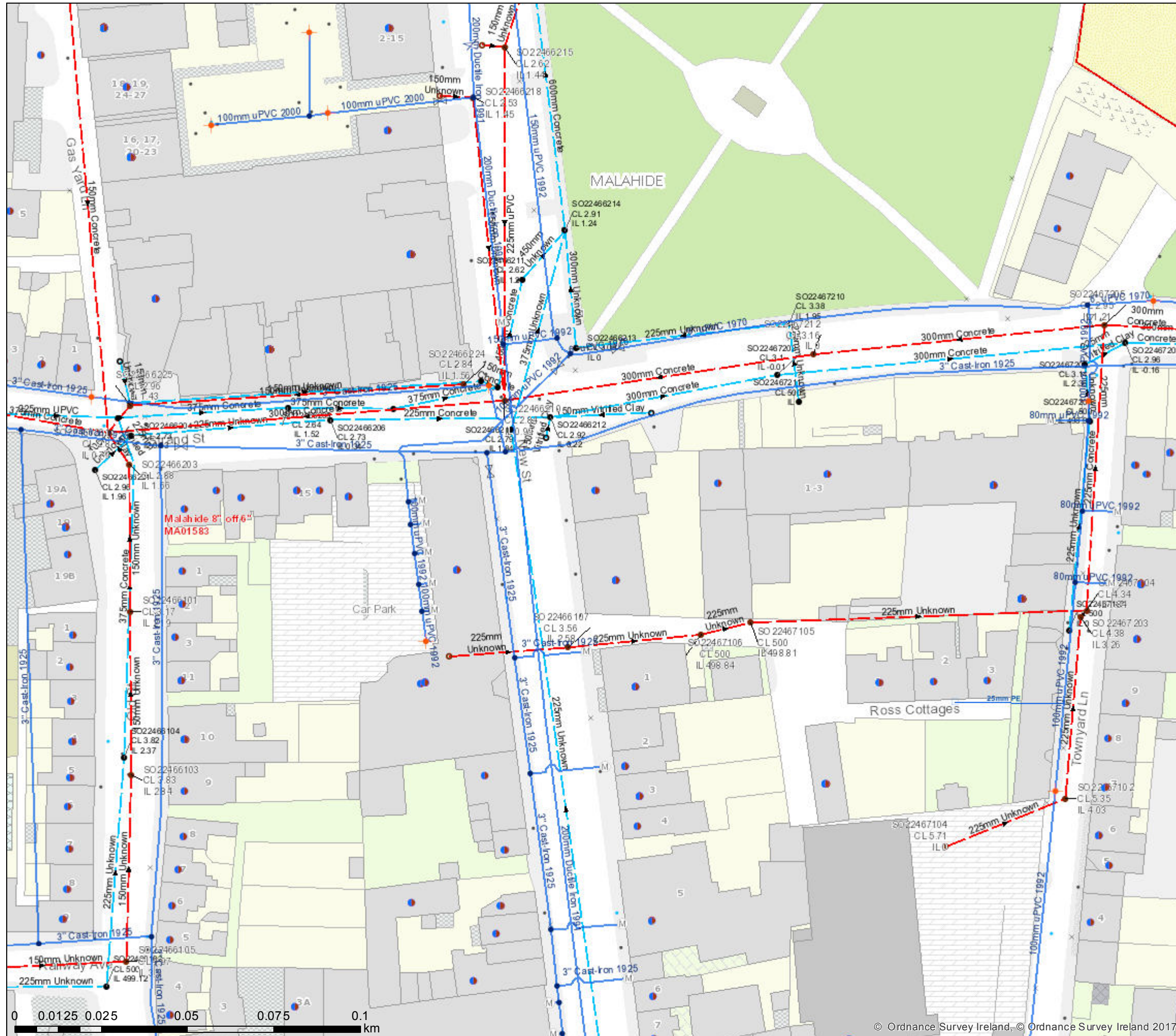


# SR166-2022 New Street Malahide Map 2



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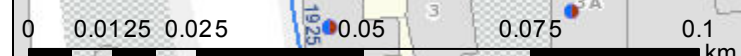
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Water Distribution Network	Sewer Foul Combined Network	Storm Water Network
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		Other Unknown
Reservoir		Storm Manholes
Potable		Standard
Raw Water		Backdrop
		Cascade
		Catchpit
		Bifurcation
		Hatchbox
		Lampole
		Hydrobrake
		Other Unknown
		Storm Culverts
		Storm Clean Outs
		Stormwater Chambers
		Discharge Type
		Outfall
		Overflow
		Soakaway
		Cascade
		Other; Unknown
		Gas Networks Ireland
		Transmission High Pressure Gasline
		Distribution Medium Pressure Gasline
		Distribution Low Pressure Gasline
		ESB Networks
		ESB HV Lines
		HV Underground
		HV Overhead
		HV Abandoned
		ESB MV/LV Lines
		MV Overhead Three Phase
		MV Overhead Single Phase
		LV Overhead Three Phase
		LV Overhead Single Phase
		MV/LV Underground
		Abandoned
		Non Service Categories
		Proposed
		Under Construction
		Out of Service
		Decommissioned
		Water Non Service Assets
		Water Point Feature
		Water Pipe
		Water Structure
		Water Non Service Assets
		Waste Point Feature
		Waste Structure
		Sewer
		Waste Structure



**APPENDIX G. Construction Management Plan by Punch Consulting Engineers.**



**Public Realm Improvements for a  
Pedestrianised New Street**

**Construction Management Plan  
222126-PUNCH-XX-XX-RP-C-0002  
February 2023**

## Document Control

Document Number: **222126-PUNCH-XX-XX-RP-C-0002**

Status	Rev	Description	Date	Prepared	Checked	Approved
S3	P01	Pre-Planning Issue	22/02/2023	D Moreton	MC Daly	P Casey



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# 1 Introduction

The purpose of this document is to briefly outline the general activities required for the construction of the proposed public realm improvements for a pedestrianised New Street, located in Malahide, Co. Dublin.

A Main Contractor has not yet been appointed to carry out the proposed public realm improvements for a pedestrianised New Street. Once appointed, it will be the responsibility of the Main Contractor to prepare and submit a detailed construction management plan to submit to the local authority for approval. The construction management plan will be a live document that will be updated throughout the project lifecycle by the Main Contractor as required.

Regardless of the form of contract, the Contractor will be contractually bound by any conditions arising from the site constraints identified and specified, all Statutory Regulations governing the works, and any additional measures or modifications that may be imposed on the proposed development by the Local Authority or other statutory authorities.

## 1.1 Site Location

The site location is shown in Figure 1-1 below. The site is approximately 0.22 hectares in area located in Malahide Village on New Street. The site currently consists of an established town street with retail, commercial and residential development throughout. The topography of the street consists of the site falling from its highest point at the southern extents of the site (The Mall) and falling towards the lowest point at the northern extents of the site (Strand Street).

The site is bounded by retail, commercial and residential developments to the west and east, a junction on Strand Street to the north, and the Diamond junction on The Mall (R106) to the south. The junctions on either end of New Street are both signalised. New Street is approximately 100m southwest of the marina. The street is currently pedestrianised with restricted vehicular access to enable deliveries allowed between 7am and 11 am only, refuse collection and emergency vehicles. The site is accessed via the Mall to the south and via Strand Street to the north.

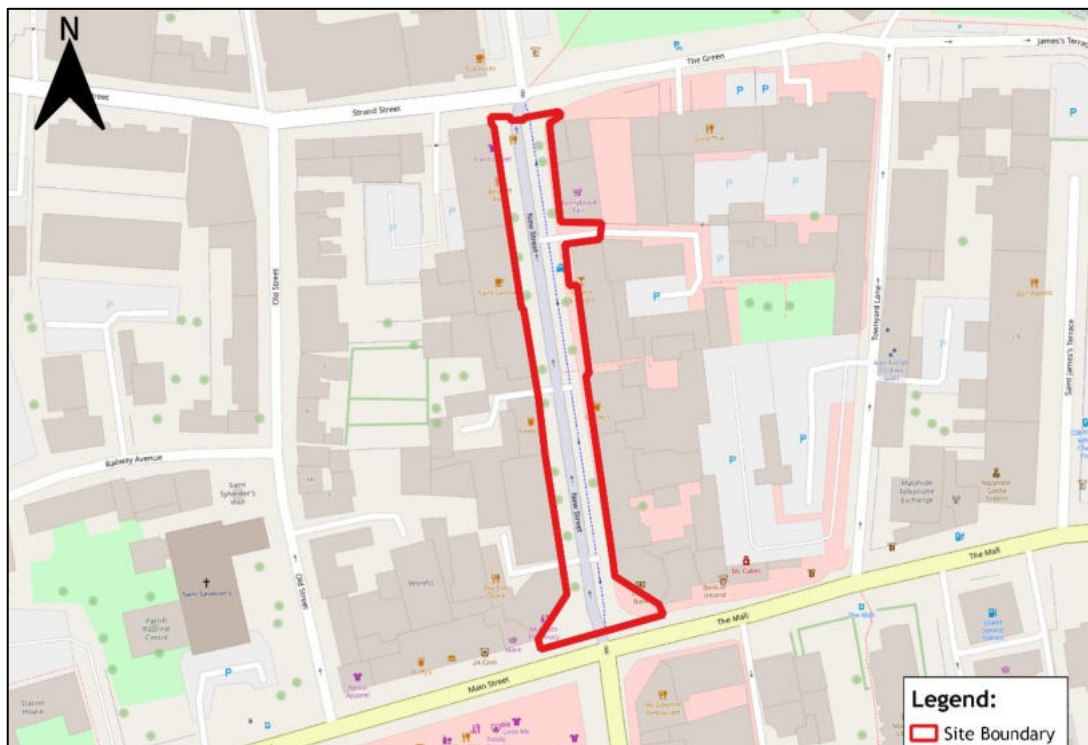


Figure 1-1: Site Location Plan.



## 2 Description of the Public Realm Improvements

The proposed public realm improvements will comprise: -

- i. Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
- ii. Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
- iii. Upgrade of all street surfaces.
- iv. Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
- v. Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
- vi. Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
- vii. Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
- viii. Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
- ix. New public lighting.
- x. Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.
- xi. Provision of ducting for existing and future utilities and piped infrastructure.
- xii. All associated site and development works.

Fingal County Council will be providing regulatory traffic signs (including regulatory signs which give effect to a pedestrianisation of New Street) in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

The proposed public realm improvements for a pedestrianised New Street are outlined in a series of architectural drawings prepared by DFLA, and engineering drawings prepared by PUNCH Consulting Engineers supplied as part of the pre-planning consultation.

## 3 Indicative Construction Programme

It is estimated that the construction programme for the works associated with the proposed public realm improvements for a pedestrianised New Street will last 15 months. However, the duration may extend to 24 months to account for seasonal closures during Summer/Christmas periods or to satisfy other potential conditions arising from the planning process. This estimation is based on the typical construction programmes for other similar developments that are currently underway. It is envisaged that redevelopment of New Street will be carried out over a single phase. The Main Contractor will be required to prepare a detailed construction programme as part of their tender proposal.

## **4 Site Set Up and Security**

The Main Contractor will be required to submit a site layout plan that will detail the proposed location of the site compound. The Contractor will ensure that the site compound will be serviced as required and will be secured with appropriate fencing/hoarding. The site compound will be used as the primary location for the storage of materials, plant and equipment, site offices and worker welfare facilities. As Project Supervisor Construction Stage (PSCS), the Contractor will be responsible for site security, and they are to ensure that the site and site compound are adequately secured at all times.

As with the other construction activities that are being carried out within Fingal County Council (FCC) administration, activities associated with the construction compounds will be subject to restrictions to the nature and timing of operations so that they do not cause undue disturbance to neighbouring areas and communities.

The site layout plan will also include the site perimeter and the proposed detail with regards the hoarding and gate system.

## **5 Site Access**

It is proposed to access the proposed development via the existing Diamond junction on The Mall/Dublin Road (R106). The proposed public realm improvements will integrate the site into the surrounding footpath networks providing construction and operational vehicle access and convenient pedestrians/cyclist routes linking the site with the surrounding area.

Construction related traffic will enter the site via the junction on Dublin Road (R106). Construction traffic associated with the development can proceed along the Dublin Road, to Swords Road, to Malahide Road, to the Swords Bypass, to Lisenhall Road, to the M1 or other routes depending on destination. Refer to Section 7 and Figure 7-1 below for illustration.

Furthermore, to reduce the requirement for site parking for employees, public transport such as Dublin Bus should be utilised.

## **6 Material Storage and Delivery**

The Contractor will ensure that the delivery of materials is coordinated to minimise impacts to adjacent properties. The Contractor will ensure that all materials are adequately stored and secured in their site compound.

For more details, please refer to the 'Construction & Demolition Waste Management Plan' prepared and included in the pre-planning assessment pack.

The Contractor will ensure the roads adjacent to the site are kept clean and free of debris.



## 7 Traffic Management Plan

The Contractor will be required to prepare and submit a detailed traffic management plan as part of their tender submission. Once appointed, the preferred Contractor will further develop the traffic management plan as required to submit to the local authority for approval in advance of works commencing onsite. The Contractor will ensure that advanced warning signs are erected on approaches to the site as required by the PSCS. The Contractor will use a competent sign provider and all signage that meets the requirements of the Safety, Health & Welfare at Work (General Applications) Regulations 2007 and Chapter 8 Traffic Signs Manual. Any proposed temporary road markings must also confirm to the requirements of Chapter 8 of the Traffic Signs Manual.



Figure 7-1: Proposed Primary Route To/ From Site.

The Main Contractor will be responsible for all site access and works activity and must ensure the continued operation of the surrounding local road network as a result of its construction traffic.

The management of construction traffic on the public and private road networks in and around the proposed public realm improvements is a critical part of the overall project and must be actively managed by the Contractor.

The Contractor must submit a Construction Traffic Management Plan to the Local Authority for approval. Haulage vehicle movements should be fully coordinated to comply with the requirements of the agreed plan:

- Construction vehicles must not stop or park along the routes at any time;
- Haulage vehicles must not travel in convoys greater than two vehicles at any time;

- Site entrance to remain free of parked or stationary vehicles at all times;
- All loading of demolition material will occur within the site boundary;
- All off-loading of deliveries will take place within the site, remote from the public road and will access via the agreed construction access point.

The site is located in an established urban area where the road and junction space is shared with public road users and construction traffic associated with other nearby developments. Therefore, the flow of construction traffic will need to be marshalled and controlled to ensure that potential conflicts are avoided as much as possible.

There are no proposals to introduce temporary road closures to facilitate construction of the proposed public realm improvement for a pedestrianised New Street however, temporary traffic light signals will be required on New Street at junction locations and at the access to Ross Cottages.

For more details please refer to the 'Construction & Demolition Waste Management Plan' prepared and included in the pre- planning assessment pack.

## 8 Works Adjacent to Railway Line

The proposed public realm improvements is in close proximity to Malahide Train Station. The proposed public realm improvements will have no interference with any of the railway infrastructure. The proposed development's location in relation to the railway infrastructure is shown in Figure 8-1 below.

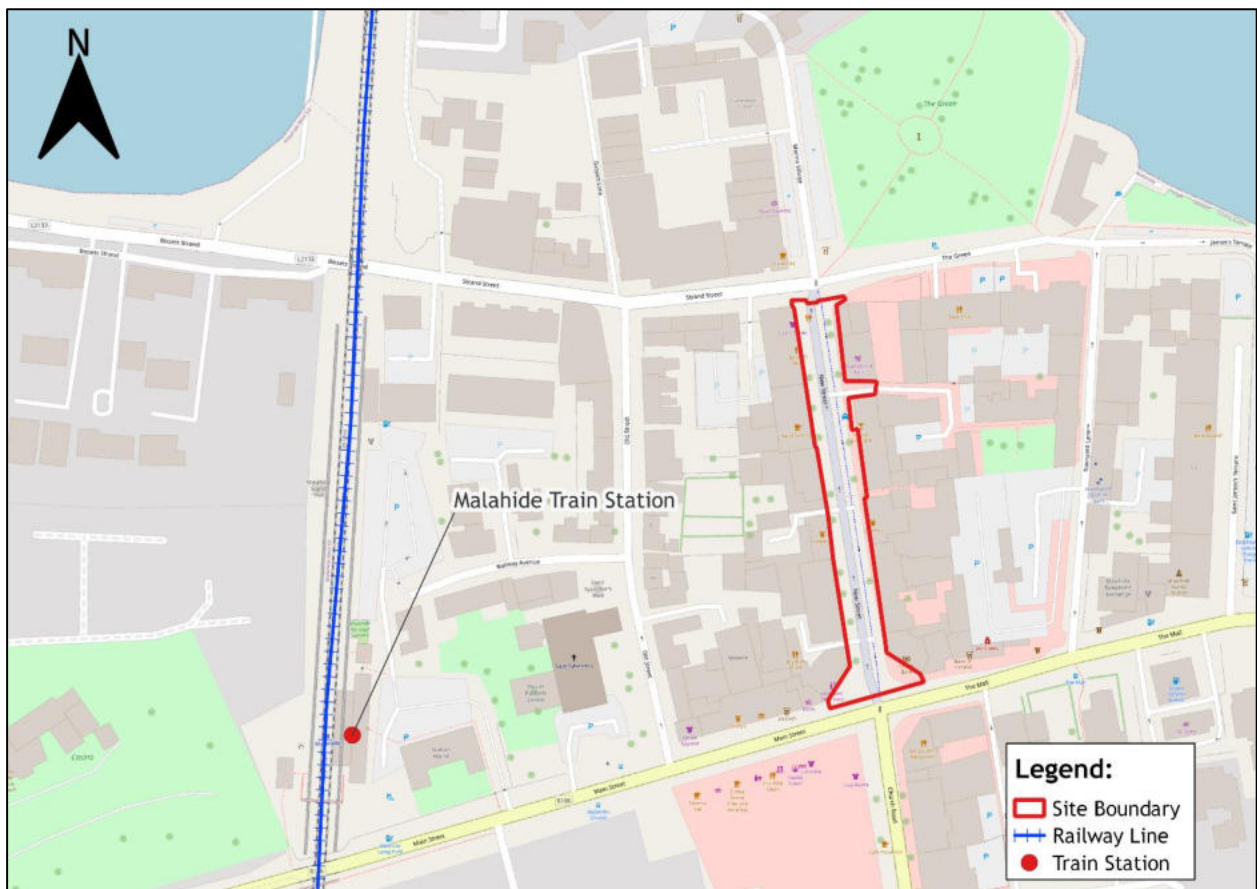


Figure 8-1: Railway Line adjacent to the Proposed Public Realm Improvements.



## 9 Potential Interface with Other Projects

The proposed public realm improvements will likely have an interface with other projects within the greater region. The appointed Contractor may need to coordinate with other Contractors in the locality to ensure a smooth interface between projects.

There may be a number of PSCS's operating in the urban locality at any one time on individual sites. It will be responsibility of the appointed Contractor as PSCS to ensure that delivery and haul routes, site access and egress points and potential crossing points associated with the site are fully coordinated and agreed with other Contractors in advance of the works commencing.

## 10 General Construction Approach

### 10.1 Construction Working Space

Construction working space will be set out in the detailed construction management plan at detail design stage.

Construction access routes, haul routes and delivery routes to the site are to be agreed with the Engineer/Employer's Representative in advance of works commencing onsite.

Any road closures required will be submitted and approved in advance with the local authority. It is the responsibility of the Main Contractor to prepare and submit the road closure application to the local authority in advance of works commencing onsite.

### 10.2 Outline Phasing Strategy

It is currently envisaged that the proposed public realm improvements will be completed in a single phase as outlined below. For further details relating to the works, please refer to the more detailed pre-planning drawings (drainage, road, landscape, etc.). The strategy is outlined as follows:

1. Establish site access routes to the New Street site.
2. Installation of secure perimeter fencing and hoarding along the active site boundaries as required and establish site compound. The location and extent of these systems will change as dictated by the staging of the Works.
3. Construct trench for installation of new drainage system. This includes a large area for the series of bioretention areas being proposed.
4. Installation of drainage/SuDS elements throughout the site.
5. Connections to external stormwater networks.
6. Regrading of topsoil throughout site.
7. Delivery of landscaping and recreation elements throughout the above, as per the architectural requirements.

### **10.3 Outline Works Description**

The construction works will involve an indicative sequence of works, as described in short below. The Contractor will outline works which impact public spaces within the Construction Management Plan that shall be subject to submission and agreement with FCC.

#### **10.3.1 Hoarding, Site Set up and Formation of Site Access/ Egress**

The active site area will be enclosed with hoarding details of which are to be agreed with Fingal County Council (FCC). Hoarding panels will be maintained and kept clean for the duration of the works. This will involve erecting hoarding around the proposed site perimeter in line with the proposed staging of the Works.

The available site footprint will enable the Contractor to set up the site compound within the site boundary.

The Contractor will be responsible for the security of the site. The Contractor will be required to:

- Operate a Site Induction Process for all site staff;
- Ensure all site staff shall have current 'Safe Pass' cards and appropriate PPE;
- Install adequate site hoarding to the site boundary;
- Maintain site security at all times;
- Install access security in the form of turn-styles and gates for staff;
- Separate public pedestrian access from construction vehicular traffic;

#### **10.3.2 Site Clearance and Demolition**

The site is comprised of an existing pedestrian street/ road. No demolition works are required. Site clearance will involve the removal of the hard standing footpath/ road that exists within the site boundary. These areas are in close proximity to retail, commercial, and residential, and will require consideration to occupants during the clearance and construction works.

#### **10.3.3 Construction Sequence of Development**

The construction sequence involves a number of steps including:

- Site clearance and Excavation
- Rationalisation of in-ground services
- Installation of Proposed Storm Drainage
- Installation of pavement sub-base through to top layer
- Hard landscaping
- Soft landscaping including bioretention areas

The construction methodology and programme of these activities will be dictated by the Contractor.

The Contractor must prepare a Construction and Demolition Waste Management Plan in accordance with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" (Department of Environment, Heritage and Local Government, 2006) and ensure that surplus material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Construction Management Plan to accommodate construction traffic.



The above represents a high-level indicative construction sequence only. The actual sequence will be dictated by the Contractor. The Contractor will issue a detailed construction programme outlining the various stages prior to commencement of works.

## **11 Waste Management Plan**

The Main Contractor will be required to prepare a detailed waste management plan for the proposed public realm improvements. This will be included in the overall construction management plan that will be submitted to the local authority.

For more details, please refer to the 'Construction & Demolition Waste Management Plan' prepared and included in the pre-planning assessment pack.

## **12 Communications and Local Stakeholder Management**

The Contractor will, as required, liaise with owners of the local properties in advance of works commencing onsite. The Contractor will use a competent sign provider and all signage used will meet the requirements of the Safety, Health & Welfare at Work (General Applications) Regulations 2007 and Chapter 8 Traffic Signs Manual.

## **13 Construction Noise, Dust and Vibration**

The Main Contractor will be required to monitor noise, dust and vibration as will be outlined in the construction contract. The Contractor will establish baselines for noise, dust and vibration in advance of works commencing onsite.

As part of their detailed construction management plan, the Contractor will be required to clearly indicate how they plan on monitoring noise, dust and vibration throughout the course of the proposed public realm improvements. The Contractor will also be required to clearly outline the mitigation measures they plan on putting in place to ensure that permissible construction noise, dust and vibration levels for a development of this scale are not exceeded.

For more details please refer to the 'Construction & Demolition Waste Management Plan' by PUNCH Consulting Engineers prepared and included in the pre-planning assessment pack.

## **14 Working Hours**

The proposed hours of work on site will be 07:00 hrs to 18:00 hrs Monday to Friday and 08:00 hrs to 16:00 hrs Saturday unless otherwise specified. Any working hours outside the normal construction working hours will be agreed with FCC. The planning of such works will take consideration of sensitive receptors, in particular any nearby businesses.

For more details, please refer to the 'Construction & Demolition Waste Management Plan' prepared and included in the pre-planning assessment pack.

## **15 Lighting**

Appropriate lighting will be provided as necessary at construction compounds. All lighting will be installed to minimise light spillage from the site.

## **16 Construction Employment**

Construction employment numbers will vary depending on the construction stage of the proposed public realm improvements and the actual approach adopted by the Contractor. However, it is anticipated that at the peak of construction there may be a workforce of approximately 25 people employed.



**APPENDIX H. Construction & Demolition Waste Management Plan by Punch Consulting Engineers.**

**Public Realm Improvements for a Pedestrianised  
New Street**

**Construction & Demolition Waste Management  
Plan**

**222126-PUNCH-XX-XX-RP-C-0003**

**February 2023**



## Document Control

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## 1 Introduction

A Main Contractor has not yet been appointed to carry out the proposed Public Realm Improvements to a Pedestrianised New Street. Once appointed, it will be the responsibility of the Main Contractor to prepare and submit a detailed construction management plan for submission to the local authority for approval. The Construction & Demolition Waste Management Plan will be a live document that will be updated throughout the public realm improvements by the Main Contractor as required.

The proposed public realm improvements will comprise: -

- i. Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
- ii. Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
- iii. Upgrade of all street surfaces.
- iv. Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
- v. Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
- vi. Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
- vii. Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
- viii. Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
- ix. New public lighting.
- x. Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.
- xi. Provision of ducting for existing and future utilities and piped infrastructure.
- xii. All associated site and development works.

Fingal County Council will be providing regulatory traffic signs in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

The proposed Public Realm Improvements to a Pedestrianised New Street are outlined in a series of architectural drawings prepared by DFLA, and engineering drawings prepared by PUNCH Consulting Engineers supplied as part of the pre-planning assessment pack. The proposed public realm improvements to a pedestrianised New Street location is show in Figure 1-1.

This report was prepared for Fingal County Council (FCC) in relation to the pre-planning submission for the proposed public realm improvements to a pedestrianised New Street and deals specifically with the "Construction & Demolition Waste Management Plan".





Figure 1-1: Site Location

## 2 Construction & Demolition Waste Management

### 2.1 Background

The purpose of the Construction and Demolition Waste Management Plan (C&D WMP) is to provide the information necessary to ensure that the management of C&D waste at the site is undertaken in accordance with current legal and industry standards including the *Waste Management Act 1996* and associated Regulations, *Litter Act 1997* and the *Eastern-Midlands Region (EMR) Waste Management Plan 2015-2021*.

This section was prepared in accordance with the 'Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects' for the pre-planning submission of the proposed public realm improvements and represents an 'Construction & Demolition Waste Management Plan' for the proposed construction works at the site.

### 2.2 Best Practice

The management of construction and demolition waste should reflect the waste management hierarchy, with waste prevention and minimisation being the first priority succeeded by reuse and recycling.

During site clearance and proposed public realm improvements, there are numerous opportunities for the beneficial reuse and recycling of the demolition materials. The subsequent use of recycled materials in proposed public realm improvements also reduces the quantities of waste which ultimately needs to be consigned to landfill sites.

## **2.3 Prevention of Waste**

The primary effort therefore should be to engage in waste prevention and reduce the amount of waste generated in the first place i.e. minimise the resources needed to do the job.

Prevention is financially advantageous as it reduces the purchase of construction materials and avoids the need to remove wastes from site. It is important to emphasise the potential for certain purchasing procedures to contribute to a reduction in excessive material wastage on site.

Examples include:

- ensuring materials are ordered on an “as needed” basis to prevent over supply to site;
- purchasing construction materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site;
- ensuring correct storage and handling of construction materials to minimise generation of damaged materials/waste, e.g. keeping deliveries packaged until they are ready to be used;
- ensuring correct sequencing of operations; and
- assigning individual responsibility (through appropriate contractual arrangements) to sub-contractors for the purchase of raw materials and for the management of wastes arising from their activities, thereby ensuring that available resources are not expended in an extravagant manner at the expense of the main contractor.

## **2.4 Reuse of Waste**

Waste material that is generated should be reused on site or salvaged for subsequent reuse to the greatest extent possible and disposal should only be considered as a last resort. Initiatives should be put in place to maximise the efficient use/reuse of materials.

## **2.5 Recycling of Waste**

There are a number of established markets available for the beneficial use of C&D waste:

- waste timber can be:
  - recycled as shuttering or hoarding, or
  - sent for reprocessing as medium density fibreboard;
- waste concrete can be utilised as fill material for roads or in the manufacture of new concrete when arising at source; and
- in addition, the technology for the segregation and recovery of stone, for example, is well established, readily accessible and there is a large reuse market for aggregates as fill for future use.



## **2.6 Overall Management of Construction & Demolition Waste**

Waste minimisation, reuse and recycling can best be managed operationally by nominating a “Construction and Demolition Waste Manager” to take responsibility for all aspects of waste management at the different stages of the proposed public realm improvements.

This C&D Waste Manager may well be a number of different individuals over the life-cycle of the proposed public realm improvements, but in general is intended to be a reliable person chosen from within the Contracting Team, who is technically competent and appropriately trained, who takes the responsibility to ensure that the objectives and measures within the Project Waste Management Plan are delivered and who is assigned the requisite authority to secure achievement of this purpose.

Specifically, the function of the C&D Waste Manager will be to communicate effectively with colleagues in relation to the aims and objectives for waste management on the proposed public realm improvements. The primary responsibility for delivery of the objectives of the Waste Management Plan will fall upon the C&D Waste Manager designated at the demolition/ construction stage. A key objective for the C&D Waste Manager should be to maintain accurate records on the quantities of waste/ surpluses arising and the real cost (including purchase) associated with waste generation and management.

The preparation, application and documentation of a Project Waste Management Plan should enable all parties - including contractors, designers and competent authorities - to learn from the systematic implementation and assessment of best practice, particularly through the recording of summary information on performance outcomes.

## **2.7 Construction Management Plan**

### **2.7.1 Disposal of Water, Wastewater and Sewage**

All site facilities during construction will be located entirely within the site. The facilities will include canteen, toilet block and drying room for all staff/workers. These facilities will be connected to the Local Authority sewage system with local authority approval.

### **2.7.2 Water Disposal**

Construction operations will adopt best working practices and the early establishment of the temporary construction drainage facilities during construction. A Construction Drainage Control System will be put in place so that all silt laden water will be diverted to temporary settlement storage tanks prior to discharge. This discharge, and the associated pollution control measures, will be subject to the approval of the Local Authority. The appointed contractor will also be required to further develop this Outline Construction Stage Surface Water Management Plan.

### **2.7.3 Working Hours**

The proposed hours of work on site will be 08:00 hrs to 18:00 hrs Monday to Friday and 08:00 hrs to 14:00 hrs Saturday unless otherwise specified by Fingal County Council. Certain tasks may need to be undertaken outside of these hours. All outside of hours work will first be agreed in writing with the Local Authority.

#### **2.7.4 Waste Management Control Policy**

In general:

Regular shaped skips will be used for the duration of the demolition/ proposed public realm improvements. All skips will be situated in the waste segregation area on site.

Labelled skips will be available for each of the following waste types: wood, metal, brick/ rubble, canteen waste, plasterboard, paper and cardboard, other general waste and special bins for any hazardous wastes as required.

Throughout the demolition/ construction zone, covered labelled wheelie bins will be placed at designated waste depots. These bins will be taken and used by the operatives/ sub-contractors and returned to the depots after use.

The waste segregation area banksman will co-ordinate the movement of skips to and from the demolition/ construction zone. The banksman will also co-ordinate the scheduling of the approved waste collector to transport waste to the relevant permitted/ licensed waste facility.

#### **2.7.5 Control of Fuels and Lubricants**

In order to provide fuel to the relevant items of plant on site, a certified double skinned metal fuel tank with integrated pump, delivery hose, meter, filter and locking mechanism will be situated in a secure area on the construction site. It will be situated within a bund. This tank will be certified for lifting when full.

Sand piles and emergency clean up spill kits will be readily available in the event of a fuel spill. A hazardous bin will also be available to contain any spent sand or soak pads.

New metal gerry cans with proper pouring nozzles will be used to move fuel around the site for the purposes of refuelling items of small plant on site.

Drip trays will be used under items of small plant at all times. Any waste oils etc. contained in the drip trays or the bunded area will be emptied into a waste oil drum, which will be stored within the bund.

Metal gerry cans and any other items of fuel containers will be stored in certified metal bunded cabinets. Any gas bottles will be stored in a caged area at a secure location on the site. All will be properly secured at point of work.

#### **2.7.6 Site Compound Layout**

Given the nature of the proposed public realm improvements, various locations for the site compound will be established as the proposed public realm improvements progress. The exact locations of the site compound will be subject to the phasing of the proposed public realm improvements, which in turn will be subject to further community engagement and the outcome of any planning process. At this stage it is considered premature to identify specific site compound locations. However, the site compound locations and extents will consider the following requirements:

- 1) Phasing of the proposed public realm improvements
- 2) Maintaining vehicular access along New Street (e.g. resident access, deliveries, refuse collection and emergency vehicles)
- 3) Maintaining access for delivery of plant and materials
- 4) Maintaining pedestrian access along New Street and access to premises



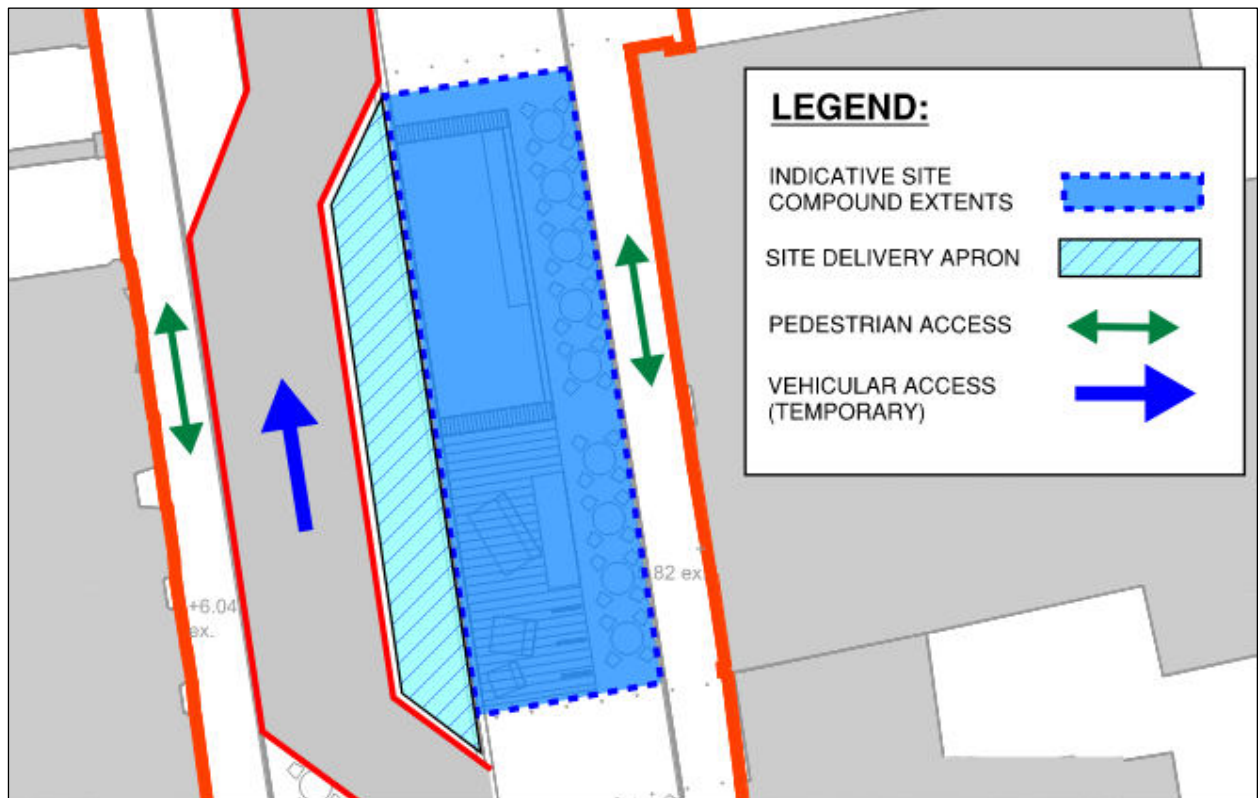


Figure 2-1: Indicative Site Compound Layout

The sites will be enclosed by hoarding or secure herras fencing. A waterproof membrane will be fixed to the base of the hoarding and the ground. The compound area will be of existing hardstanding material.

### 2.7.7 Car Parking Arrangements

Due to the limited availability of space on the site, parking of construction workers vehicles will be limited within the site extents. Parking will be permitted at other legal locations. To minimise congestion, a parking and traffic management plan will need to be developed by the Contractor for submission to FCC to ensure that construction workers access the site using alternative means of transport (i.e. public transport) to negate/minimise any impacts on the local network.

### 2.7.8 Traffic Management Procedures / Generation

All deliveries will be booked into site at least one day before delivery. All drivers will contact the site gate man 15 minutes before arrival on site.

Construction traffic will arrive along Dublin Road (R106), prior to entering the proposed development site. Refer to defined construction/demolition traffic route in Section 4.1.1 of this report. All deliveries will be off-loaded without delay by the most appropriate method and escorted off site.

The site gate man will be responsible for ensuring that there is no conflict between pedestrians and vehicles entering/ exiting the site. In addition, temporary markings will be painted on the footpath either side of the site entrance to alert pedestrians.

It is predicted that there will be as many as 25 personnel on site during peak construction activity. It is envisaged that working hours on site will be 08:00 hrs to 18:00 hrs Monday to Friday and 08:00 hrs to 14:00 hrs Saturday, therefore the peak movements in and out of the site should occur outside of the AM/PM rush hour traffic.

The volume of HGV movements per day will vary according to the different stages of demolition but is likely to be low and infrequent. Peak HGV movements will be mainly associated with removal off-site of stone and clay and any demolished hardstanding materials, if they cannot be re-used elsewhere on-site. There will also be deliveries to the site of materials for construction.

For a rigid HGV hauling material to the site, it will typically take 15 mins from when the rigid arrives at the site entrance, travels to the unloading area, empties its load and leaves the site.

The worst-case scenario is demolition with an estimated average of 2 HGV's per hour predicted during peak site grading activity. It is envisaged that HGV movements will be undertaken outside of AM/ PM rush hour traffic.

### **2.7.9 Air Quality**

There is the potential for a number of emissions to the atmosphere during the bulk construction stage of the project. In particular, activities may generate quantities of dust. Construction vehicles, generators etc., will also give rise to some exhaust emissions.

Vehicular movements to and from the site will make use of existing roads. It is estimated that peak construction HGV movements will be 2 HGV's per hour. Considering the existing traffic levels in the area, the likely air quality impact associated with construction traffic is not significant.

A dust minimisation plan will be formulated for the bulk demolition and construction phase of the proposed public realm improvement, as construction activities are likely to generate dust emissions. The potential for dust to be emitted depends on the type of activity being carried out in conjunction with environmental factors including levels of rainfall, wind speeds and wind direction. The potential for impact from dust depends on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. The majority of any dust produced will be deposited close to the potential source and any impacts from dust deposition will typically be within several hundred metres of the construction area.

In order to ensure that no dust nuisance occurs, a series of measures will be implemented.

Roads shall be regularly cleaned and maintained as appropriate. Hard surface roads shall be swept to remove mud and aggregate materials from their surface. Furthermore, any road that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions.

Vehicles delivering material with dust potential both on and off the site shall be enclosed or covered with tarpaulin at all times to ensure no potential for dust emissions.

Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind. Water misting or sprays shall be used as required if particularly dusty activities are necessary during dry or windy periods.

At all times, the procedures put in place will be strictly monitored and assessed. In the event of dust nuisance occurring outside the site boundary, satisfactory procedures will be implemented to rectify the problem.

The dust minimisation plan shall be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practise and procedures.



## 2.8 Noise and Vibration

### 2.8.1 Noise

There is no published Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project. Local authorities normally control construction activities by imposing limits on the hours of operation and consider at their discretion noise limits.

In the absence of specific noise limits, appropriate criteria relating to permissible construction noise levels for a development of this scale will be agreed with Fingal County Council (FCC) and will indicate the maximum permissible noise levels at adjacent properties during construction and any related time constraints with regard hours of operation. The majority of the construction activity is expected to occur during normal working hours.

### 2.8.2 Vibration

There are two varieties of criteria for vibration: those dealing with human comfort and those dealing with cosmetic or structural damage to buildings. In both instances, it is appropriate to consider the magnitude of vibration in terms of Peak Particle Velocity (PPV).

It is acknowledged that humans are particularly sensitive to vibration stimuli and that any perception of vibration may lead to concern. In the case of road traffic, vibration is perceptible at around 0.5 mm/s and may become disturbing or annoying at higher magnitudes. However, higher levels of vibration are typically tolerated for single events or events of short duration. For example, piling is typically tolerated at vibration levels up to 5mm/s. This guidance is applicable to the daytime only; it is unreasonable to expect people to be tolerant of such activities during the night.

Guidance relevant to acceptable vibration within buildings is contained in the following documents:

- British Standard BS 7385 -2:1993: Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration, and;
- British Standard BS 5228-2:2009: Code of practice for noise and vibration control on construction and open sites

### 2.8.3 Noise and Vibration Measures

Due to the nature of the activities undertaken on a construction site, there is naturally potential for generation of significant levels of noise. A variety of items of plant may be in use, such as pneumatic breakers, excavators, lifting equipment, dumper trucks, compressors and generators. The flow of vehicular traffic to and from a construction site is also a potential source of relatively high noise levels.

The potential for vibration at neighbouring sensitive locations during construction is typically limited to demolition, excavation and lorry movements on uneven road surfaces.

With regard to construction activities, reference will be made to BS 5228-1:2009: Noise control on construction and open sites, which offers detailed guidance on the control of noise and vibration from demolition and construction activities. In particular, it is proposed that various practices be adopted during construction, including:

- limiting the hours during which site activities likely to create high levels of noise or vibration are permitted;
- establishing channels of communication between the contractor/developer, Local Authority and residents;

- appointing a site representative responsible for matters relating to noise and vibration;
- monitoring typical levels of noise and vibration during critical periods and at sensitive locations;
- all site access roads will be kept even, to mitigate the potential for vibration from lorries;
- Construction of 2.4m high hoarding.

Furthermore, it is envisaged that a variety of practicable noise control measures will be employed. These may include:

- selection of plant with low inherent potential for generation of noise and/ or vibration;
- erection of barriers as necessary around noisy processes and items such as generators heavy mechanical plant or high duty compressors;
- placing of noisy / vibratory plant as far away from sensitive properties as permitted by site constraints and the use of vibration isolated support structures where necessary.

We would recommend that vibration from construction activities be limited to the values set out in Section 2.8.2. It should be noted that these limits are not absolute but provide guidance as to magnitudes of vibration that are very unlikely to cause cosmetic damage. Magnitudes of vibration slightly greater than those are normally unlikely to cause cosmetic damage, but construction creating such magnitudes should proceed with caution. Where there is existing damage, these limits may need to be reduced by up to 50%.

During the construction phase of the proposed public realm improvements there will be some small impact on nearby properties due to noise emissions from site traffic and other activities. However, given that the construction phase of the proposed public realm improvements is temporary in nature, it is expected that the various noise sources will not be excessively intrusive. Furthermore, the application of binding noise limits and hours of operation, along with implementation of appropriate noise and vibration control measures, will ensure that noise and vibration impact is kept to a minimum.

It is highly recommended that appropriate dilapidation records for the site and surrounding area are documented prior to the commencement of construction/demolition activities.

## 2.9 Indicative On-Site Waste Construction & Demolition Waste Management Plan

In the course of the proposed public realm improvements, it is estimated that the following quantities of construction and demolition wastes/material surpluses will arise:

Construction Waste Material	Quantity	Actions
Metal	2t	Not envisaged at this stage of the public realm improvements*
Concrete	50t	50% of any waste concrete to be recycled and 50% to be properly disposed of
Paper & Cardboard	1t	100% of any waste packaging to be recycled
Plastic		100% of any waste packaging to be recycled
Wood	2t	100% of any waste timber to be recycled
Mixed Waste	15t	Waste materials will be recycled where possible or disposed of appropriately



Mineral (bricks, gypsum)	5t	100% of any waste masonry to be recycled
Soil/Stones	840t	100% of any soil or stones to be recycled and reuse on site subject to suitability of material
Residues	10t	Any other waste materials will be recycled where possible or disposed of appropriately
<b>TOTAL Arisings</b>	<b>925t</b>	

Table SF1 Estimated C&D Waste Arisings on Site from Appendix 3 of Best Practice Guidelines of Waste Management Plans for C&D Projects (figures to be confirmed as design progresses)

These quantities are provisional only and subject to further determination during the proposed public realm improvements.

### 2.9.1 Proposals for Minimisation, Reuse and Recycling of C&D Waste

Construction and demolition waste will arise on the proposed public realm improvements mainly from the site clearance, service trenches and foundation preparation.

The following are proposals for minimisation, reuse and recycling of C&D waste:

- The Purchasing Manager shall ensure that materials are ordered so that the quantity delivered, the timing of the delivery and the storage is not conducive to the creation of unnecessary waste.
- Concrete waste will be source segregated.
- Masonry and wood will be source segregated.
- Packaging will be source segregated for recycling or return to suppliers.
- Hazardous wastes will be identified, removed and kept separate from other C&D waste materials in order to avoid further contamination.
- Other C&D waste materials will be collected in receptacles with mixed C&D waste materials, for subsequent separation and disposal at a remote facility.

It is anticipated that waste materials will have to be moved off site. It is the intention to engage specialist waste service Contractors, who will possess the requisite authorisations, for the collection and movement of waste off-site, and to bring the material to a facility which currently holds a Waste Licence/ Waste Permit/ Certificate of Registration. Accordingly, it will be necessary to arrange the following waste authorisations specifically for the proposed public realm improvements:

Authorisation Type	Specific Need for the proposed public realm improvements (Yes/No?)	
Waste Licence	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Waste Permit	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Waste Collection Permit	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Trans frontier Shipment Notification	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Movement of Hazardous Waste Form	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Table SF2 Waste Authorisations Necessary for the Scheme from Appendix 3 of Best Practice Guidelines of Waste Management Plans for C&D Projects

A list of waste collection permit holders to be employed on this proposed public realm improvements will be submitted to the local authority by the contractor in their Formal Construction and Demolition Waste Management Plan for the Construction Stage.

A list of waste collection permit sites that the waste may be recovered or disposed to on this proposed public realm improvements will be submitted to the local authority by the contractor in their Formal Construction and Demolition Waste Management Plan for the Construction Stage.

**2.9.2 Assignment of Responsibilities**

A foreman shall be designated as the Responsible Person and have overall responsibility for the implementation of the on-site Waste Management Plan.

The Responsible Person will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan.

At the operational level, a Ganger from the main contractor and appropriate personnel from each sub-contractor on the site shall be assigned the direct responsibility to ensure that the discrete operations stated in the Waste Management Plan are performed on an on-going basis.

**2.9.3 Training**

Copies of the Waste Management Plan will be made available to all personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the Waste Management Plan and informed of the responsibilities which fall upon them as a consequence of its provisions.

Where source segregation, selective demolition and material reuse techniques apply, each member of staff will be given instructions on how to comply with the Waste Management Plan.

Posters will be designed to reinforce the key messages within the Waste Management Plan and will be displayed prominently for the benefit of site staff.

**2.9.4 Waste Auditing**

The C&D Waste Manager shall arrange for full details of all arisings, movements and treatment of construction and demolition waste discards to be recorded during the construction stage of the proposed public realm improvements.

Each consignment of C&D waste taken from the site will be subject to documentation, which will conform to Table SF3 and ensure full traceability of the material to its final destination.

Detail	Particulars
Name of Project of Origin	e.g. New Harbour Motorway
Material being Transported	e.g. Soil, Demolition Concrete, Crushed Asphalt etc.
Quantity of Material	e.g. 20.50 tonnes
Date of Material Movement	e.g. 01/07/2020
Name of Carrier	e.g. Authorised Carriers Ltd.
Destination of Material	e.g. New Street Development
Proposed Use	e.g. Use as Hardcore in Dwelling Floors

**Table SF3 Details to be Included within Transportation Dockets from Appendix 3 of Best Practice Guidelines of Waste Management Plans for C&D Projects**



Details of the inputs of materials to the Construction site and the outputs of wastage arising from the proposed public realm improvements will be investigated and recorded in a Waste Audit, which will identify the amount, nature and composition of the waste generated on the site. The Waste Audit will examine the manner in which the waste is produced and will provide a commentary highlighting how management policies and practices may inherently contribute to the production of construction and demolition waste. The measured waste quantities will be used to quantify the costs of management and disposal in a Waste Audit Report, which will also record lessons learned from these experiences which can be applied in the future.

The total cost of C&D Waste management will be measured and will take account of the purchase cost of materials (including imported soil), handling costs, storage costs, transportation costs, revenue from sales, disposal costs etc. Costs will be calculated for the management of a range of C&D Waste materials, using the format shown in Table SF4.

The Table SF4 below will be completed and submitted to the Council in full following the appointment of a contractor for the proposed public realm improvements.

Material	Estimated Quantities & Costs (tonnes & Euro)
<u>SOIL</u>	XXX tonnes for €_____
Quantity of Waste Soil(tonnes)	
Purchase Cost i.e. Import Costs (€)	
Materials Handling Costs (€)	
Material Storage Costs (€)	
Material Transportation Costs (€)	
Revenue from Material Sales (€)	
Material Disposal Costs (€)	
Material Treatment Costs (€)	
<b>Total Waste Soil Management Costs (€)</b>	
<b>Unit Waste Soil Management Costs (€)</b>	

Table SF4 Standard Record Form for Costs of C & D Waste Management from Appendix 3 of Best Practice Guidelines of Waste Management Plans for C&D Projects

Details of the quantities and types of C&D Waste arising from the proposed public realm improvements will be forwarded to Environmental Protection Agency, local competent authority, NCDWC etc.

## **3 Waste Management Legislation and Obligations**

### **3.1 Relevant Waste Management Legislation**

This section provides details of waste related legislation relevant to the proposed public realm improvements. In accordance with cradle to grave responsibilities, the Contractor will be responsible for all waste arisings from the time the waste is generated until it reaches its final destination point. This includes its method of treatment/disposal. The Waste Management Acts 1996-201, give effect to the polluter pays principle effectively stating that the waste producer may be liable for any pollution incidents arising from the management of their waste. There is therefore an onus on the Contractor to ensure that all contractors managing waste on their behalf are legally compliant and technically competent and the waste itself is contained, handled, treated and disposed of in accordance with all relevant regulatory requirements.

A brief description of the main waste related regulatory controls relevant to the proposed public realm improvements is provided hereunder; however, the list is not exhaustive and should be reviewed and amended at regular intervals in accordance with changing legislation:

#### **3.1.1 Waste Management (Landfill Levy) Regulations 2015, S.I. No. 189/2015**

The existing levy of €75 per tonne of waste disposed is unchanged under these new Regulations.

#### **3.1.2 Waste Management (Facility Permit and Registration) (Amendment) Regulations 2015, S.I. No. 198/2015**

These regulations describe the process for obtaining a Waster Permit or Certificate of Registration, by a private operator from a local authority, or a Certificate of Registration from the Environmental Protection Agency (EPA) in respect of a local authority run waste activity which requires registration.

#### **3.1.3 Waste Management (Licensing) (Amendment) Regulations 2010, S.I. No. 350/2010**

These regulations relate to the process for obtaining a waste licence from the EPA for the operation of certain waste recovery or disposal facilities under Part V of the Waste Management Act.

#### **3.1.4 Waste Management (Collection Permit) (Amendment) Regulations 2016, S.I. No. 24/2016**

These regulations relate to the requirement to obtain a waste collection permit from the relevant local authority for the collection of waste on a commercial basis.

#### **3.1.5 Waste Management (Movement of Hazardous Waste) Regulations 1998, S.I. No. 14/1998**

These regulations control the movement of hazardous waste within Ireland requiring authorisation in the form of C1 consignment forms. The C1 form is completed by the Consignor, the Carrier and the Consignee. A three part document provides a tracking mechanism for the hazardous waste from its point of origin to its final destination.



### **3.1.6 Waste Management (Shipments of Waste) Regulations 2007, S.I. No. 419/2007**

These regulations control the movement of waste across member states. Shipments are controlled under a TFS (Transfrontier Shipment) form, which designates the waste under the categories of Green, Amber and Red List. Fingal County Council is the designated competent authority under the regulations.

### **3.1.7 Waste Classification, List of Waste and Determining if Waste is Hazardous or Non-Hazardous, 2015**

This document allows the generators of waste to classify the waste as hazardous or non-hazardous and in the process assigning the correct List of Waste entry. The waste classification system applies across the EU and is the basis for all national and international waste reporting obligations. Correct classification is the foundation for ensuring that collection, transportation, storage, treatment of waste is carried out in a manner that provides protection for the environment and human health and in compliance with legal requirements.

### **3.1.8 Carriage of Dangerous Goods by Road Regulations 2015, S.I. No. 288/2015**

These regulations require drivers transporting dangerous goods to be ADR trained. In addition, a Dangerous Goods Safety Advisor (DGSA) must be appointed where activities include the carriage, or related packing, loading, filling or unloading of dangerous goods by road.

## 4 Construction Traffic Management

This section, relating to the Construction Traffic Management Plan (CTMP), sets out the traffic management requirements that will apply to Contractors who are engaged in the demolition and construction activities associated with the proposed public realm improvements at New Street, Malahide, Co. Dublin. The Contractor must adopt the requirements of this preliminary Construction Traffic Management Plan into his own Construction Traffic Management Plan and must agree same with Fingal County Council prior to commencement on site.

### 4.1 Construction Traffic Access to the Site

#### 4.1.1 Location and access to the site

The site will be accessed via an existing junction on The Mall (R106). Road is also labelled as Dublin Road (R106). See Figure 4-1, Figure 4-2, and Figure 4-3 below.

Construction related traffic will enter the site via the junction on Dublin Road (R106). Construction traffic associated with the development can proceed along the Dublin Road, to Swords Road, to Malahide Road, to the Swords Bypass, to Lisenhall Road, to the M1 or other routes depending on destination. Refer to Figure 4-4 below for illustration.

The management of construction traffic on the public road network around the development will be a critical part of the overall proposed public realm improvements and must be actively managed by the Contractor.



Figure 4-1: Dublin Road (R106) Heading eastward towards junction with New Street. © Google Maps





Figure 4-2: Dublin Road (R106) junction with New Street. © Google Maps



Figure 4-3: Proposed site access looking northwards on New Street. © Google Maps



Figure 4-4: Proposed Primary Route To/From Site.



#### 4.1.2 Definition of Construction Traffic

Construction traffic means the following vehicles:

- HGVs & haul trucks - i.e. vehicle with 6 tyres or more as set out in the RSA publication 'Guidelines on Maximum Weights and Dimensions of Mechanically Propelled Vehicles and Trailers, Including Manoeuvrability Criteria'
- Site machinery such as excavators, tippers, bulldozers, etc.
- Concrete trucks.

Smaller vehicles used by construction workers to access the site, such as cars and vans, are not deemed to be construction traffic.

#### 4.2 Management of Construction Traffic around Dublin Road (R106)

The Contractor is required to control the construction traffic in and around the proposed development location, with access to the site via Dublin Road (R106). The Contractor must adhere to the following:

- Communicate clearly to all construction staff and subcontractors that they are bound by these restrictions.
- Schedule site traffic in advance to ensure that these restrictions are adhered to.
- Monitor construction traffic at key points remote from the site to check compliance.
- Details of the Contractor's management plan must be submitted to Fingal County Council (FCC) in advance of construction and included as part of the Construction Management Plan.
- Vehicle movements associated with ancillary, maintenance and other non-essential activities will be minimised during the peak traffic hours on the public road in the vicinity of the site. These are the hours of 8:00-9:00 in the morning and 17:00-18:00 in the evening.
- A special permit for moving oversized and hazardous loads will be obtained from FCC/ An Garda Síochána prior to any such movements.
- Daily construction programmes will be planned to minimise the number of disruptions to surrounding roads by staggering HGV movements to avoid site queues.
- It is envisaged that there will be provision for on-site parking, sufficient only to serve those directly involved with the proposed public realm improvements.
- Construction vehicles will follow the road hierarchy as much as practicable - i.e. construction vehicles will be directed away from local or minor streets and roads and will be required to use designated primary national and regional routes for accessing the site.
- The Contractor will appoint a Traffic Management Coordinator who will be responsible for the coordination of all traffic safety and traffic management matters. The Traffic Management Coordinator will ensure that all traffic management requirements set-out in the CTMP are met.
- In the event that multiple contractors will be working on site, overall traffic management coordination will be required. This will include a review of the individual CTMPs prepared by different Contractors and provision of guidance to ensure consistency between them. An overall CTMP for the entire site should be prepared and agreed with FCC in advance of commencement of proposed public realm improvements.

### **4.3 Proof of Compliance with Traffic Restrictions**

The Contractor will track the transit of construction traffic in the area for the duration of the proposed public realm improvements.

The Contractor will control traffic movements using the following procedure;

- Develop a restrictions and rule adherence form that all lorry drivers and site operatives will sign.
- All traffic movements to and from site to be managed by the Contractor's transport manager in accordance with these restrictions
- Appointed person located at the site entrance to issue docketts and record all traffic entering and leaving site.
- Records to be reviewed periodically by the site manager.
- Prior to any new contractors starting, all persons must sign up to restrictions and prequalification forms.
- A certified Flagman must be present to coordinate the traffic entering and leaving the site.

### **4.4 Construction Traffic Access to site via Dublin Road (R106)**

#### **4.4.1 Traffic Management Procedures / Generation**

All deliveries will be booked into site at least one day before delivery. All drivers will contact the site gate man 15 minutes before arrival on site.

All construction traffic will arrive along the main access roads with entry to the site via its northern site boundary. All deliveries will be off-loaded without delay by the most appropriate method and escorted off site.

The site gate man will be responsible for ensuring that there is no conflict between pedestrians and vehicles / entering / exiting the site.

It is predicted that there will be an average of 25 personnel on site during peak construction activity. It is envisaged that working hours on site will be 08:00 hrs to 19:00 hrs Monday to Friday and 08:00 hrs to 16:30 hrs Saturday, therefore the peak movements in and out of the site should occur outside of the AM/PM rush hour traffic.

There is one stage that the proposed public realm improvements will generate HGV movements; bulk excavation.

For a rigid HGV hauling material to the site, it will typically take 15 mins from when the rigid arrives at the site entrance, travels to the unloading area, empties its load and leaves the site.

The worst-case scenario is demolition with an estimated average of 2 HGV's per hour predicted during peak site grading activity. It is envisaged that HGV movements will be undertaken outside of AM/ PM rush hour traffic.

#### **4.4.2 Traffic management - Internal Site Extents**

Contractor / subcontractor / supplier parking is not permitted on any local access routes. Vehicles must be parked within approved designated areas within the site extents. To minimise congestion, a traffic management plan will need to be developed by the Contractor to ensure that construction workers access



the site using alternative means of transport (i.e. public transport) to negate impacts on the local network.

No unloading or blockages of access routes, including emergency vehicle access routes. Such vehicles will be immediately requested to move to avoid impeding the proposed public realm improvements.

In accordance with the CTMP, the Contractor must appoint a Traffic Management Coordinator responsible for the management of traffic management related activities on site.

The Contractor must carry out an auto-track analysis to ensure that adequate turning space is available. The auto-track must demonstrate how construction vehicles will go in and out of the site. Contractors must eliminate where possible the necessity for reversing of any construction or supply chain vehicle onsite.

Contractor is to note requirement for traffic management.

#### **4.4.3 Traffic management coordination meetings**

Monthly logistics coordination will be undertaken where the traffic management strategy, traffic management coordination (and implementation of any required temporary traffic management schemes) will be discussed and agreed.

#### **4.4.4 Construction Access Road required behaviours**

The Contractor must adhere to established traffic management measures specified in the Construction Traffic Management Plan including:

- Queuing procedures outside the site for vehicles seeking to enter the site to prevent back-up onto the local road network;
- Sign-in requirements;
- Visual PPE checks;
- Arrangements for infrequent visitors, e.g. integrated design team, client visitors;
- Compliance to sign-in requirements, use of turnstiles and/or swipe cards; and
- Collaborate with any required security searches of vehicles entering or exiting.

All Contractors will be deemed to have inspected and examined the site and its surroundings at tender stage and to have satisfied itself as to the nature and means of access to the site.

In the event of a Contractor not being satisfied with the permitted access routes to and from the site, the Contractor is obliged to provide for all expenses and charges for temporary wayleaves and temporary truck/vehicle holding areas in connection with different access arrangements to the site. Any amendments must be to the satisfaction of FCC.

#### **4.4.5 Loading/Unloading locations**

Vehicles must be loaded and unloaded within the site area (i.e. access routes, site compound set-up and loading areas to be developed and agreed with the Contractor). Contractors are not permitted to carry out loading or unloading on the public roadway. This approach reduces the risk to the public, reduces congestion, and minimises disruption and risk to any passing vehicles on the highway. All deliveries and collections should be overseen and managed for the Contractor by a nominated competent person.

Contractors must consider and explain how to manage the impacts on cyclists, pedestrians, other road users, and any affected roadway infrastructure.

#### **4.4.6 Emergency Access**

Access for emergency vehicles via the primary haul roads must be maintained at all times.

#### **4.4.7 Asset Protection**

The Contractor must take care to avoid damage to roads, footpaths, grass margins, and other surfaces and all walls including protected walls, structures including protected structures and the associated curtilage, trees, lighting fixtures and all other street furniture within or outside of the overall site. They shall be liable for the cost of repairing / replacing all such damage caused by its operations to the satisfaction of FCC.

Contractors must take precautions to ensure against spillage of diesel fuel, contaminated water or solvents. Any damage so caused shall be made good by the offending Contractor at its own expense.

Contractors must prohibit the use of tracked plant on road surfaces outside of the site unless suitably approved protective measures are taken to safeguard the integrity of surfaces.

The Contractors Construction Management Plan must include specifications regarding the quality of temporary reinstatements and the timelines for permanent reinstatements of roads and pavements affected by the proposed public realm improvements.



**APPENDIX I. Site Specific Flood Risk Assessment by Punch Consulting Engineers.**

**Public Realm Improvements for a  
Pedestrianised New Street**

**Site Specific Flood Risk Assessment**

**222126-PUNCH-XX-XX-RP-C-0004**

**February 2023**

## Document Control

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# 1 Introduction

## 1.1 Background

PUNCH Consulting Engineers were appointed by Fingal County Council to carry out a Site-Specific Flood Risk Assessment for the proposed public realm improvements at a pedestrianised New Street, located in Malahide, Co. Dublin.

The assessment has been prepared as part of a pre-planning assessment submission package and is carried out in full compliance with the requirements of “The Planning System & Flood Risk Management Guidelines” published by the Department of the Environment, Heritage and Local Government in November 2009.

The proposed site layout is detailed in a series of drawings provided by DFLA in the pre-planning assessment submission documentation.

## 1.2 Existing Site

The site is approximately 0.22 hectares in area located in Malahide Village on New Street. The site currently consists of an established town street with retail, commercial and residential development throughout. The topography of the street consists of the site falling from its highest point at the southern extents of the site (The Mall) and falling towards the lowest point at the northern extents of the site (Strand Street).

The site is bounded by retail, commercial and residential developments to the west and east, a junction on Strand Street to the north, and a junction on The Mall (R106) to the south. The junctions on either end of New Street are both signalised. New Street is approximately 100m southwest of the marina. The street is pedestrianised with restricted vehicular access to enable deliveries allowed between 7am and 11 am only, refuse collection and emergency vehicles. The site is accessed via The Mall (R106) to the south and via Strand Street to the north. Please refer to Figure 1-1 **Error! Reference source not found.** below illustrating the site boundary.

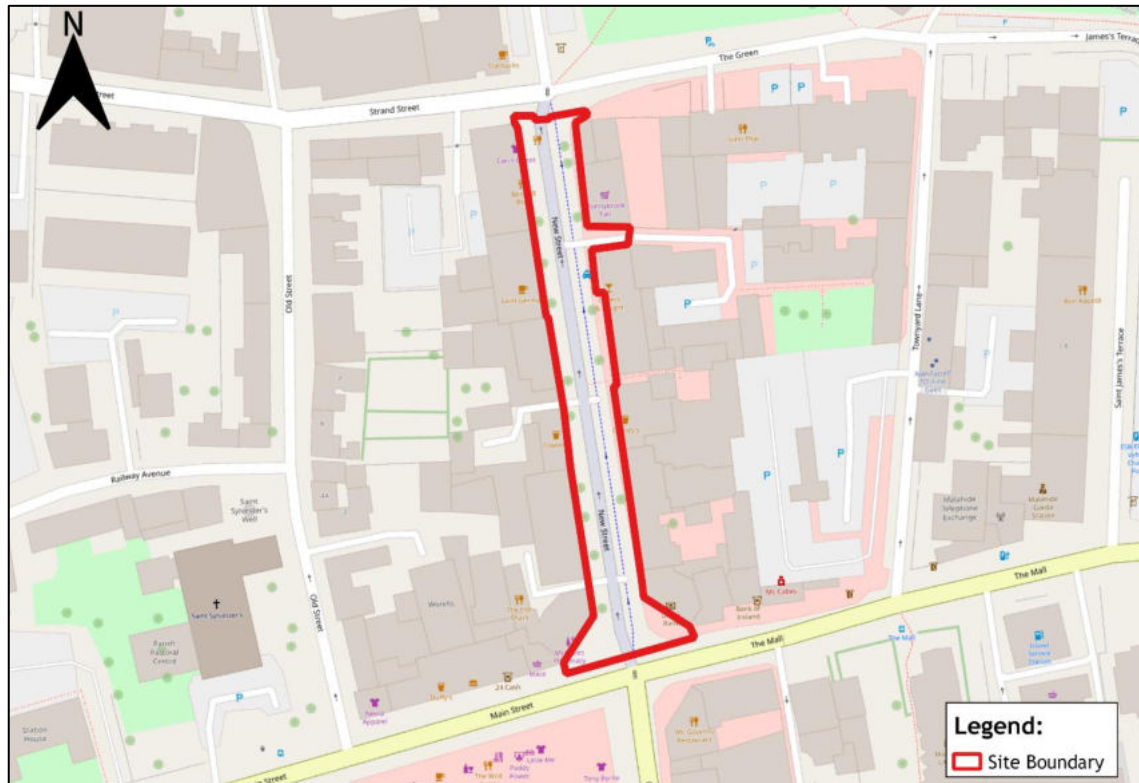


Figure 1-1: Site Location Plan.

### 1.3 Nature of the Proposed Development

The proposed public realm improvements will comprise: -

- i. Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
- ii. Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
- iii. Upgrade of all street surfaces.
- iv. Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
- v. Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
- vi. Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
- vii. Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
- viii. Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
- ix. New public lighting.
- x. Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.



- xi. Provision of ducting for existing and future utilities and piped infrastructure.
- xii. All associated site and development works.

Fingal County Council will be providing regulatory traffic signs in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

The proposed public realm improvements are outlined in a series of architectural drawings prepared by DFLA, and engineering drawings prepared by PUNCH Consulting Engineers supplied as part of the pre-planning assessment pack.

Please refer to Architectural Documents for full proposed site layout.

## 2 Relevant Guidance

### 2.1 “The Planning System and Flood Risk Management” Guidelines

In September 2008, “The Planning System and Flood Risk Management” Guidelines were published by the Department of the Environment, Heritage and Local Government in Draft Format. In November 2009, the adopted version of the document was published. This assessment has been prepared as part of a pre-planning assessment submission package.

The Flood Risk Management Guidelines give guidance on flood risk and development. The guidelines recommend a precautionary approach when considering flood risk management. The core principle of the guidelines is to adopt a flood risk sequential approach to managing flood risk and to avoid development in areas that are at risk. The sequential approach is based on the identification of flood zones for river and coastal flooding. The guidelines include definitions of Flood Zones A, B and C, as noted in Table 2-1 below. It should be noted that these do not take into account the presence of flood defences, as there remain risks of overtopping and breach of the defences.

Table 2-1: Flood Zone Designation

Flood Zone	Type of Flooding	Annual Exceedance Probability (AEP)
Flood Zone A	Coastal	Less than a 1:200 (0.5% AEP) year event
	Fluvial	Less than a 1:100 (1% AEP) year event
Flood Zone B	Coastal	Greater than a 1:200 (0.5% AEP) and less than a 1:1000 (0.1% AEP) year event
	Fluvial	Greater than a 1:100 (1% AEP) and less than a 1:1000 (0.1% AEP) year event
Flood Zone C	Coastal	Greater than a 1:1000 (0.1% AEP) year event
	Fluvial	Greater than a 1:1000 (0.1% AEP) year event

Once a flood zone has been identified, the guidelines set out the different types of development appropriate to each zone. Exceptions to the restriction of development due to potential flood risks are provided for through the use of the **Justification Test**, where the planning need and the sustainable management of flood risk to an acceptable level must be demonstrated. This recognises that there will be a need for future development in existing towns and urban centres that lie within flood risk zones, and that the avoidance of all future development in these areas would be unsustainable.

A three staged approach to undertaking an FRA is recommended:

**Stage 1: Flood Risk Identification** - Identification of any issues relating to the site that will require further investigation through a Flood Risk Assessment;

**Stage 2: Initial Flood Risk Assessment** - Involves establishment of the sources of flooding, the extent of the flood risk, potential impacts of the development and possible mitigation measures;

**Stage 3: Detailed Flood Risk Assessment** - Assess flood risk issues in sufficient detail to provide quantitative appraisal of potential flood risk of the development, impacts of the flooding elsewhere and the effectiveness of any proposed mitigation measures.

This report addresses the requirements for Stage 2.

## 2.2 Fingal Development Plan 2017-2023

Chapter 7 of the Fingal Development Plan 2017-2023 includes policies on surface water and flooding. The policy relevant to this document is as follows:

*SW07 Implement the Planning System and Flood Risk Management-Guidelines for Planning Authorities (DoEHLG/OPW 2009) or any updated version of these guidelines. A site-specific Flood Risk Assessment to an appropriate level of detail, addressing all potential sources of flood risk, is required for lands identified in the SFRA, located in the following areas: Courtlough; Ballymadun; Rowlestown; Ballyboghil; Coolatrath; Milverton, Skerries; Channell Road, Rush; Blakescross; Lanestown/Turvey; Lissenhall, Swords; Balheary, Swords; Village/Marina Area, Malahide; Streamstown, Malahide; Balgriffin; Damastown, Macetown and Clonee, Blanchardstown; Mulhuddart, Blanchardstown; Portrane; Sutton; and Howth, demonstrating compliance with the aforementioned Guidelines or any updated version of these guidelines, paying particular attention to residual flood risks and any proposed site specific flood management measures*

A Strategic Flood Risk Assessment (SFRA) was completed for Fingal County Council (FCC) in February of 2016 to supplement the Fingal Development Plan 2017-2023. FCC's Policy SW07 above is replicated as part of this pre-planning assessment submission.

## 2.3 Fingal Draft Development Plan 2023-2029

Chapter 11.5.2.3 (Strategic Flood Risk Assessment) of the Fingal Draft Development Plan 2023 - 2029 provides a list of Council Objectives with regards to flood risk. The objectives relevant to this report are as follows:

It is an objective of the Council to:

- IUP12 Ensure the continued incorporation of Flood Risk Management into the spatial planning of the County of Fingal, to meet the requirements of the EU Floods Directive and the EU Water Framework Directive and to promote a climate resilient County.*
- IUP14 Continue to support and assist the OPW in implementing and delivering the relevant CatchmentBased Flood Risk Assessment and Management Programmes for rivers, coastlines and estuaries within Fingal.*
- IUP16 Have regard to the OPW Flood Risk Management Guidelines (2009), as revised by Circular PL 2/2014, when assessing planning applications and in the preparation of statutory and non-statutory plans and to require site specific flood risk assessments are to be considered for all new developments within the County. All development must prepare a Stage 1 Flood Risk Analysis and if the flooding risk is not screened out, they must prepare a Site Specific Flood Risk Assessment (SFRA) for the development, where appropriate.*

A Draft Strategic Flood Risk Assessment (SFRA) was completed by Fingal County Council in February 2022 to supplement the Fingal Draft Development Plan 2023 - 2029.



## 2.4 Land Zoning

The land on which the development is proposed is currently a street and therefore not defined by a land zoning. It is noted that the lands adjacent to either side of New Street are zoned as “TC: Town and District Centre” on Sheet No.9 from the Fingal Development Plan 2017 - 2023. An extract is shown in Figure 2-1.

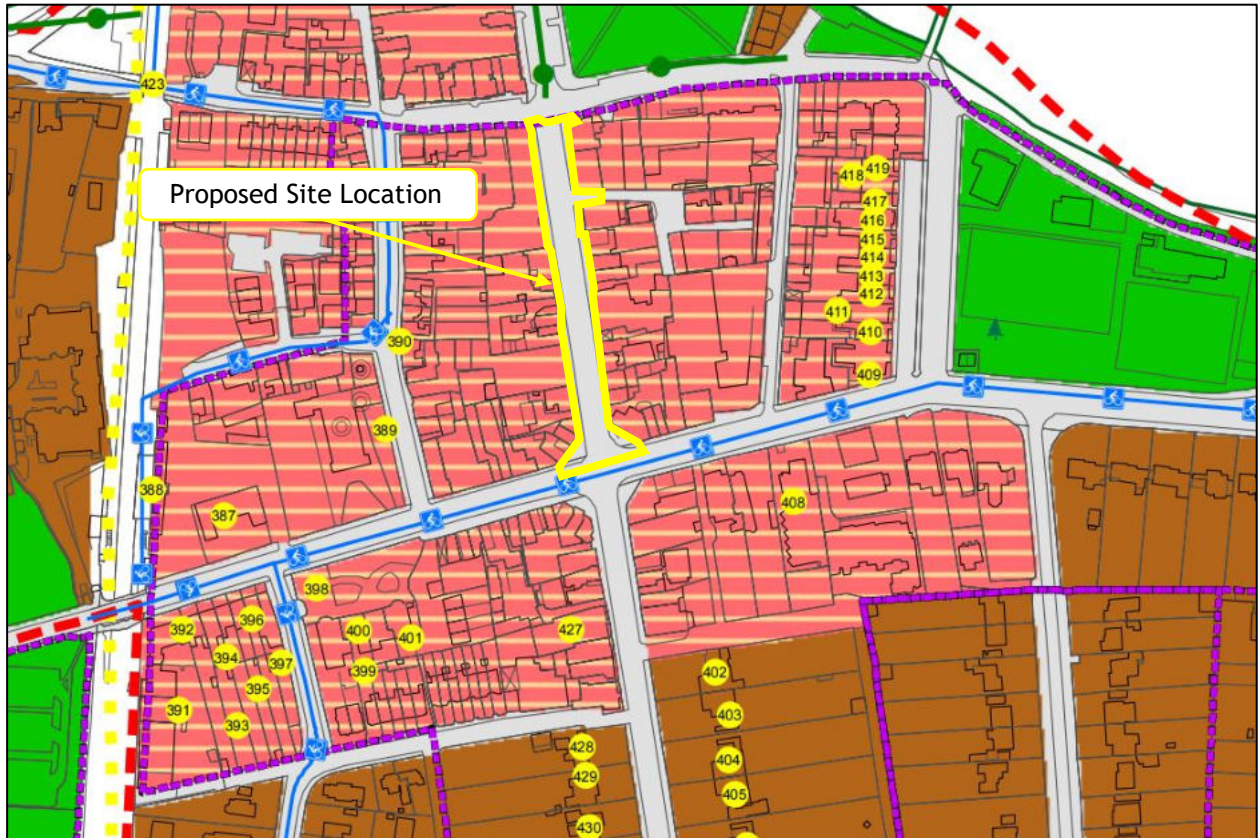


Figure 2-1: Land Use Zoning (Extract from Sheet No.9 from Fingal Development Plan 2017 - 2023).

### 3 Flood Risk Identification

#### 3.1 Existing Hydrogeological Environment

The existing hydrological environment is characterised primarily by the presence of the water associated with the Broadmeadow River, and Malahide Bay. The dominant hydrological features in the vicinity contributing to the Broadmeadow Water/ Malahide Bay are the Ballymadrough River, Broadmeadow River, and the Gaybrook Stream. The watercourse locations are shown in Figure 3-1.



Figure 3-1: Hydrological Environment around the site.

#### 3.2 Topographical Survey

A topographical survey of the site and its environments was completed by Apex Surveys in July 2022. The topography of the site falls steeply in a south-north direction, with levels ranging from 9.24m at the southern end of the site, and 2.84m at the northern end of the site.

### 3.3 Site Walkover

PUNCH Consulting Engineers visited the site on 2<sup>nd</sup> of February 2022 to assess conditions and key features of the site, to establish any potential sources of flooding and to identify the likely routes of flood waters. Appendix A contains a selection of key images taken during the site visits.

The following was established from the site visit:

- a) The site was accessed via Strand Street.
- b) Ground was dry at the time of the visit. The entirety of the sites consists of hardstanding areas (existing street and footpaths).
- c) The site is bounded by retail, commercial and residential developments to the west and east.
- d) Levels in the site were steep with a noticeable fall from the southern part of the site towards the norther end.

### 3.4 Site Geology

The geology of the site was reviewed using data from the Geological Survey of Ireland (available at [www.gsi.ie](http://www.gsi.ie)). The soil type at the location of the proposed development is identified as ‘Gravels derived from Limestones’ towards the northern end of the site and “Till derived from Limestones” towards the southern end of the site as seen in. The surrounding areas comprise mainly of ‘Bedrock outcrop or sub crop’ and “Till derived from Limestones”.

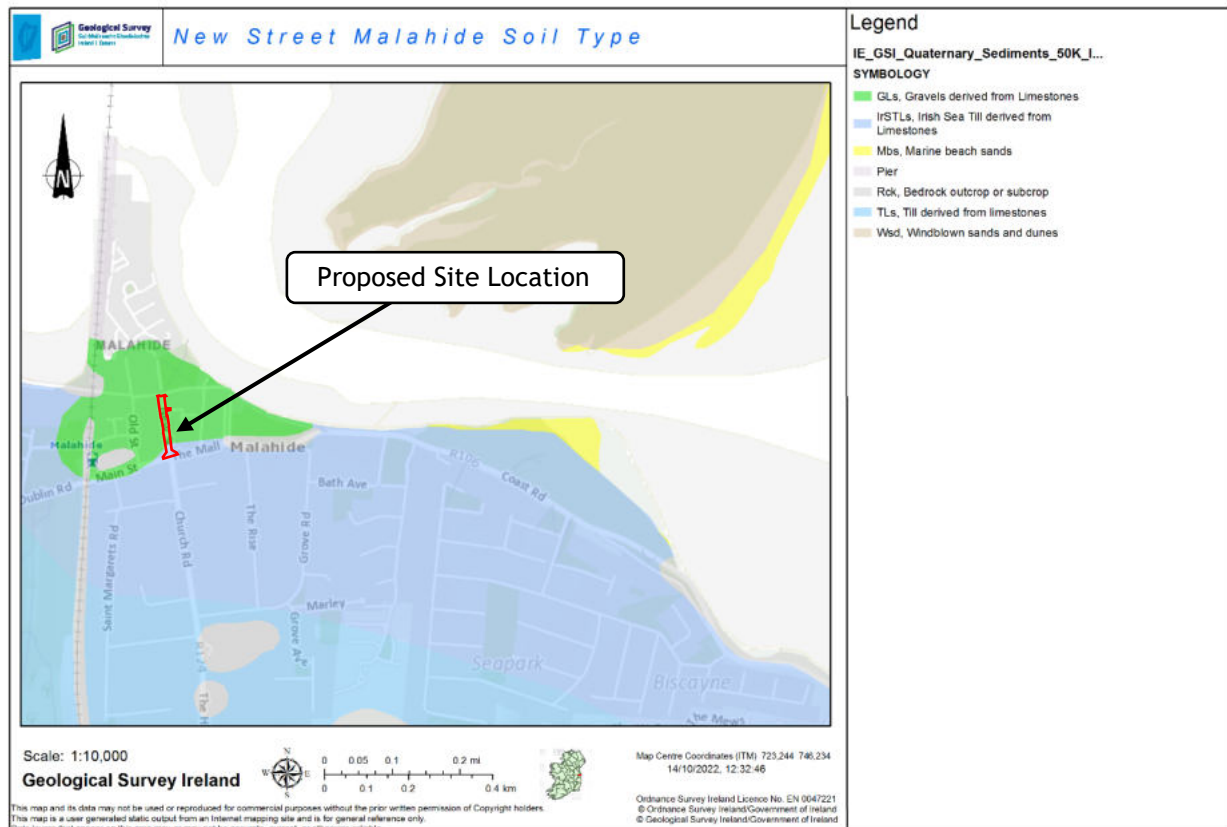


Figure 3-2: Geology of the surrounding area (source: Geological Survey of Ireland (<http://www.gsi.ie>))



### 3.5 Groundwater Flooding

GSI data show that the site is primarily within an area of extreme groundwater vulnerability as shown in the figure below.

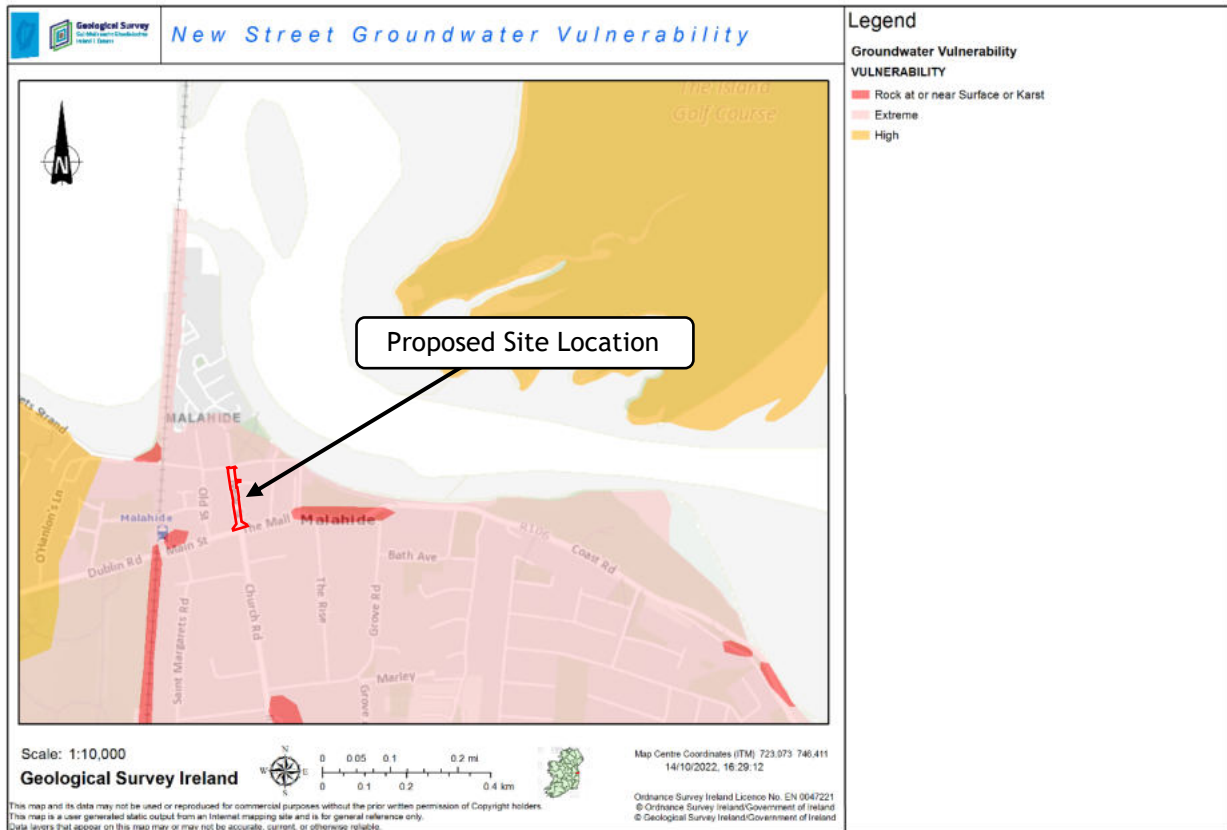


Figure 3-3: Groundwater Vulnerability (source: Geological Survey of Ireland (<http://www.gsi.ie>)).

### 3.6 Pluvial Flooding

Pluvial Flooding is the result of rainfall generated overland flows which arise before run-off can enter any watercourse or sewer. It is usually associated with high-intensity rainfall. The proposed site will include a surface water drainage system to ensure pluvial flooding does not occur. The development will also include SuDS measures such as bioretention areas which will reduce the overall pluvial flood risk.

### 3.7 Review of Existing Surface Water Infrastructure

Fingal County Council was contacted with regards existing surface water infrastructure in the vicinity of the site. the following stormwater drainage networks are present within the development site:

1. 225mm stormwater piped concrete sewer flowing south-north on New Street.

The following stormwater drainage exists adjacent to the development site:

1. 225mm stormwater piped concrete sewer flowing west-east on Strand Street

Please refer to Figure 3-4 illustrating the existing stormwater drainage arrangement.

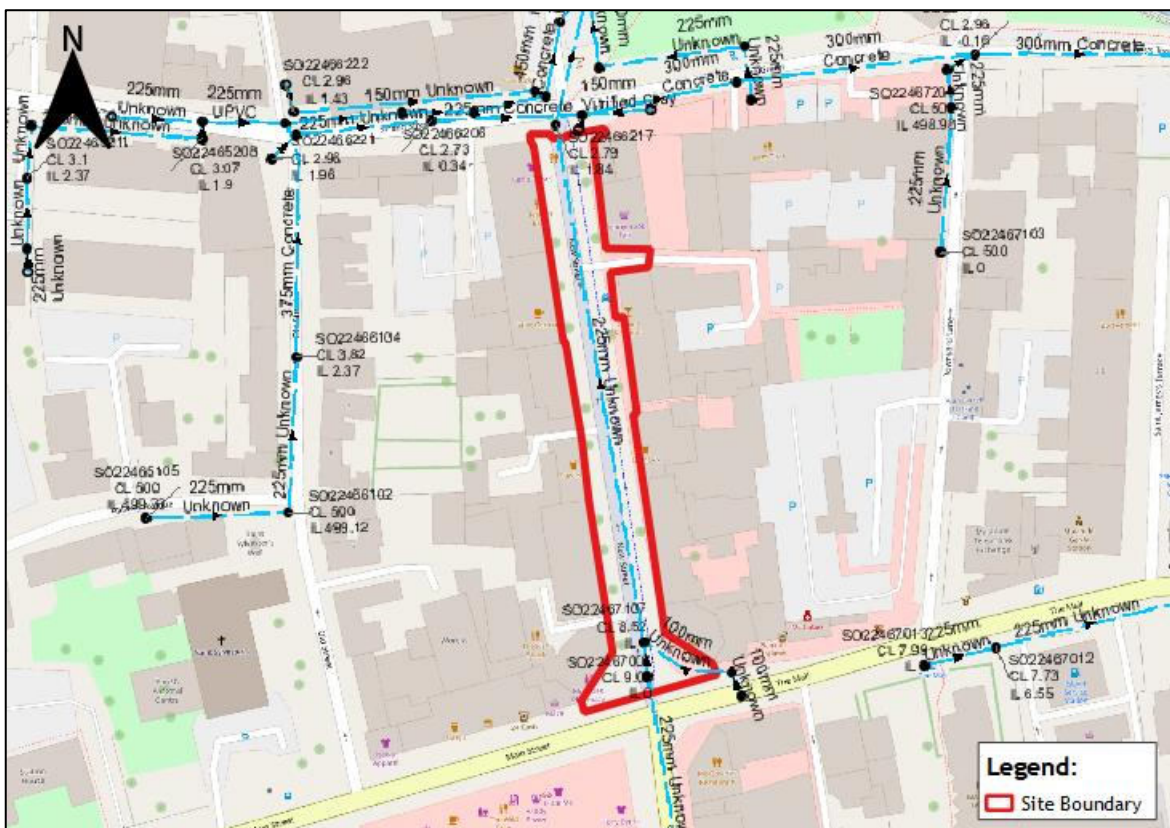


Figure 3-4: Existing stormwater drainage surrounding the site.

### 3.8 Review of Historic Mapping

A review of the OSI Historical maps<sup>1</sup> was carried out. Figure 3-5 shows an extract from the 25-inch historic map for the site. The site is not indicated as “liable to flood” in the available historic OSI maps.

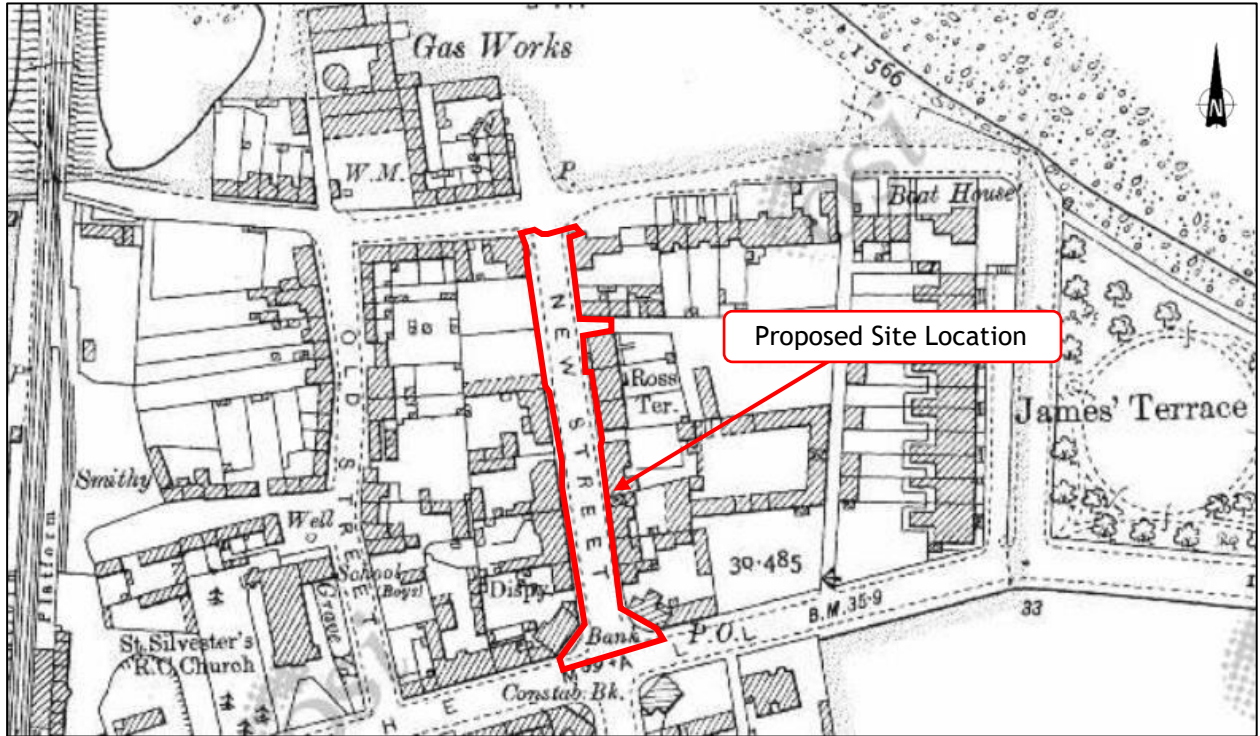


Figure 3-5: Extract from OSI historical 25-inch map.

<sup>1</sup> Maps available: <http://map.geohive.ie/mapviewer.html>



### 3.9 History of Flooding

The Office of Public Works (OPW) Flood Hazard Mapping website holds a record of historic flood events. A review of the database indicated that there have been no instances of flooding on the proposed site as shown in Figure 3-6, see Appendix B for full report.

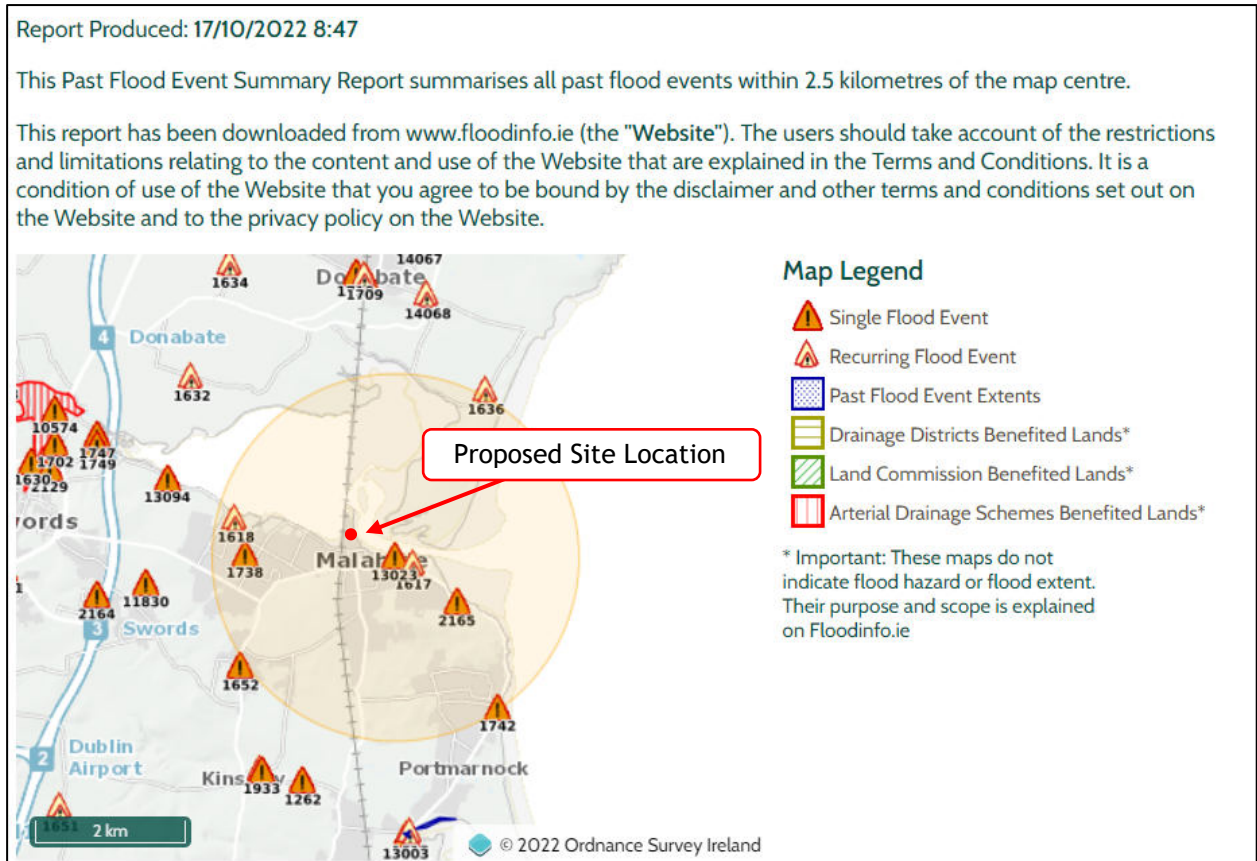


Figure 3-6: Extract from OPW Flood maps Database Report (see Appendix B for full report)

Please note that this is not a guaranteed record of all flood events.

### 3.10 Catchment Flood Risk Assessment and Management Study (CFRAMS) Mapping

The CFRAMS is an OPW led national programme which seeks to identify and map potential existing and future flood hazard in areas at significant risk from flooding. It also aims to identify flood relief measures and prepare Flood Risk Management Plans for these areas.

As part of the CFRAMS programme, mapping is available online for public viewing, and the local area has been assessed as part of the Eastern CFRAMS. The OPW has published detailed flood hazard mapping for the area based on results from the CFRAMS. This includes flood extent and flood depth mapping for a number of return periods for fluvial and coastal flood events. The CFRAMS mapping for the Malahide area is currently “Under Review” on the OPW website and is therefore unavailable for use in this study.

### 3.11 Draft Fingal Development Plan 2023 - 2029 - SFRA

The Strategic Flood Risk Assessment (SFRA) prepared to accompany the DRAFT Fingal Development Plan 2023-2029 provides flood risk maps for the area

Figure 3-7 below is an extract from the relevant SFRA Fluvial Flood Map. Full SFRA Mapping for the area are included in Appendix C of this report.

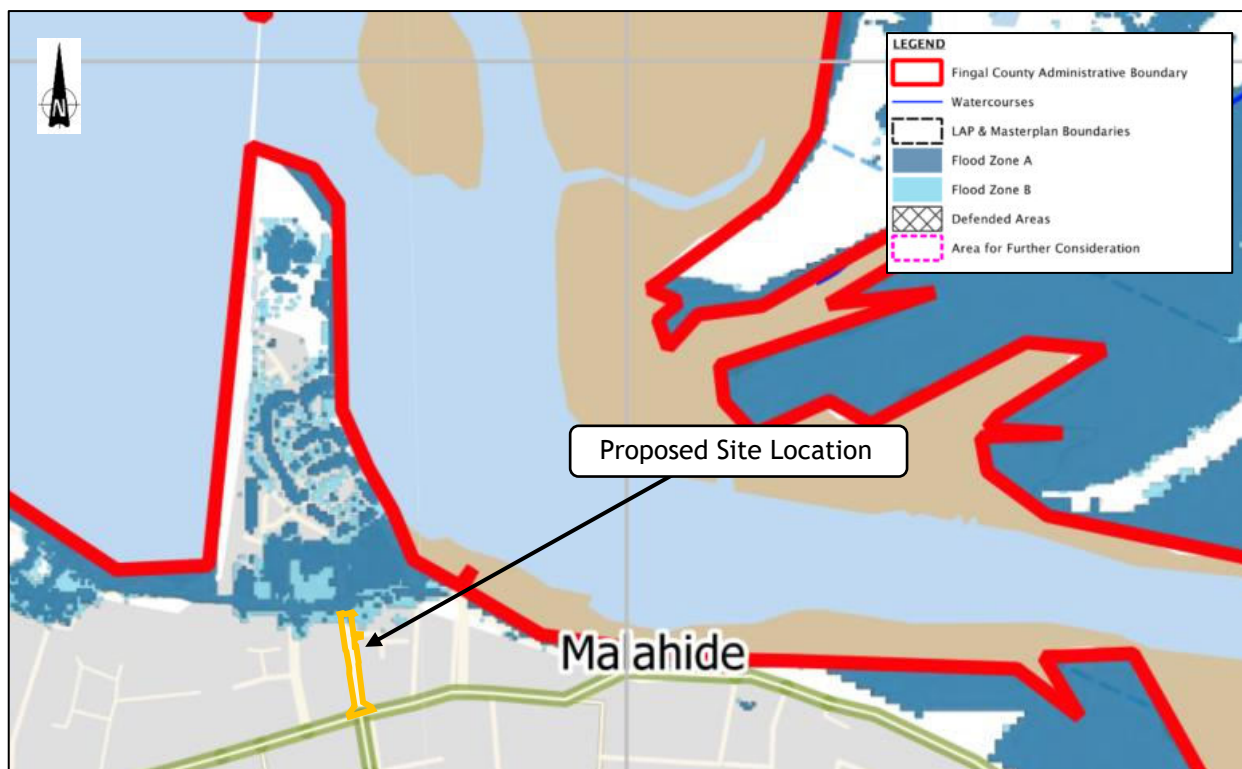


Figure 3-7: Extract from the SFRA Flood Map for the area (site indicated in orange), sourced from the Strategic Flood Risk Assessment (SFRA) for the DRAFT Fingal Development Plan 2023-2029

The flood map above demonstrates that the majority of the site is not at risk of flooding. However, a small section of New Street towards the northern boarder of the site at the junction with Strand Street is within Flood Zone A.

### 3.12 Estimate of Flood Zone

PUNCH Consulting Engineers have reviewed the available information as outlined in the above sections. We have concluded that the northern extent of the site is located in Flood Zone A and is therefore at risk of flooding.

### 3.13 Vulnerability Classification

As part of this pre-planning assessment submission, table 3.1 of “The Planning System and Flood Risk Management” Guidelines was consulted. This table provides a broad classification of land use and vulnerability class. The proposed street can be classified “Amenity Open Space” and as such is considered a Water Compatible Development.

As part of this pre-planning assessment submission, Table 3.2 of “The Planning System and Flood Risk Management” Guidelines was consulted. This table provides a matrix of vulnerability versus flood zone and is reproduced here as Table 3-1. With reference to this table, it is concluded that the proposed street is considered appropriate within Flood Zone A.

**Table 3-1: Matrix of Vulnerability versus Flood Zone to indicate Justification Requirement.**

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

### 3.14 Flood Impact Assessment of the Proposed Public Realm Improvements

There are a number of potential aspects to consider when assessing if the proposed development will increase the flood risk elsewhere.

- i. Loss of flood storage - Not applicable
- ii. Diversion of flood waters - Not Applicable
- iii. Increased runoff from the proposed development - Not applicable

Flood storage and flow paths in the area will be unaffected due to the proposed New Street Ground levels will be maintained at the existing ground levels as much as possible. Flow paths in extreme flood events will have the same flow pattern as existing.

The majority of the current site has impermeable surfaces, and SUDs measures will be introduced as part of the proposed development. The result of this is that the runoff rate from the development will be reduced in the proposed scenario when compared to the existing scenario.



## **4 Flood Risk Assessment Conclusions**

This report was prepared to accompany a pre-planning assessment submission to Fingal County Council (FCC) for the proposed public realm improvements at New Street, located in Malahide, Co. Dublin.

As part of this pre-planning assessment submissions, the proposed redevelopment of New Street has been assessed in accordance with “The Planning System and Flood Risk Management” Guidelines and FCC’s Development Plan 2017-2023, and FCC’s DRAFT Development Plan 2023-2029. It was determined that the proposed public realm improvement to a pedestrianised New Street is currently located within Flood Zone A for fluvial flooding. The proposed public realm improvement to a pedestrianised New Street is classified as a Water Compatible Development under “The Planning Scheme and Flood Risk Management” Guidelines and as such is considered appropriate in this location. The proposed public realm improvement to a pedestrianised New Street will not increase the flood risk elsewhere.

## **Appendix A Site Visit Images**



Image 1: Existing site access from junction between Strand Street and New Street.



Image 2: View of New Street (looking southwards along the street).





Image 3: Existing site access from junction between The Mall (R106) and New Street.



Image 4: View of New Street (looking northwards along the street).



**Image 5: Existing gullies present along New Street.**

**Appendix B      OPW Historic Flood Events Record**

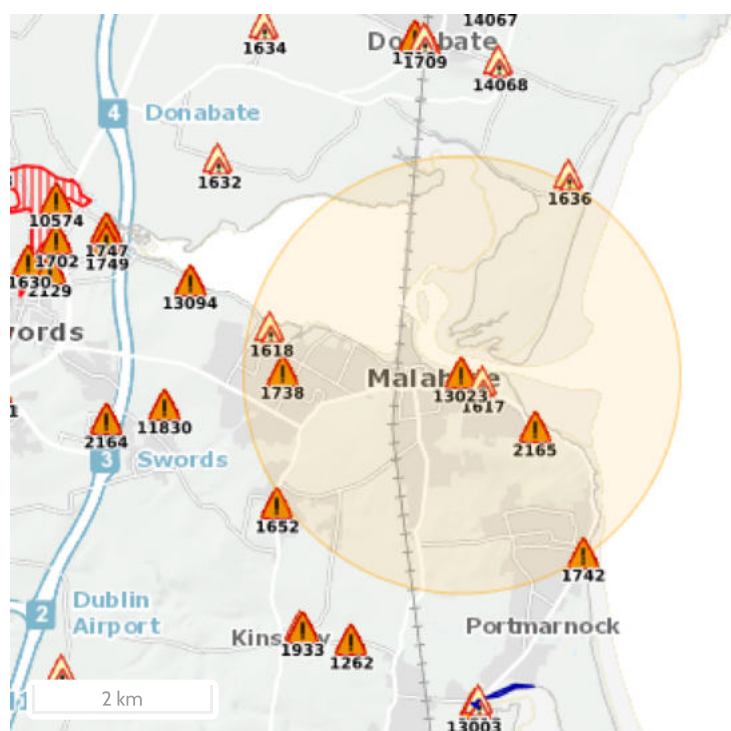




Report Produced: 17/10/2022 8:47

This Past Flood Event Summary Report summarises all past flood events within 2.5 kilometres of the map centre.

This report has been downloaded from [www.floodinfo.ie](http://www.floodinfo.ie) (the "Website"). The users should take account of the restrictions and limitations relating to the content and use of the Website that are explained in the Terms and Conditions. It is a condition of use of the Website that you agree to be bound by the disclaimer and other terms and conditions set out on the Website and to the privacy policy on the Website.



## Map Legend

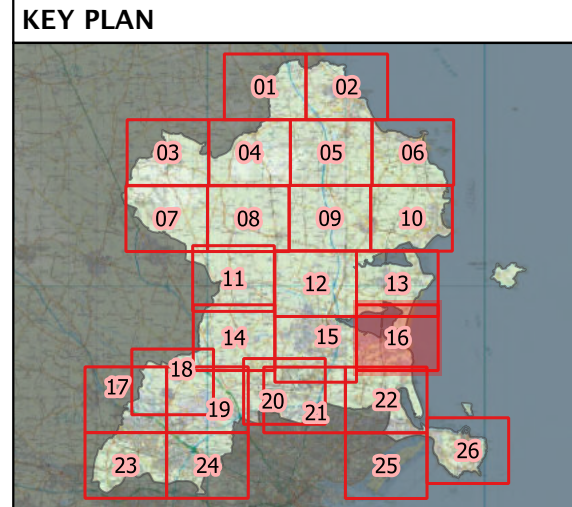
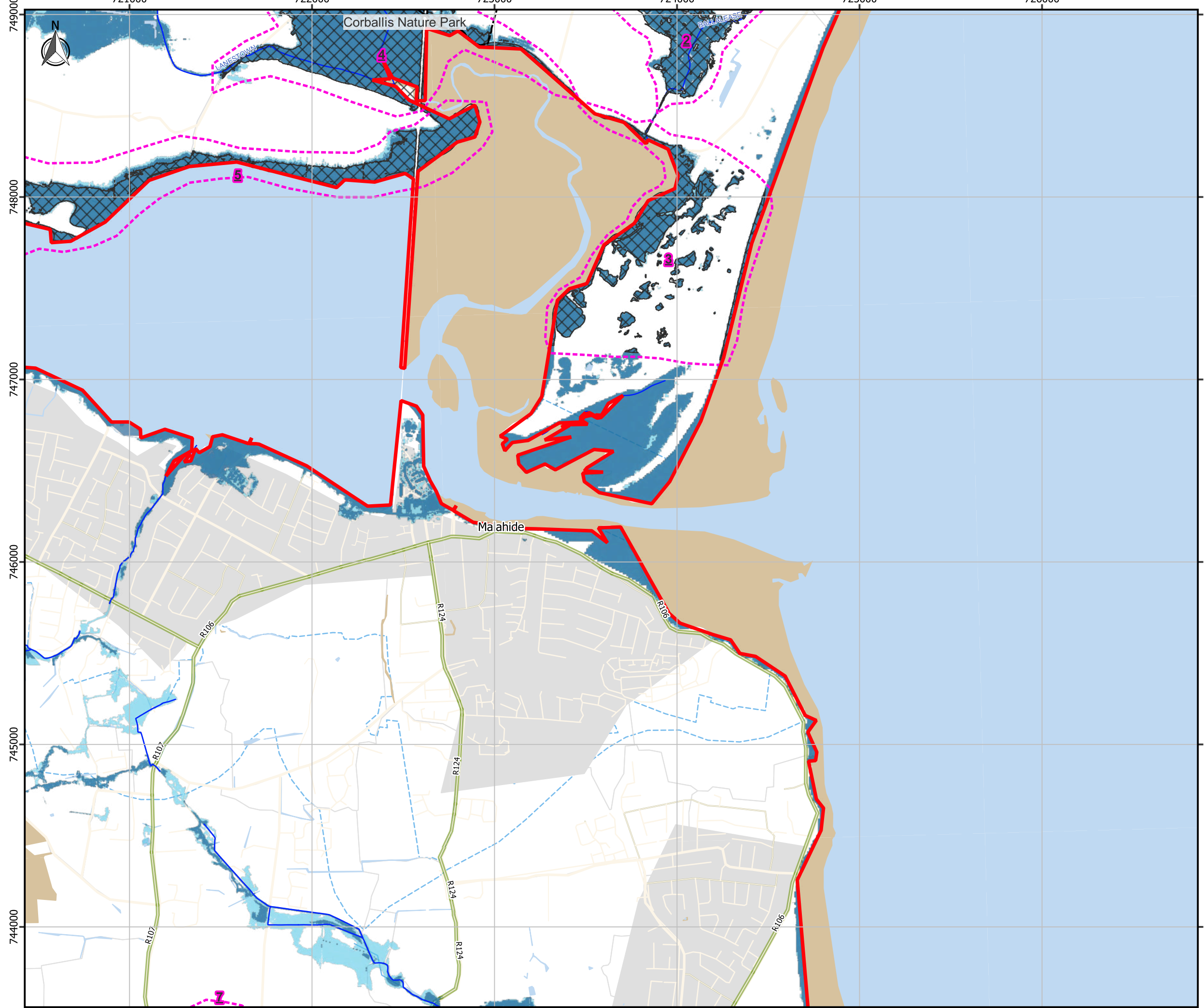
- Single Flood Event
- Recurring Flood Event
- Past Flood Event Extents
- Drainage Districts Benefited Lands\*
- Land Commission Benefited Lands\*
- Arterial Drainage Schemes Benefited Lands\*

\* Important: These maps do not indicate flood hazard or flood extent. Their purpose and scope is explained on [Floodinfo.ie](http://Floodinfo.ie)

## 6 Results

Name (Flood_ID)	Start Date	Event Location
1.  Mill View Lawn Malahide Feb 2002 (ID-1738) Additional Information: <a href="#">Reports (1)</a> , <a href="#">Press Archive (0)</a>	01/02/2002	Exact Point
2.  Strand Road Malahide Feb 2002 (ID-1742) Additional Information: <a href="#">Reports (1)</a> , <a href="#">Press Archive (0)</a>	01/02/2002	Approximate Point
3.  Biscayne Coast Road Malahide Oct 2002 (ID-2165) Additional Information: <a href="#">Reports (1)</a> , <a href="#">Press Archive (0)</a>	19/10/2002	Exact Point
4.  Flooding at Malahide on 03/01/2014 (ID-13023) Additional Information: <a href="#">Reports (0)</a> , <a href="#">Press Archive (0)</a>	03/01/2014	Approximate Point
5.  Seabank (Estate) Court Malahide Recurring (ID-1617) Additional Information: <a href="#">Reports (5)</a> , <a href="#">Press Archive (0)</a>	n/a	Exact Point
6.  Bisset Strand and Estuary Road Malahide Recurring (ID-1618) Additional Information: <a href="#">Reports (4)</a> , <a href="#">Press Archive (0)</a>	n/a	Exact Point

**Appendix C      SFRA Mapping**



**LEGEND**

- Fingal County Administrative Boundary
- Watercourses
- LAP & Masterplan Boundaries
- Flood Zone A
- Flood Zone B
- Defended Areas
- Area for Further Consideration

REV: 03	NOTE: DRAFT ISSUE	DATE: 22/02/2022
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**Comhairle Contae Fhine Gall**  
**Fingal County Council**

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 W: www.mcclloyconsulting.ie

**MAP:** FLOOD ZONE MAP

**FLOOD PROBABILITY:**  
 FLUVIAL: 1% / 0.1%      COASTAL: 0.5% / 0.1%

**SOURCE CRS:** ITM EPSG:2157

**DRAWN BY:** DL      **DATE:** 22/02/2022

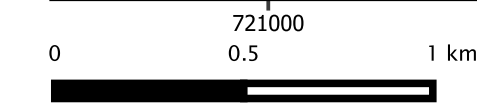
**CHECKED BY:** PS      **DATE:** 22/02/2022

**APPROVED BY:** DKS      **DATE:** 22/02/2022

**DRAWING NUMBER:**  
 M02127-06\_FIG\_FL116

**MAP SERIES:** PAGE 16 OF 26

**DRAWING SCALE:** 1:20000 @ A3





**APPENDIX J. Traffic & Transport Assessment by Punch Consulting Engineers.**

**Public Realm Improvements for a  
Pedestrianised New Street**

**Traffic and Transportation Assessment  
222126-PUNCH-XX-XX-RP-C-0005**

**February 2023**

## Document Control

Document Number: 222126-PUNCH-XX-XX-RP-C-0005

Status	Revision	Description	Date	Prepared	Checked	Approved
S3	P01	Pre-Planning	22/02/2023	R Lee JP Murray	J Tiernan	P Casey



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## 1 Non-Technical Summary

1. The development consists of public realm improvements for a pedestrianised New Street in Malahide, Co. Dublin.
2. A number of traffic surveys were compared in order to assess any change in traffic flows due to the proposed public realm improvements for a pedestrianised New Street.
3. It is proposed to access the development as follows:
  - a. A one-way restricted vehicular traffic system (northbound).
  - b. Deliveries permitted from 7am-11am each day, with vehicle bollards at the Diamond as control measure.
  - c. Unrestricted vehicular access to Ross Cottages (from the north).
4. Capacity analysis was carried out on 11 no. junctions:
  1. Junction of New Street, Strand Street, The Green, Marina Village (signalised junction)
  2. Junction of Old Street and Strand Street
  3. Junction of Townyard Lane and Strand Street
  4. The Diamond - Junction of New Street and R106 (signalised junction)
  5. Junction of Townyard Lane and The Mall (R106)
  6. Junction of Old Street and Dublin Road (R106)
  7. Junction of James' Terrace and The Mall (R106)
  8. Junction of the Rise and The Mall (R106)
  9. Junction of Grove Road and The Mall (R106)
  10. Junction of Grove Road and the Rise
  11. Junction of Grove Road and Church Road

The analysis shows that, when comparing the 2023 post-pedestrianisation with the 2019 pre-pedestrianisation scenarios, there are minimal effects on the capacity for the surrounding junctions.

5. Parking spaces for the proposed development are restricted to a single accessible parking facility at the HSE building location.
6. Secure cycle parking facilities have been provided within the proposed public realm improvements to meet the requirements set out in Objective MT16 of the Fingal Development Plan 2017-2023 and in Objective CM09 of the Draft Fingal Development Plan 2023-2029.

## **2 Introduction**

PUNCH Consulting Engineers as part of a multidisciplinary design team led by DFLA were commissioned by Fingal County Council (FCC) to carry out a Traffic and Transportation Assessment (TTA) for proposed public realm improvements for a pedestrianised New Street in Malahide, Co. Dublin.

The assessment has been carried out in accordance with TII's Traffic and Transport Assessment Guidelines PE-PDV-02045 (May 2014) and makes reference to the Design Manual for Urban Roads & Streets (DMURS). Sections from the Fingal Development Plan (2017-2023) have been used to help describe the development location and its local context.

The purpose of the TTA report is to assess the impact of the proposed public realm improvements on a pedestrianised New Street on the existing local transport network in comparison with the pre-pedestrianised scenario. An assessment of the accessibility of the site for cyclists, pedestrians and public transport users has also been made.

### 3 Existing Conditions

#### 3.1 Site Location

The site is approximately 0.22 hectares in area located at New Street, Malahide Village. The site currently consists of an established town street with retail, commercial and residential development throughout. The topography of the street falls from south at The Diamond, The Mall, Main Street, and Church Road junction to the north at the Strand Street junction. The site is located within the Fingal Development Plan 2017-2023.

Refer to Figure 3-1 below.

The access points to the proposed development are as follows:

- i. From the south at the junction with Mall Street (one-way time restricted vehicular traffic system).
- ii. From the north at the junction with Strand Street (unrestricted vehicular access to Ross Cottages).

The site is located a short distance from Malahide Beach and Marina, Malahide Castle Public Park, and Malahide DART station. It is located approximately 20 km from Dublin City Centre (Connolly Station).

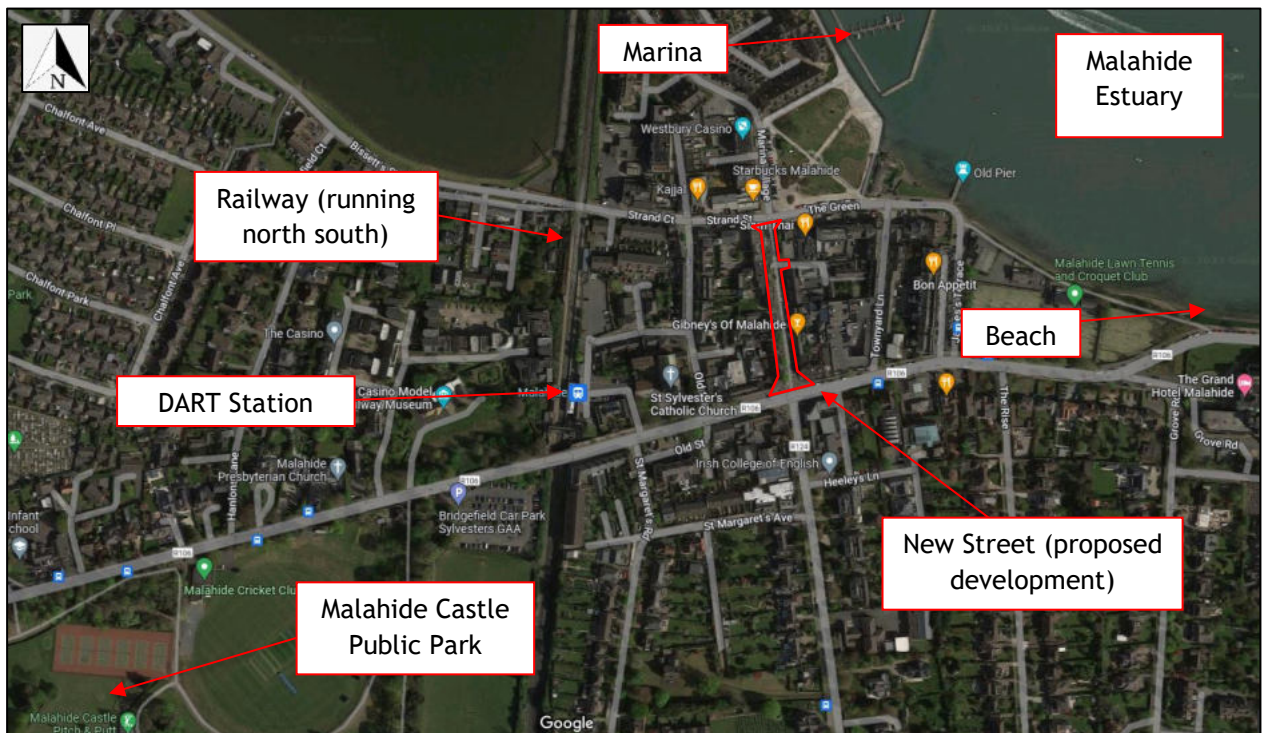


Figure 3-1: Site Location Plan (Ref Google Maps)



### 3.2 Existing Road Network

The site location in relation to the wider road network is detailed in Figure 3-2, Figure 3-3 and Figure 3-4.

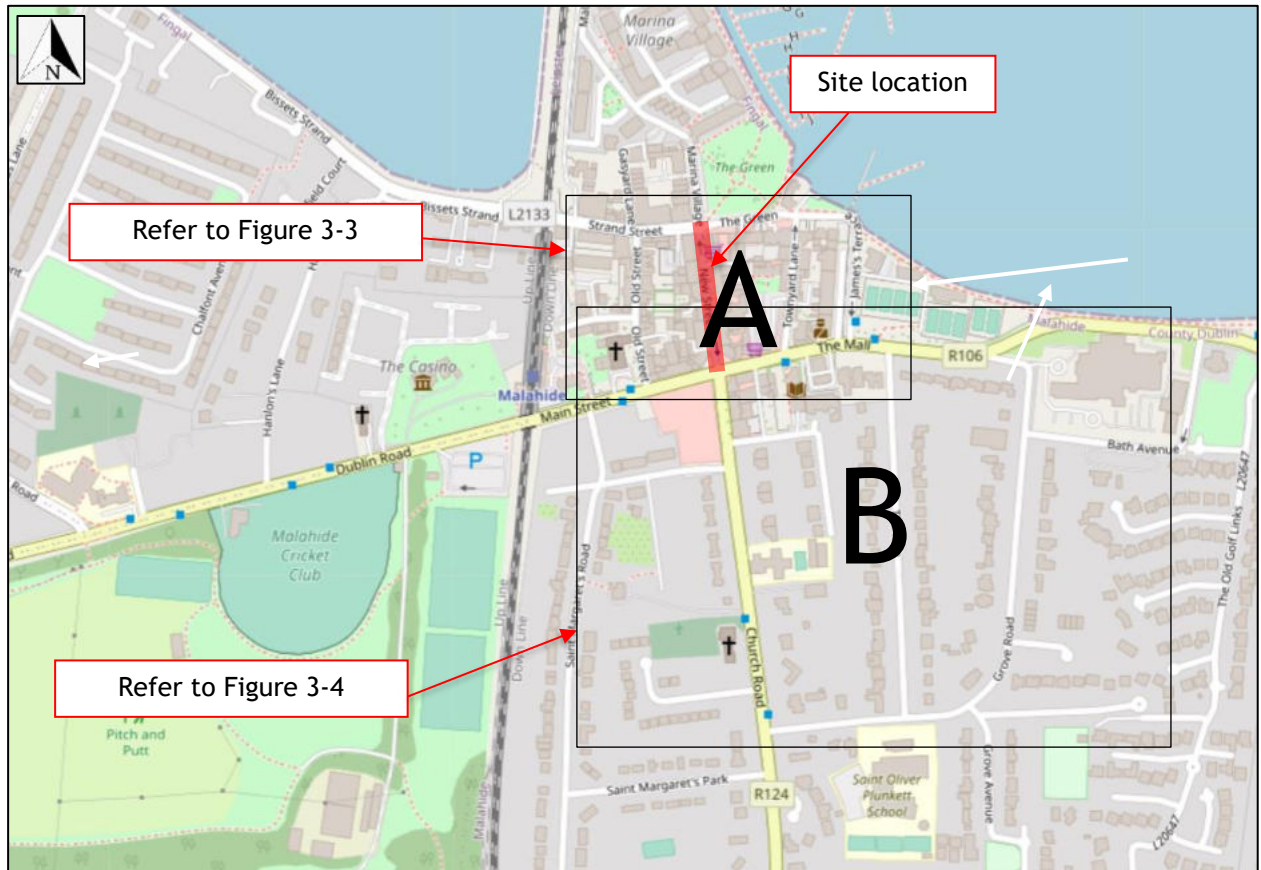


Figure 3-2: Overview - Site location and surrounding road network (Ref openstreetmap.org)

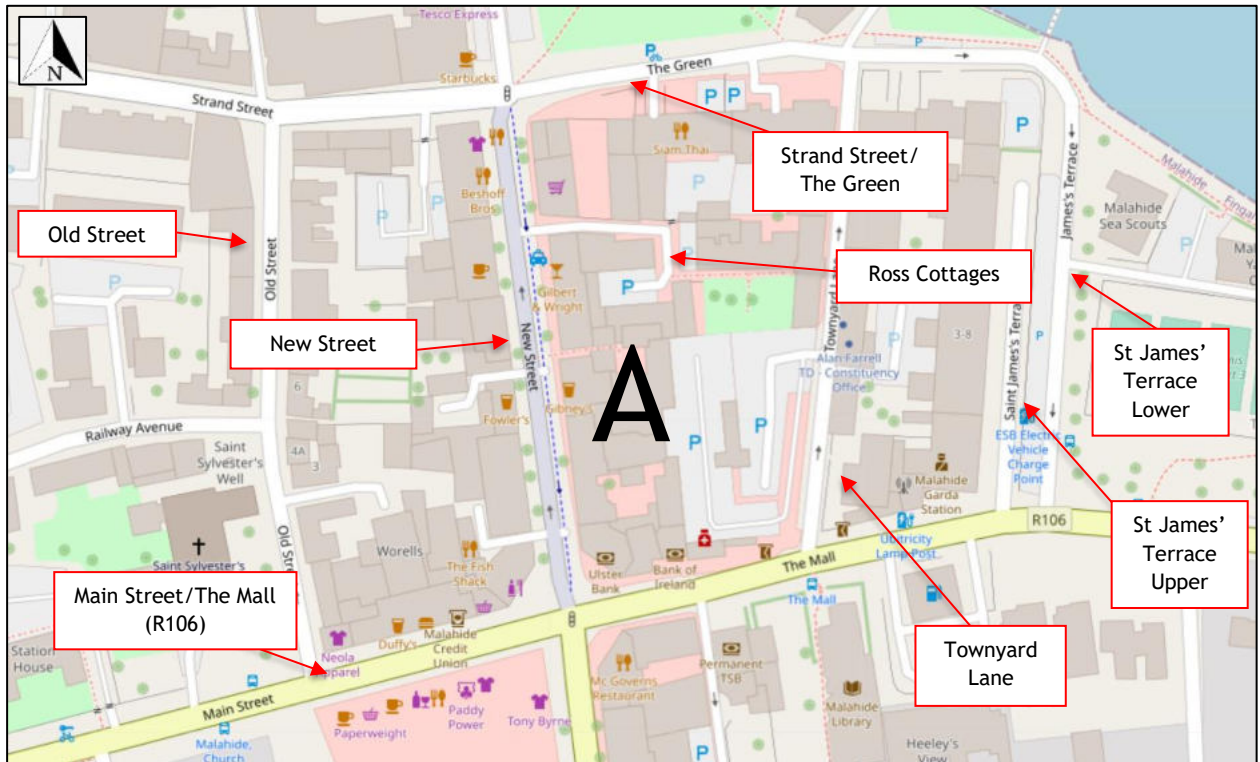


Figure 3-3: Detail A - Site location and surrounding road network (Ref openstreetmap.org)

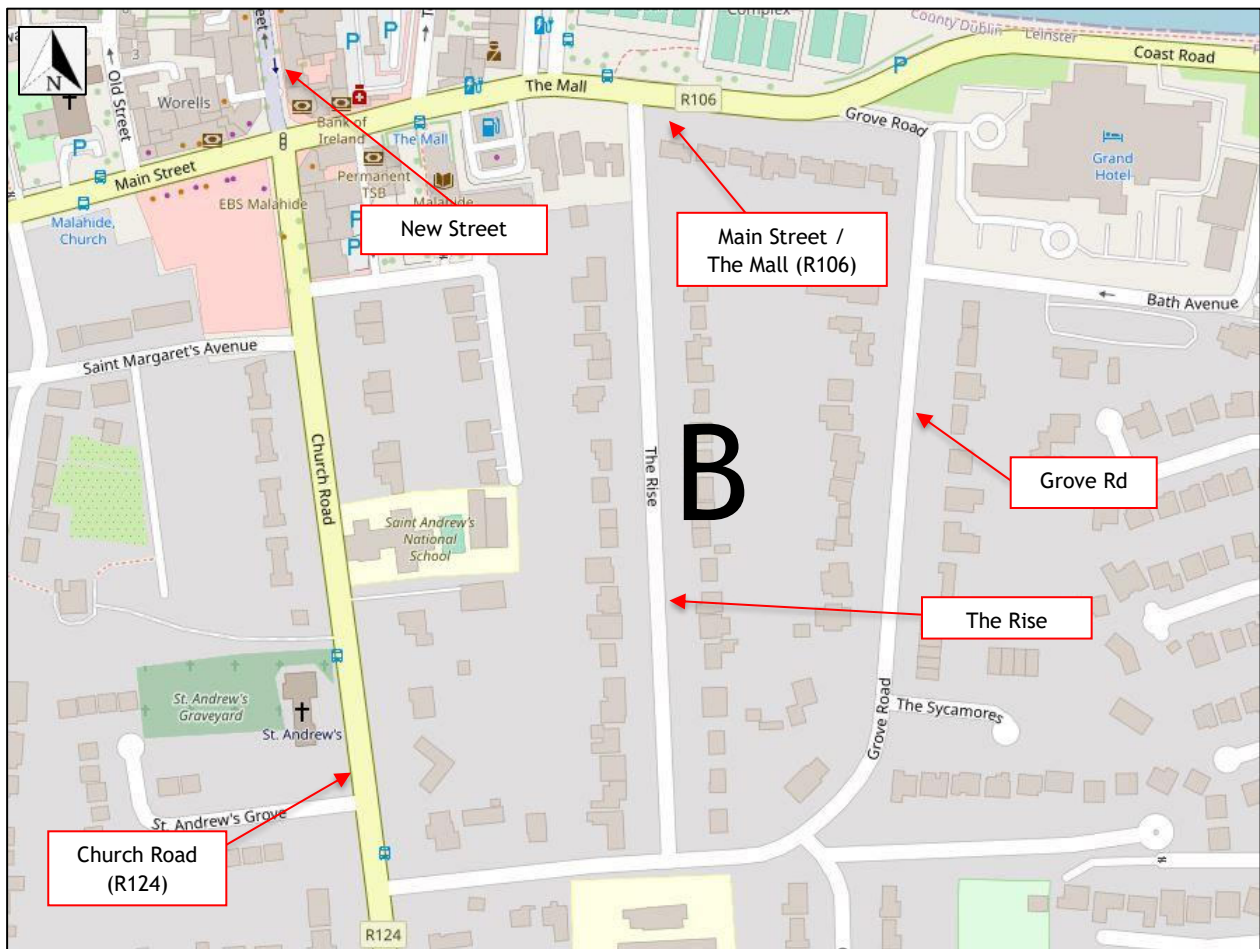


Figure 3-4: Detail B - Site location and surrounding road network (Ref openstreetmap.org)



A brief description of the local road network and the major road junctions is provided below:

### 3.2.1 New Street

New Street links Main Street/The Mall with Strand Street/The Green. Refer to Figure 3-5 and Figure 3-6. New Street is approximately 150m in length, with signal-controlled junctions at either end:

- T155 Malahide, the “Diamond” junction (South end)
- T372 Malahide Marina / Strand Street junction (North end)

The street has an average width of approximately 14m, with 1.7m wide separated footpaths to the west, and 1.2m separated footpaths to the east. The street is orientated north/south, with 37 No. premises facing onto it, with a combination of residential, commercial, boutique shops, retail, cafe, restaurants, pubs, health services, garden centre, banking outlets and a Mall, with a variety of uses.

New Street consists of a one-way restricted vehicular traffic system (northbound). Deliveries are permitted from 7am-11am each day, with bollards at the Diamond installed at 11am and removed at 7am each day. Additionally, the street currently provides unrestricted vehicular access to Ross Cottages (from the north) which has 3 residential cottages, a residential apartment; and parking for each of these residents as well as for 3 no. Residents on New Street.

New Street was first pedestrianised by Fingal County Council (FCC) in September 2019. The pedestrianisation was successfully carried out as part of FCC’s Car Free Day. The pedestrianisation was introduced in June 2020 and continued until December 2020, following the mandate issued by Government for the prioritisation of urban spaces to pedestrians and cyclists during the Covid-19 pandemic.

This arrangement was modified again from December 2020 until June 2021 to a one-way system (northbound from the Diamond to Strand St.) for vehicular traffic with a contra flow cycle lane.

Prior to June 2020), New Street was a single way two-way carriageway with footpaths on either side of the carriageway and no designated cycle lanes. Refer to Figure 3-7 for a view of the original layout prior to pedestrianisation.



Figure 3-5: New Street (Looking North from the Diamond). Image taken 2022. © PUNCH





Figure 3-6: New Street (Looking South from The Green). © PUNCH, 2022



Figure 3-7: New Street: Pre-pedestrianisation (Looking South). Image from 2019. © Google Maps



### 3.2.2 Main Street/The Mall (R106)

The Mall (R106) is a regional road in the North Dublin area. It runs from Sutton towards Swords, passing through Malahide. The Mall (R106) connects with the southern tip of New Street at The Diamond, a signal-controlled crossroads. Refer to Figure 3-8 and Figure 3-9.

The Mall (R106) is a single lane two-way carriageway with wide footpaths on either side of the carriageway and no designated cycle lanes. There is a bridge crossing over the railway line approximately 200m west of the site, refer to Figure 3-10.



Figure 3-8: The Mall - R106 (Looking West) at The Diamond [Junction 4]. © Google Maps



Figure 3-9: The Mall - R106 (Looking East) at the junction with Townyard Lane [Junction 5]. © Google Maps



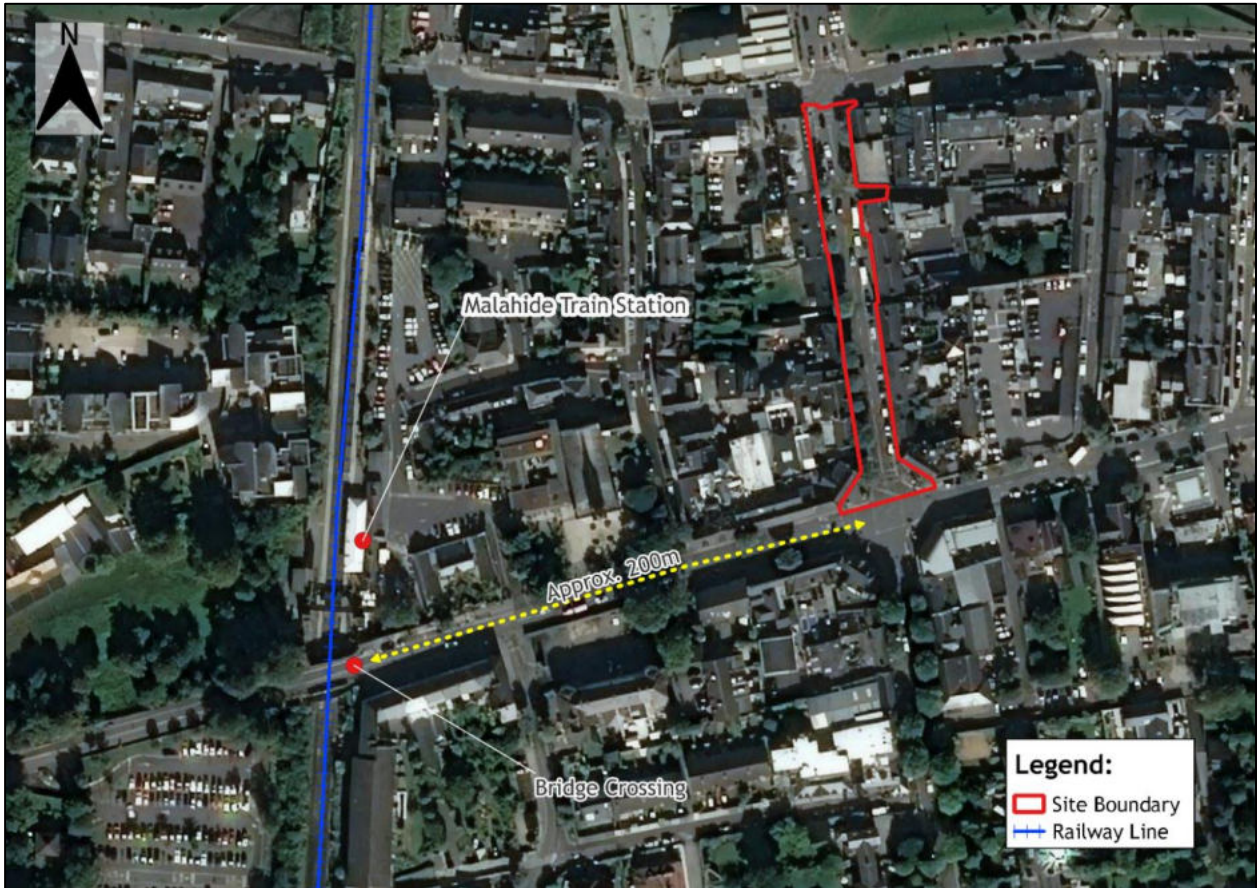


Figure 3-10: Bridge Crossing on The Mall (R106). Ref Google Maps

### 3.2.3 Strand Street/The Green

Strand Street/The Green is the link between James’s Terrace to the east and Bissett’s Strand to the West. Strand Street connects with the northern tip of New Street at a signal-controlled crossroads. Refer to Figure 3-11. Strand Street is a single lane two-way carriageway with footpaths on either side of the carriageway and no designated cycle lanes.



Figure 3-11: Strand Street (Looking East) [Junction 1]. © Google Maps



### 3.2.4 Townyard Lane

Townyard Lane is the link between The Mall (R106) to the south and The Green to the north. Refer to Figure 3-12 and Figure 3-13. Townyard Lane is a single lane one-way (northbound) vehicle traffic system with footpaths on either side of the carriageway and no designated cycle lanes.



Figure 3-12: Townyard Lane (Looking North) © Google Maps



Figure 3-13: Townyard Lane (Looking North) [Junction 3]. © Google Maps



### 3.2.5 Old Street

Old Street is another link between the Dublin Road/The Mall (R106) and Strand Street, with existing residential/ retail developments on either side of the street. Old Street is a single lane one-way (northbound) vehicle traffic system with parking on either side, wide footpaths on either side of the carriageway and no existing designated cycle lanes. Refer to Figure 3-14 and Figure 3-15.



Figure 3-14: Old Street (Looking North) at junction with Strand Street [Junction 2]. © Google Maps



Figure 3-15: Old Street (Looking North) from Main Street [Junction 6]. © Google Maps



### 3.2.6 St. James' Terrace

St. James's Terrace is the link between Strand Street/The Green and The Mall (R106). St. James's Terrace is a single lane one-way vehicle traffic system (southbound), with designated car/cycle parking, and footpaths either side of the carriageway. Refer to Figure 3-16 and Figure 3-17. St. James's Terrace has no designated cycle lanes.



Figure 3-16: St. James's Terrace (Looking South). © Google Maps



Figure 3-17: St. James's Terrace (Looking South) at junction with R106 [Junction 7]. © Google Maps



### 3.2.7 Church Road (R124)

Church Road is the regional road R124 extending to Donaghmede from Malahide. It is a link between Grove Road to the south and The Diamond to the north. Refer to Figure 3-18. Church Road is a single lane two-way carriageway with wide footpaths on both sides of the carriageway and no existing designated cycle lanes. It has a bus stop and pay and display parking.



Figure 3-18: Church Road Lane (Looking North) at St Andrews NS located on the right. © Google Maps

### 3.2.8 Grove Road

Grove Road is the link between the R106 (Coast Road) to the north and the R124 (Church Road) to the south west. Refer to Figure 3-19, Figure 3-20, Figure 3-21 and Figure 3-22. Grove Road is a single lane two-way carriageway with wide footpaths on both sides of the carriageway and no existing designated cycle lanes.



Figure 3-19: Grove Road (Looking West) at the junction with the R124 [Junction 11]. © Google Maps



Figure 3-20: Grove Road (Looking East) at the junction with The Rise [Junction 10]. © Google Maps





Figure 3-21: Grove Road (Looking North) at the junction with The Grand Hotel. © Google Maps



Figure 3-22: Grove Road (Looking West) at the junction with The Mall (R106) [Junction 9]. © Google Maps



### 3.2.9 The Rise

The Rise is the link between Grove Road to the south and The Mall (R106) to the north. Refer to Figure 3-23 and Figure 3-24. The Rise is a single lane two-way carriageway with wide footpaths on both sides of the carriageway and no existing designated cycle lanes.



Figure 3-23: The Rise (Looking North). © Google Maps



Figure 3-24: The Rise (Looking North) at the junction with The Mall [Junction 8]. © Google Maps

### 3.3 Existing Traffic Flows

Classified turning count traffic surveys of the existing junctions were completed by Idaso on Tuesday 10<sup>th</sup> January 2023 on behalf of the client at various sites. Furthermore, a number of traffic surveys were also completed by ITS across a number of the same sites on Wednesday 9<sup>th</sup> October 2019 (AM only), Tuesday 12<sup>th</sup> December 2019, as well as on Wednesday 15<sup>th</sup> July 2020. Refer to Table 3-1 for a summary.

The locations of the surveyed junctions/sites are shown in Figure 3-25, Figure 3-26 and Figure 3-27. The traffic survey locations and full traffic survey results are included in Appendix A.

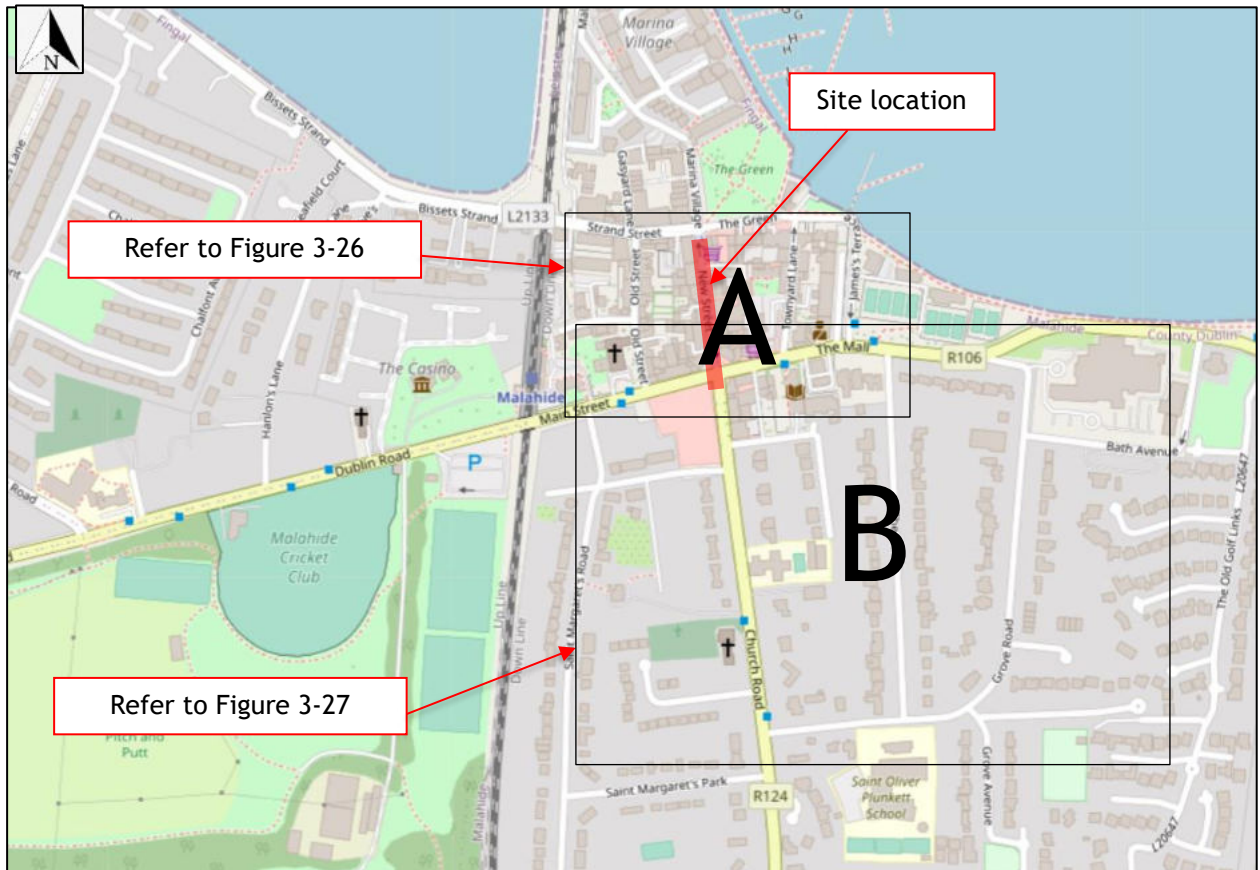


Figure 3-25: Overview - Junction/site locations (Ref openstreetmap.org)



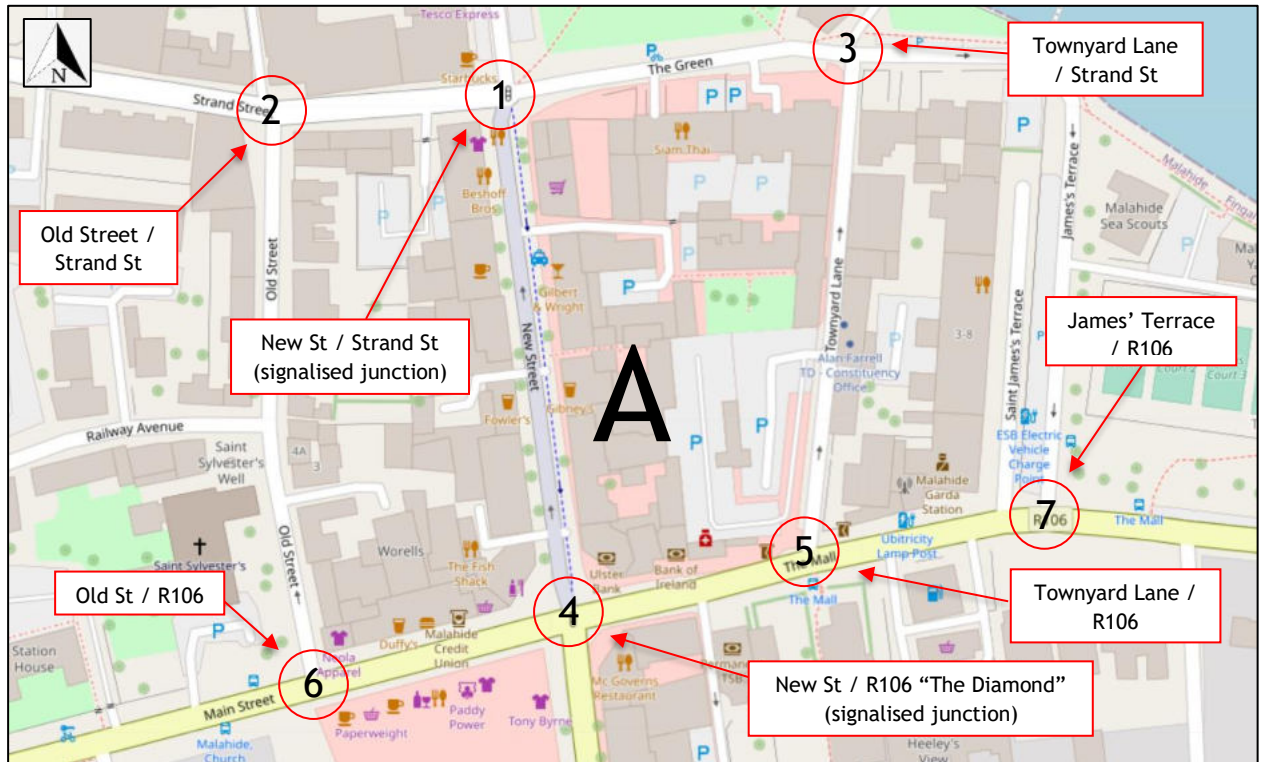


Figure 3-26: Detail A - Junction/site locations (Ref openstreetmap.org)

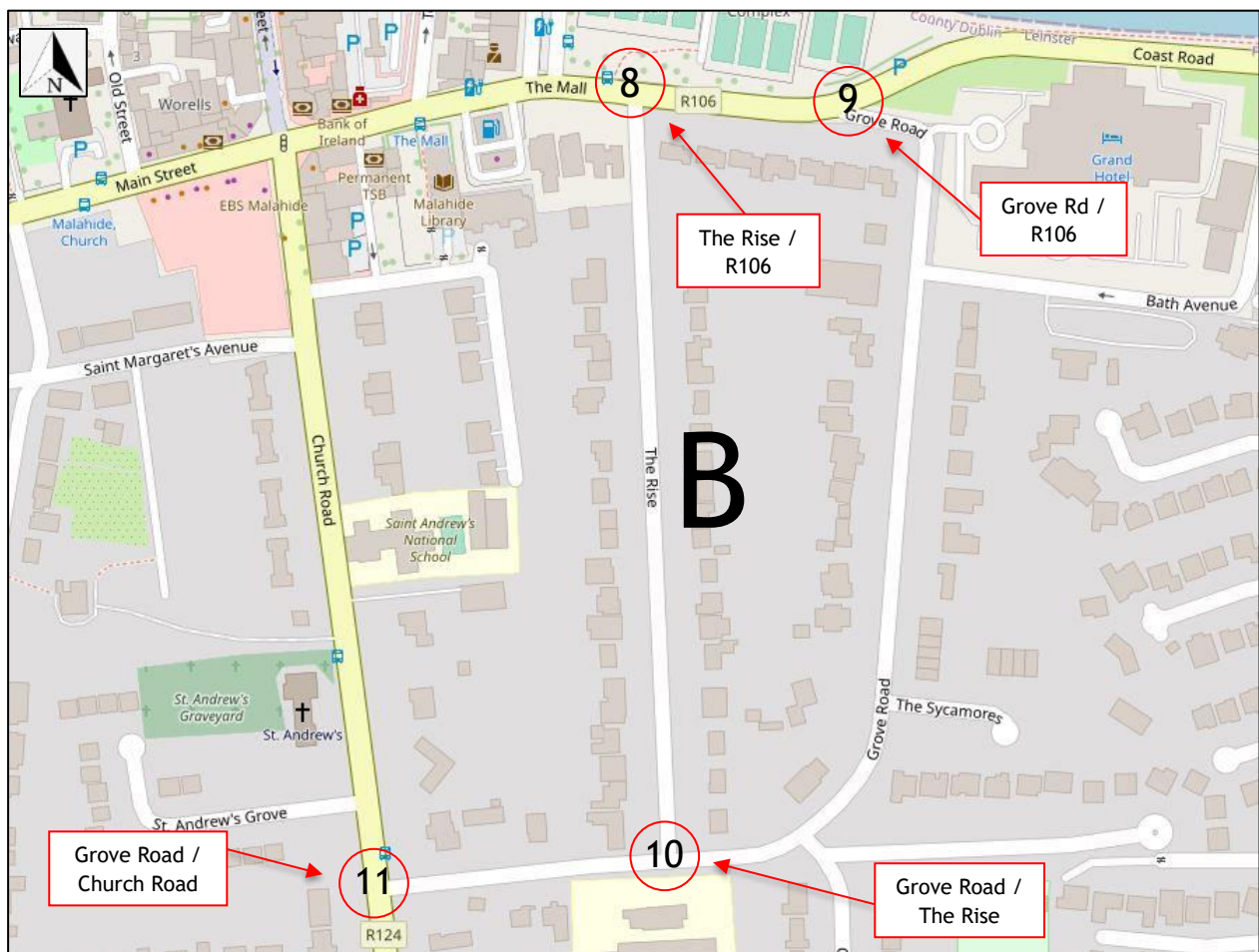


Figure 3-27: Detail B - Site location and surrounding road network (Ref openstreetmap.org)



Junction reference	Site	Survey year(s)		
1	Junction of New Street and the Strand <i>(signalised junction)</i>		2020	2023
2	Junction of Old Street and the Strand		2020	2023
3	Junction of Townyard Lane and the Strand			2023
4	Junction of New Street and the R106 <i>(signalised junction)</i>	2019	2020	2023
5	Junction of Townyard Lane and the R106		2020	2023
6	Junction of Old Street and the R106		2020	2023
7	Junction of James' Terrace and the R106		2020	2023
8	Junction of The Rise and the R106	2019		2023
9	Junction of Grove Road and the R106	2019		2023
10	Junction of Grove Road and The Rise	2019		2023
11	Junction of Grove Road and Church Road	2019		2023

**Table 3-1: Summary of traffic survey site locations and years completed**

### 3.3.1 Junction 1 - New Street and the Strand (signalised junction)

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 1 generally occurred between 08:15 and 09:15 (AM). The evening peak hour flow was found to be between 16:45 and 17:45 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-28.

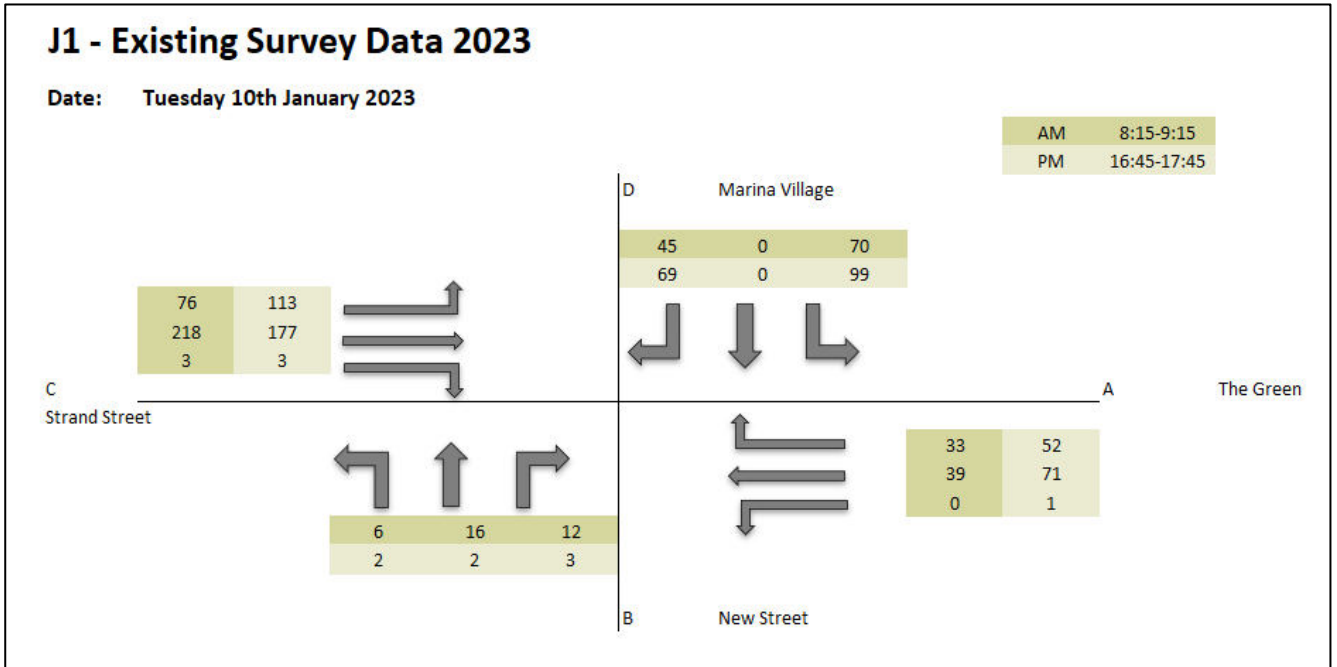


Figure 3-28: January 2023 Peak Hour Traffic Survey Results Junction 1 (PCUs)

### 3.3.2 Junction 2 - Old Street and the Strand

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 2 generally occurred between 08:30 and 09:30 (AM). The evening peak hour flow was found to be between 17:00 and 18:00 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-29.

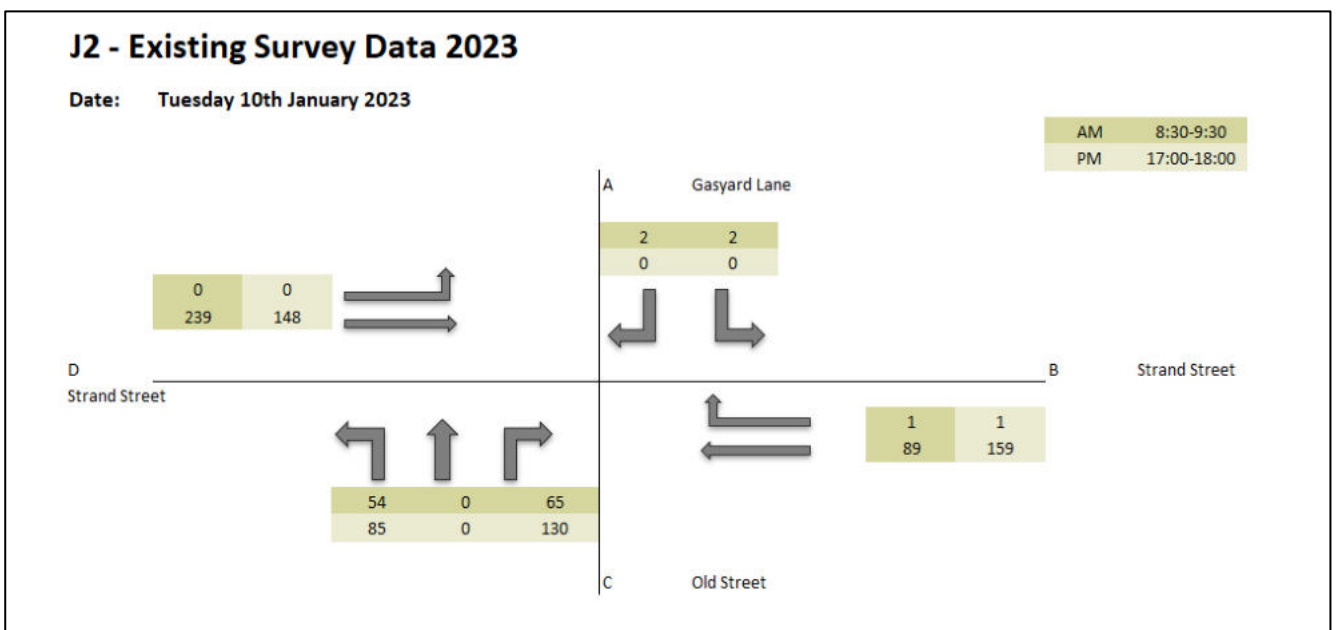


Figure 3-29: January 2023 Peak Hour Traffic Survey Results Junction 2 (PCUs)

### 3.3.3 Junction 3 - Townyard Lane and the Strand

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 3 generally occurred between 10:30 and 11:30 (AM). The evening peak hour flow was found to be between 16:45 and 17:45 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-30.

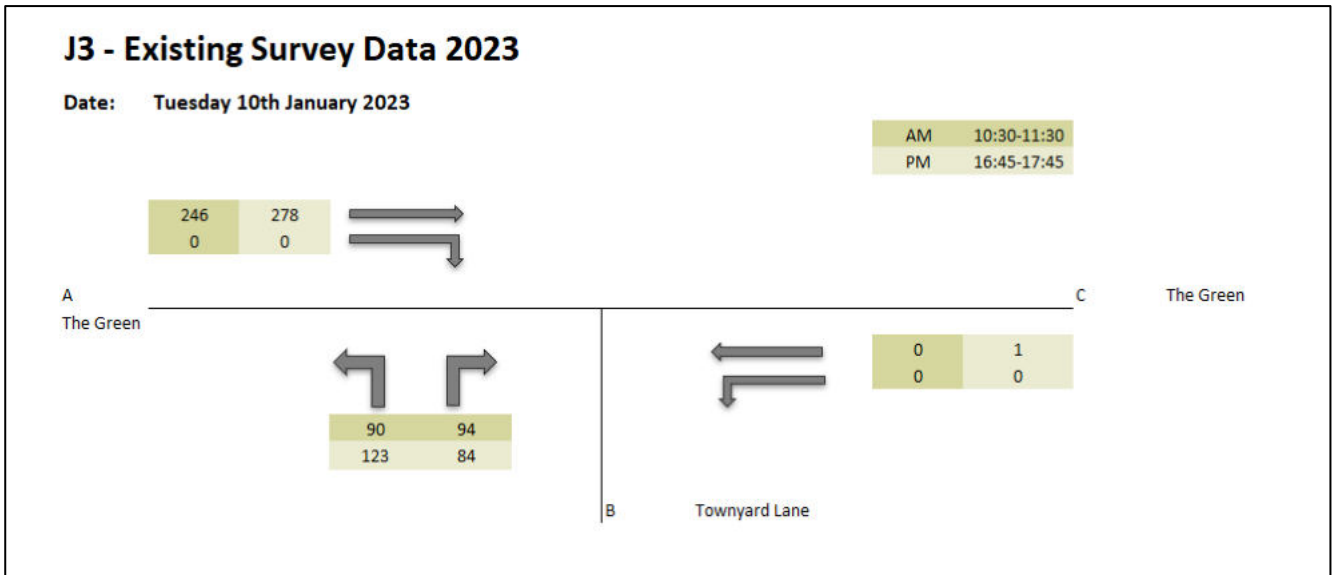


Figure 3-30: January 2023 Peak Hour Traffic Survey Results Junction 3 (PCUs)

### 3.3.4 Junction 4 - The Diamond - New Street and the R106 (signalised junction)

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 4 generally occurred between 08:30 and 09:30 (AM). The evening peak hour flow was found to be between 15:45 and 16:45 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-31.

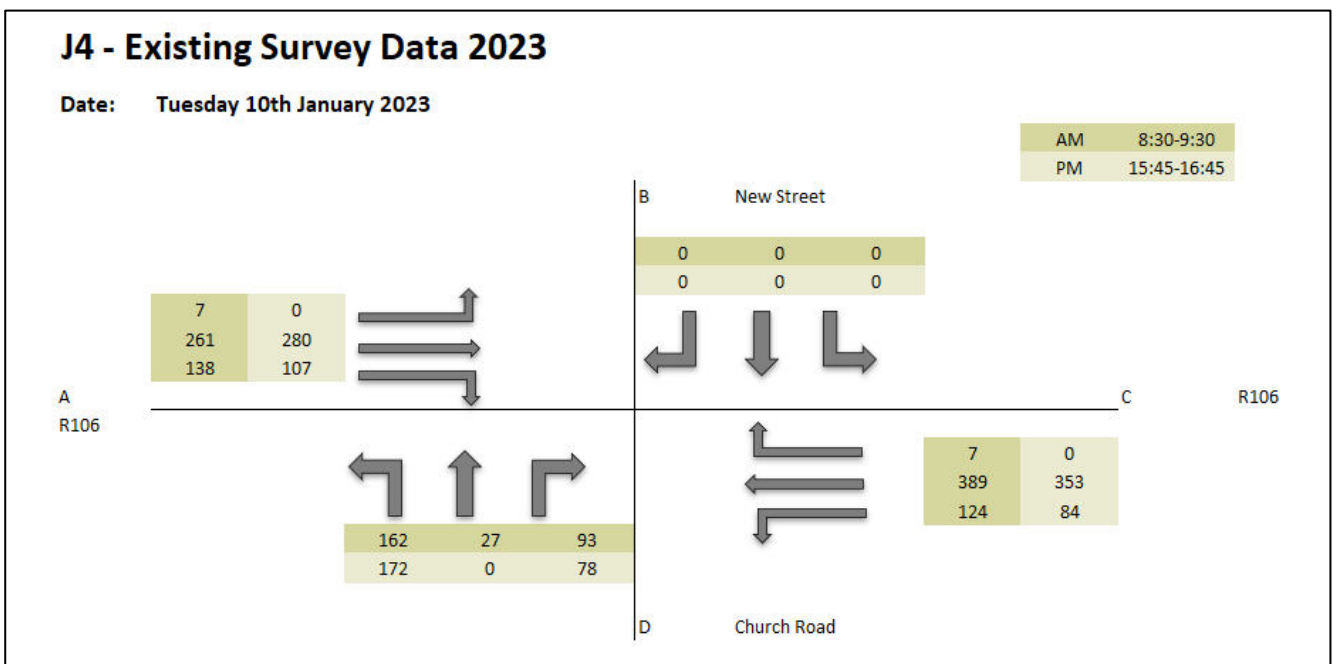


Figure 3-31: January 2023 Peak Hour Traffic Survey Results Junction 4 (PCUs)



### 3.3.5 Junction 5 - Townyard Lane and The Mall (R106)

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 5 generally occurred between 08:45 and 09:45 (AM). The evening peak hour flow was found to be between 13:00 and 14:00 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-32.

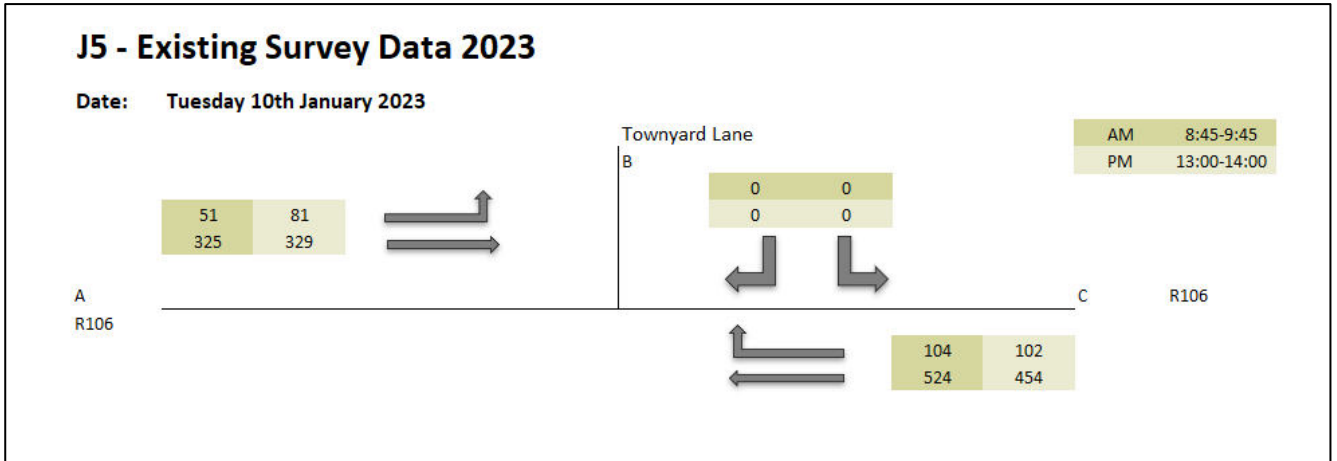


Figure 3-32: January 2023 Peak Hour Traffic Survey Results Junction 5 (PCUs)

### 3.3.6 Junction 6 - Old Street and the R106

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 6 generally occurred between 08:15 and 09:15 (AM). The evening peak hour flow was found to be between 15:45 and 16:45 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-33.

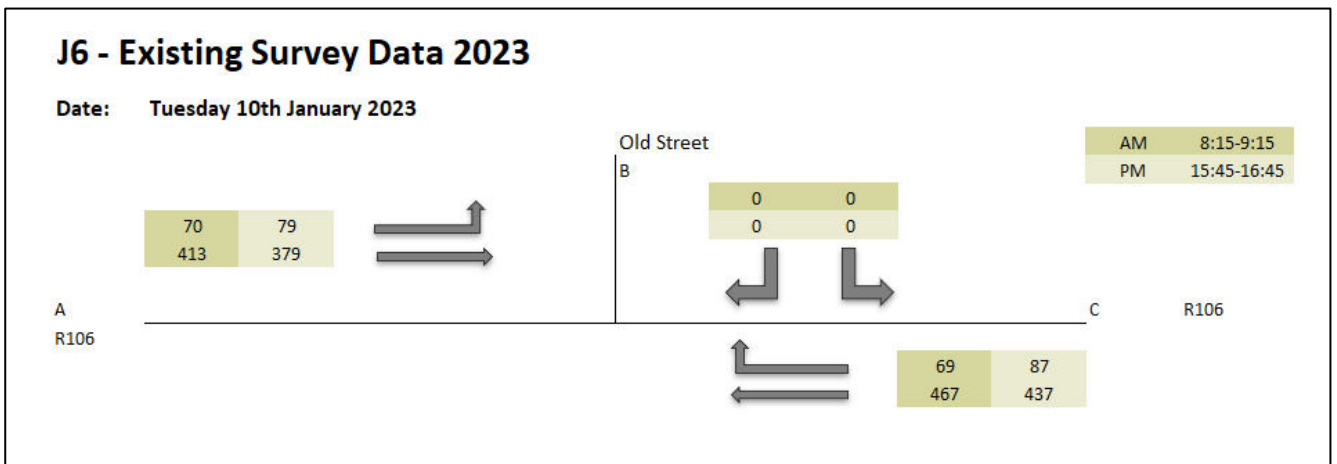


Figure 3-33: January 2023 Peak Hour Traffic Survey Results Junction 6 (PCUs)

### 3.3.7 Junction 7 - James' Terrace and the R106

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 7 generally occurred between 08:30 and 09:30 (AM). The evening peak hour flow was found to be between 16:30 and 17:30 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-34.

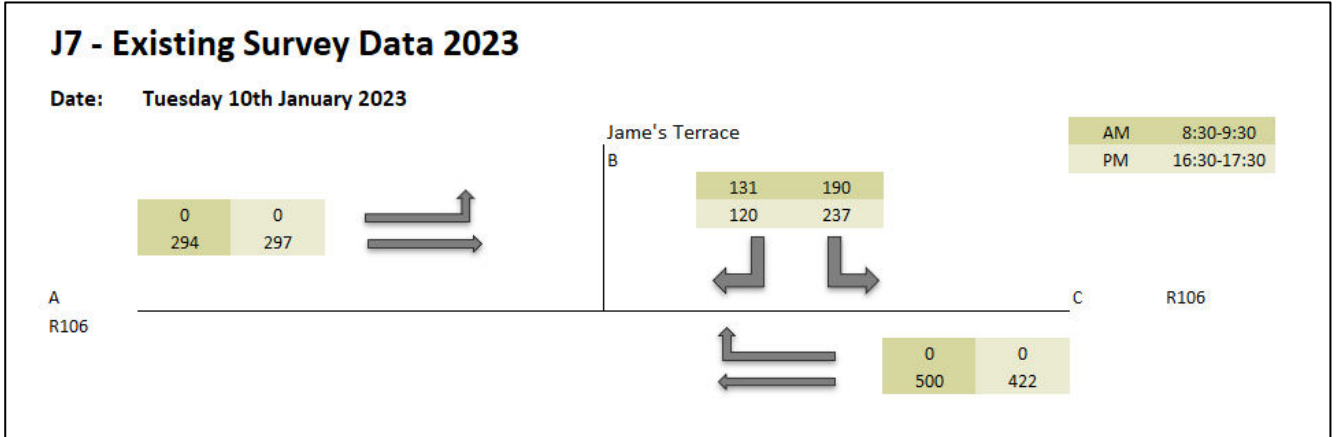


Figure 3-34: January 2023 Peak Hour Traffic Survey Results Junction 7 (PCUs)

### 3.3.8 Junction 8 - The Rise and the R106

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 8 generally occurred between 08:30 and 09:30 (AM). The evening peak hour flow was found to be between 16:30 and 17:30 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-35.

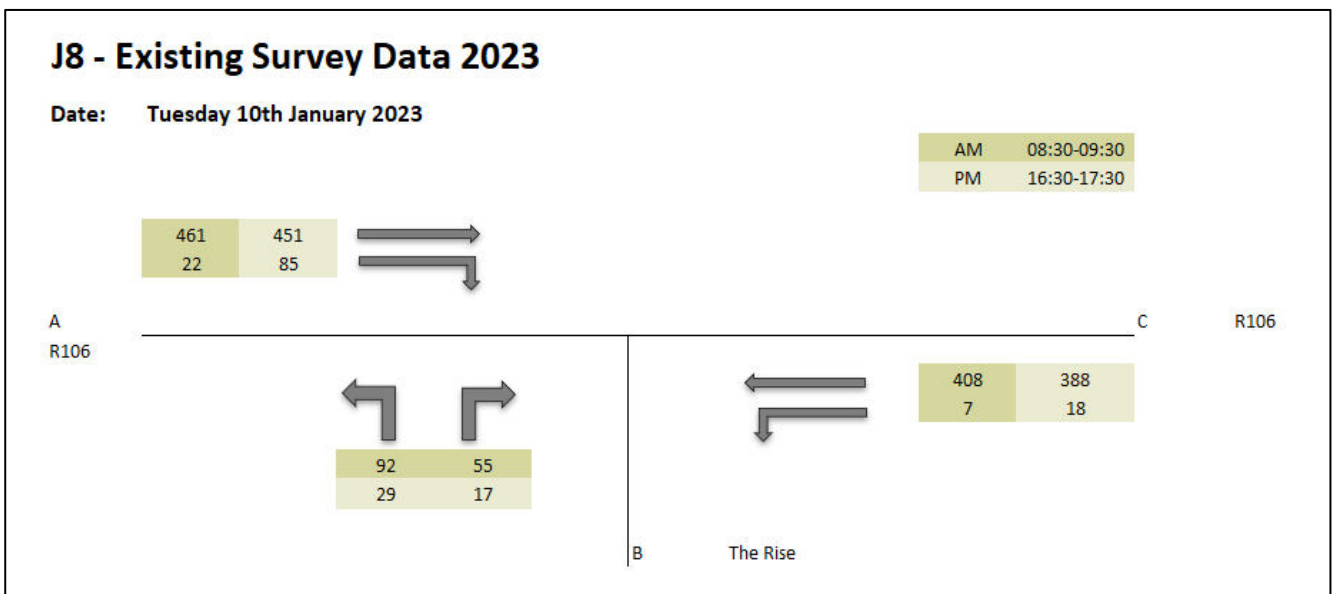


Figure 3-35: January 2023 Peak Hour Traffic Survey Results Junction 8 (PCUs)

### 3.3.9 Junction 9 - Grove Road and the R106

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 9 generally occurred between 08:30 and 09:30 (AM). The evening peak hour flow was found to be between 16:30 and 17:30 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-36.

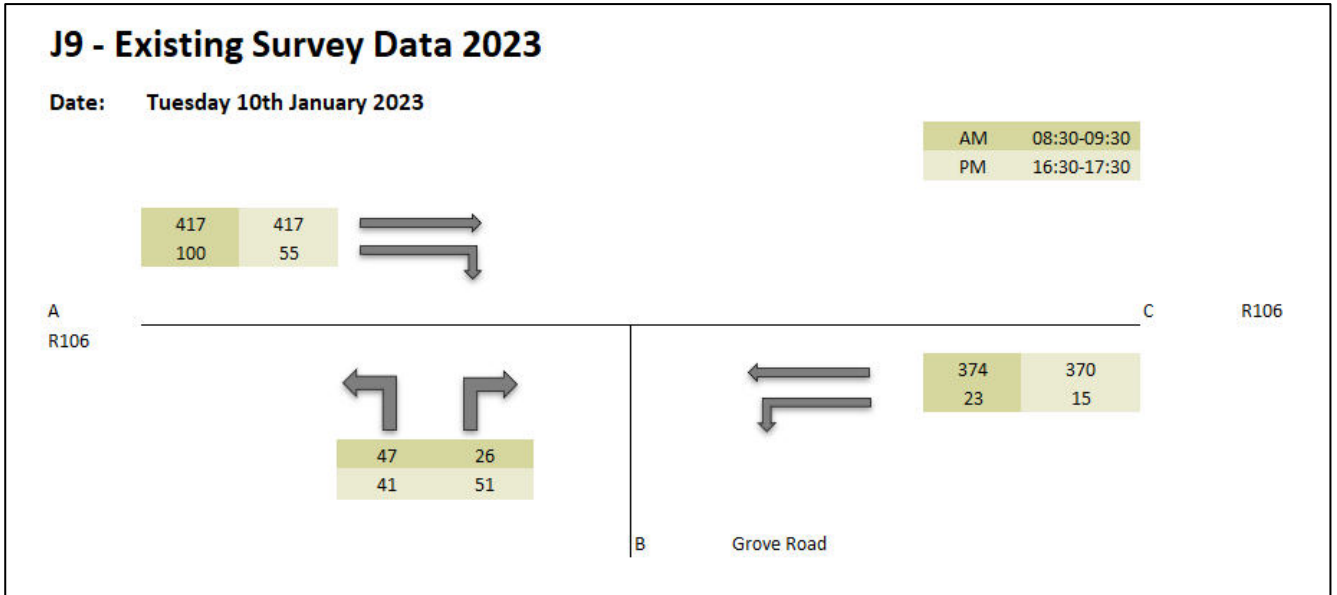


Figure 3-36: January 2023 Peak Hour Traffic Survey Results Junction 9 (PCUs)

### 3.3.10 Junction 10 - Grove Road and the Rise

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 10 generally occurred between 08:15 and 09:15 (AM). The evening peak hour flow was found to be between 16:30 and 17:30 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-37.

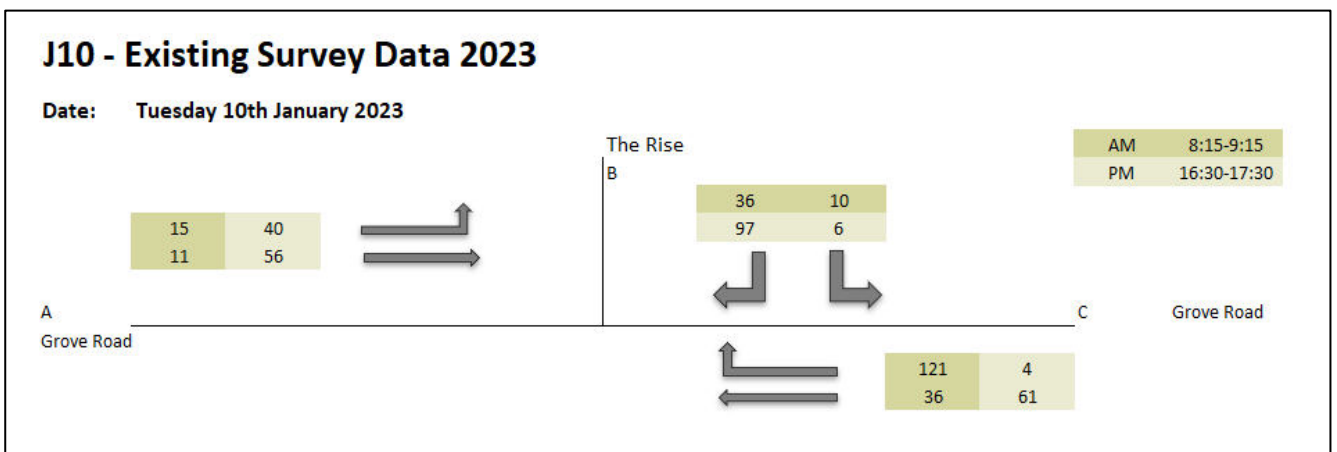


Figure 3-37: January 2023 Peak Hour Traffic Survey Results Junction 10 (PCUs)



### 3.3.11 Junction 11 - Grove Road and Church Road

The traffic surveys undertaken found that the mean morning peak hour traffic flow at Junction 11 generally occurred between 08:30 and 09:30 (AM). The evening peak hour flow was found to be between 15:45 and 16:45 (PM). The 2023 surveyed peak hour turning PCUs are presented in Figure 3-38.

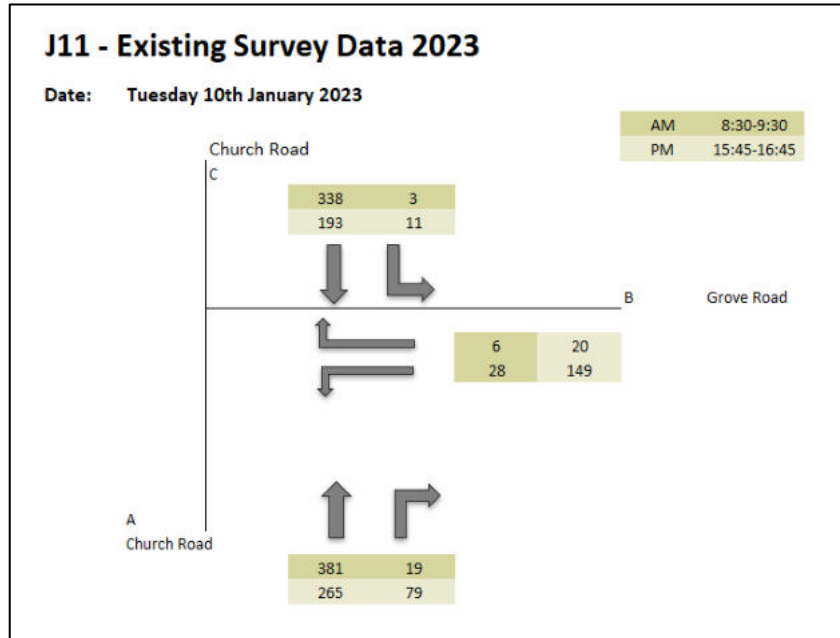


Figure 3-38: January 2023 Peak Hour Traffic Survey Results Junction 11 (PCUs)

### 3.4 Future Transport Proposals

The site is located in the Fingal Development Plan 2017 - 2023. There are no proposed road upgrades in the vicinity of the site, however the Development Plan outlines indicative cycle/pedestrian routes on The Mall (R106) at the southern border of New Street, as shown in Figure 3-39 below. The Greater Dublin Area (GDA) Cycle Network is also proposed on The Mall (R106).

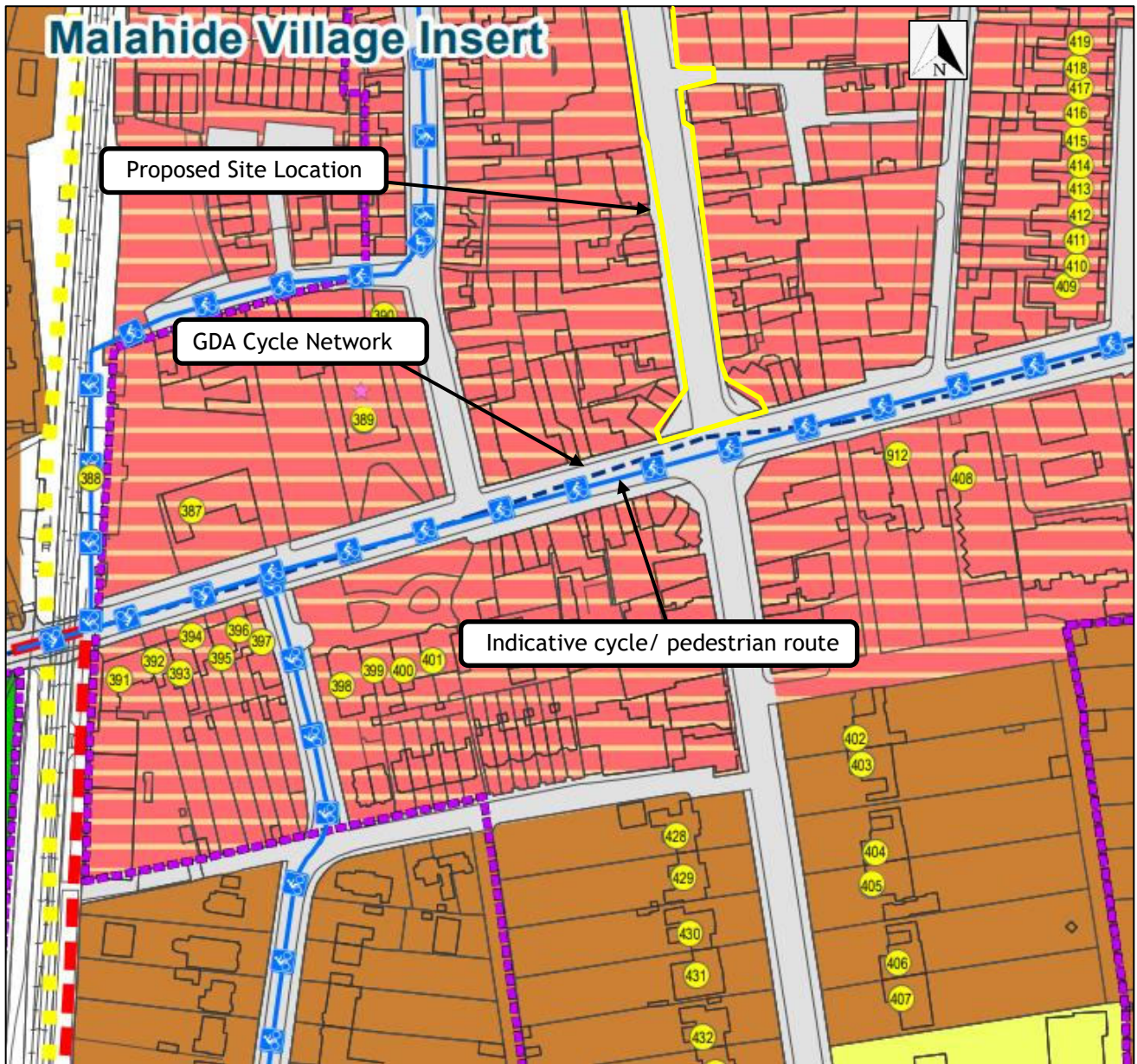


Figure 3-39: Extract from Sheet No.9 from Fingal Development Plan 2017 - 2023.

General proposals and objectives as noted in the Development Plan are to reduce car dependency and promote walking and cycling as sustainable modes of transport. The inclusion of indicative cycle/ pedestrian routes and the GDA Cycle Network proposed on The Mall (R106) at the southern end of New Street will improve connectivity to the site.

The land on which the development is proposed is currently a public street and therefore not defined by a land zoning. It is noted that the lands adjacent to either side of New Street are zoned as “TC: Town and District Centre” on Sheet No.9 from the Fingal Development Plan 2017 - 2023 and similarly on sheet No. 9 of the Draft Development Plan 2023-2029. Refer to Figure 3-39.

## 4 Proposed Public Realm Improvements

### 4.1 Description of Proposals

The proposed public realm improvements will comprise: -

- i. Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
- ii. Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
- iii. Upgrade of all street surfaces.
- iv. Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
- v. Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
- vi. Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
- vii. Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
- viii. Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
- ix. New public lighting.
- x. Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.
- xi. Provision of ducting for existing and future utilities and piped infrastructure.
- xii. All associated site and development works.

Fingal County Council will be providing regulatory traffic signs in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

The proposed layout for the public realm improvements is detailed in the series of drawings by DFLA Landscape Architects accompanying this report and an extract is included in Figure 4-1.



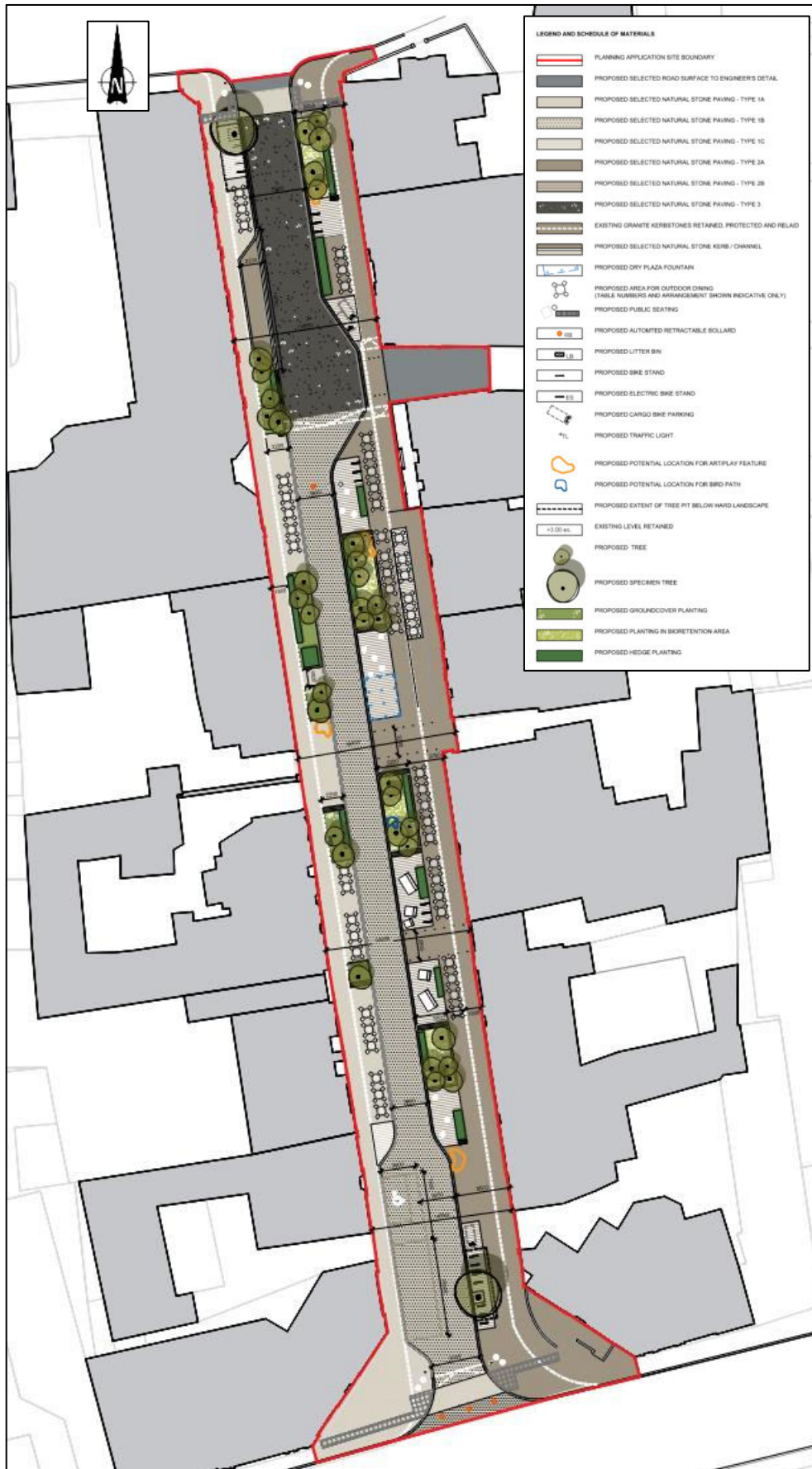


Figure 4-1: Proposed Site Layout (© DFLA)

## 5 Traffic Forecasting

As discussed in section 4, the proposed public realm improvements for a pedestrianised of New Street has already taken place. Survey data taken in 2019 for a number of junctions was consulted as listed in Table 3-1. In the absences of survey data for all junctions, a growth factor was required in order to estimate 2019 flows based on actual 2023 data.

In the absence of any specific local traffic growth information, it was assumed that baseline traffic grew from 2019 to 2023 at the levels recommended by the TII in the Project Appraisal Guidelines (PAG) - Unit 5.3 - Travel Demand Projections publication by the TII (Oct 2021). The Project Appraisal Guidelines describe three levels of transport model functionality. The static model, which reflects traffic volumes on the basis of link flows, is best suited to the proposed development. Such models do not attempt any route assignment, and hence are applicable for networks where no change in traffic flows will result from a proposed scheme. We have used figures from Table 6.2 'Link-Based Growth Rates' for the Dublin County area.

The 2019 survey year for which the growth was applied would give a 4-year period of growth. This was applied in reverse order i.e. from 2023 back to 2019.

The central growth factors from the Project Appraisal Guidelines - Unit 5.3 publication are appropriate and are detailed below:

- TII Link Based Growth Rates: Annual Growth Factor for 2016-2030 = 1.018 (LVs) and 1.0317 (HVs);

With regards to the volume of traffic using the road, generally the passenger car is adopted as the standard unit and other vehicles are assessed in terms of PCU's. Cars and Light Goods Vehicles are grouped together as Light Vehicles (LV). All other Goods Vehicles, Buses and Coaches are defined as Heavy Vehicles (HV).

## **6 Trip Assignment and Distribution**

There will be no increase in traffic generated by the proposed public realm improvements. However, as cars can no longer use New Street, vehicular traffic will be redistributed to other junctions in the area.

The redistribution of traffic was considered on a junction-by-junction basis. Refer to section 7 of this report for the methodology used at each junction. An overall network flow diagram closest to New Street has been included in Appendix M. (Note: The 2023 diagrams are the actual flows. The 2019 diagrams contain both actual survey data where available and assumed flows calculated using TII growth rates and diverted traffic due to the Pedestrianisation of New Street.)



## 7 Assessment and Road Impact

The impact on the local external road network has been assessed in this TTA. The scenarios being assessed are as follows: the 2019 'pre-pedestrianisation' of New Street forms the baseline and the analysis seeks to compare this to the 2023 'post-pedestrianisation' traffic arrangements. The 2020 'post-pedestrianisation' scenario is also included for reference but is relied on to a lesser degree due to the impacts of the Covid-19 pandemic on the traffic counts.

This involved examining the traffic flows of the local road network both before and after the proposed development took place.

The morning peak period and the evening peak period have been examined in order to assess the busiest case in terms of local traffic on the road network and traffic generated by the proposed development.

### 7.1 Junction Analysis

Capacity analysis was carried out for the junctions listed below:

1. Junction of New Street, Strand Street, The Green, Marina Village (signalised junction)
2. Junction of Old Street and Strand Street
3. Junction of Townyard Lane and Strand Street
4. The Diamond - Junction of New Street and the R106 (signalised junction)
5. Junction of Townyard Lane and The Mall (R106)
6. Junction of Old Street and Dublin Road (R106)
7. Junction of James' Terrace and The Mall (R106)
8. Junction of the Rise and The Mall (R106)
9. Junction of Grove Road and The Mall (R106)
10. Junction of Grove Road and the Rise
11. Junction of Grove Road and Church Road

The following scenarios were analysed for all junctions:

1. Survey year: 2023
2. Survey year: 2020 (Where data was available)
3. Survey year: 2019 (Where data was available)
4. Estimated Pre-Pedestrianisation: 2019 (Where no 2019 data was available)

Linsig software was used for the analysis of the signalised junctions. The Junctions 9 software was used for priority junction analysis.

#### ***Junctions 9 Analysis Note:***

The ratio of flow to capacity (RFC) is an indicator of the likely performance of a junction under design year loading. Due to site-to-site variation, there may be a standard error of prediction of the entry capacity by the formulae of + or - 15% for any site. Thus, queuing should not occur in the various turning movements in the chosen design year peak hour in 5 out of 6 peak hour periods or sites if a maximum RFC of about 85% is used. Once the RFC is at 1.0 the Junctions 9 modelling software produces results regarding queues and delays that is unrepresentative of the actual or likely effects.

#### ***LinSig Analysis Note:***

The degree of saturation (DOS) is defined as the ratio of demand flow to the maximum flow which can be passed through the junction from a particular approach. If an approach is found to have a DOS greater

than 100%, then it is “over saturated” and long queues will result. The practical capacity is the level of capacity above which the junction is assumed to work inefficiently (usually taken to be 90%). Junction capacities shown below are only one theoretical interpretation of the phase/stage setup for the existing junction. The results should be viewed more for a comparative assessment of with and without proposed development for the various scenarios.

No survey information was available for the pre-pedestrianisation scenario for 6 of the junctions surrounding New Street. In order to compare how the junctions were operating before and after the pedestrianisation of New Street, 2019 flows had to be estimated. This was done using TII growth rates and applying them to the 2023 data. Additionally, assumptions on how the traffic had diverted to other streets post-pedestrianisation had to be made. These were based on proportioning the flows at junctions using existing data and making assumptions on human behaviour, e.g. choosing to avoid the busy town by turning at a certain junction. Refer to Appendix M for Network Flow Diagrams of the assumed diverted traffic movements. (Note: The 2023 diagrams are the actual flows. The 2019 diagrams contain both actual survey data where available and assumed flows calculated using TII growth rates and diverted traffic due to the Pedestrianisation of New Street.)

### 7.1.1 Junction 1 - New Street and the Strand (signalised junction)

The Linsig output is summarised below and the full detailed output is included in greater detail in Appendix C.

Table 7-1: Summary for Linsig Analysis Results for Junction 1

Peak Hour Flow	Max Degree of Saturation (%)
AM 2023 Existing Survey	45.9
AM 2020 Existing Survey	34.0
AM 2019 Estimated pre-pedestrianisation	69.3
PM 2023 Existing Survey	53.1
PM 2020 Existing Survey	49.0
PM 2019 Estimated pre-pedestrianisation	77.5

The above analysis compares the current performance of the junction using 2023 and 2020 survey data with the estimated performance for 2019. The 2019 figures were estimated using the following methodology and assumptions;

- Using TII growth factors 2019 figures were reverse calculated from 2023. The resulting scenario assumes pedestrianisation of New Street.
- Using the 2019 surveyed data for Junction 4 the total number of PCUs travelling south along New Street was calculated as follows:
  - 33% of traffic that travels south on New Street is assumed to originate from Marina Village.
  - 33% of traffic that travels south on New Street is assumed to originate from The Green.
  - 33% of traffic that travels south on New Street is assumed to originate from Strand Street.

The junction is performing well in all years during the AM and PM peak hours, with an improvement in the 2020, and 2023 scenarios post-pedestrianisation. The above results are based on a 90 second cycle time and calling pedestrians every cycle during peak times.

The results indicate low volumes of traffic resulting in negligible queuing at this junction.

### 7.1.2 Junction 2 - Old Street and the Strand

The Junction 2 output is summarised below and the full detailed output is included in greater detail in Appendix D.

**Table 7-2: Summary of Junctions 9 Analysis Results for Junction 2**

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.56
AM 2020 Existing Survey	0.29
AM 2019 Estimated Pre-Pedestrianisation	-
PM 2023 Existing Survey	0.37
PM 2020 Existing Survey	0.47
PM 2019 Estimated Pre-Pedestrianisation	-

The above analysis compares the current performance of the junction using 2023 survey data with the available 2020 survey data. It should be noted that the 2020 survey results would have been affected by Covid-19 restrictions. No survey was completed for the junction in 2019. However, the junction is operating well within the design threshold in both 2023 and 2020. It is expected that flows would have been less in 2019 as 2023 values would be subject to normal growth as per the TII growth factors, therefore it was not deemed necessary to complete any further analysis.

Based on the survey information, the junction is operating under the design threshold in all years. The results indicate low volumes of traffic resulting in negligible queuing at this junction.



### 7.1.3 Junction 3 - Townyard Lane and the Strand

The Junction 3 output is summarised below and the full detailed output is included in greater detail in Appendix E.

Table 7-3: Summary of Junctions 9 Analysis Results for Junction 3

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.40
AM 2020 Existing Survey	-
AM 2019 Estimated Pre-Pedestrianisation	-
PM 2023 Existing Survey	0.47
PM 2020 Existing Survey	-
PM 2019 Estimated Pre-Pedestrianisation	-

The above analysis shows the current performance of the junction using 2023 survey. No survey was completed for the junction in 2019 or 2020. However, the junction is operating well within the design threshold in both 2023 Am and PM scenarios. It is expected that flows would have been less in 2019 as 2023 values would be subject to normal growth as per the TII growth factors and the pedestrianisation in place on New Street, therefore it was not deemed necessary to complete any further analysis.

The results indicate low volumes of traffic resulting in negligible queuing at this junction.

### 7.1.4 Junction 4 - The Diamond - New Street and the R106 (signalised junction)

The linsig output is summarised below and the full detailed output is included in greater detail in Appendix F.

Table 7-4: Summary of Linsig Analysis Results for Junction 4

Peak Hour Flow	Max Degree of Saturation (%)
AM 2023 Existing Survey	79.6
AM 2020 Existing Survey	115.3
AM 2019 Existing Survey	170.7
PM 2023 Existing Survey	69.4
PM 2020 Existing Survey	136.4
PM 2019 Existing Survey	144.6

The above analysis compares the current performance of the junction using 2023, 2020 and 2019 survey data.

The junction is performing well in 2023 during the AM and PM peak hours, but it is over capacity for 2019 and 2020 scenarios during the AM and PM peak hours. The above results are based on a 90 second cycle time and calling pedestrians every cycle during peak times.

The results indicate maximum queuing of 13.4 PCUs in the peak hour. This is a decrease on the surveyed queuing experienced in 2019, showing that the pedestrianisation of New Street has improved the performance of this junction.

### 7.1.5 Junction 5 - Townyard Lane and the R106

The Junction 5 output is summarised below and the full detailed output is included in greater detail in Appendix G.

Table 7-5: Summary of Junctions 9 Analysis Results for Junction 5

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.32
AM 2020 Existing Survey	0.26
AM 2019 Estimated pre-pedestrianisation	0.23
PM 2023 Existing Survey	0.30
PM 2020 Existing Survey	0.36
PM 2019 Estimated pre-pedestrianisation	0.07

The above analysis compares the current performance of the junction using 2023 survey data with the available 2020 survey data and the estimated pre-pedestrianisation values. It should be noted that the 2020 survey results would have been affected by Covid-19 restrictions. In the absence of actual 2019 data an estimated value has been calculated using both TII Growth Factors and accounting for displaced traffic assumed to have previously used New Street. The 2019 figures were estimated using the following methodology and assumptions;

- Using TII growth factors 2019 figures were reverse calculated from 2023. The resulting scenario assumes pedestrianisation of New Street.
- The 2019 survey data indicates that 15 PCUs travelling from the east turn right onto New Street in the AM. Therefore, 15 PCUs were subtracted from the assumed 2019 right turning traffic at Junction 5. This was then repeated for the PM scenario.
- Additionally, a percentage of traffic from Church Road that would have been travelling north on New Street will now turn right onto the R106 and then left onto Townyard lane. Proportions of right turning traffic were calculated based on the 2019 survey at junction 4 and the resulting PCUs were subtracted from the left turning traffic at junction 5.

Based on the 2023 survey information, it is estimated that 1 car will travel along Townyard Lane every 20 seconds compared to 1 car every 40 seconds in 2019. Despite this increase in traffic volumes, the junction is operating under the design threshold in all years. The results indicate low volumes of traffic resulting in negligible queuing at this junction.

### 7.1.6 Junction 6 - Old Street and the R106

The Junction 6 output is summarised below and the full detailed output is included in greater detail in Appendix H.

Table 7-6: Summary of Junctions 9 Analysis Results for Junction 6

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.21
AM 2020 Existing Survey	0.21
AM 2019 Estimated pre-pedestrianisation	0.14
PM 2023 Existing Survey	0.26
PM 2020 Existing Survey	0.20
PM 2019 Estimated pre-pedestrianisation	0.13

The above analysis compares the current performance of the junction using 2023 survey data with the available 2020 survey data and the estimated pre-pedestrianisation values. It should be noted that the 2020 survey results would have been affected by Covid-19 restrictions. In the absence of actual 2019 data an estimated value has been calculated using both TII Growth Factors and accounting for displaced traffic assumed to have previously used New Street. The 2019 figures were estimated using the following methodology and assumptions;

- Using TII growth factors 2019 figures were reverse calculated from 2023. The resulting scenario assumes pedestrianisation of New Street.
- It was assumed that traffic travelling west to east in 2019 and turning left at Junction 4 will now turn left at Old Street rather than travelling through the town. These numbers have been subtracted from the assumed 2019 values for Junction 6.
- Additionally, a percentage of traffic from Church Road that would have been travelling north on New Street will now turn left onto the R106 and then right onto Old Street. Proportions of left turning traffic were calculated based on the 2019 survey at junction 4 and the resulting PCUs were subtracted from the right turning traffic at Junction 6.

The junction is operating under the design threshold in all years. The results indicate low volumes of traffic resulting in negligible queuing at this junction. It is noted that bus services have been diverted to Old Street to permit the pedestrianisation of New Street. This has not resulted in queuing at Old Street.



### 7.1.7 Junction 7 - James Terrace and the R106

The Junction 7 output is summarised below and the full detailed output is included in greater detail in Appendix I.

**Table 7-7: Summary of Junctions 9 Analysis Results for Junction 7**

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.80
AM 2020 Existing Survey	0.63
AM 2019 Estimated pre-pedestrianisation	0.41
PM 2023 Existing Survey	0.84
PM 2020 Existing Survey	0.84
PM 2019 Estimated pre-pedestrianisation	0.53

The above analysis compares the current performance of the junction using 2023 survey data with the available 2020 survey data and the estimated pre-pedestrianisation values. It should be noted that the 2020 survey results would have been affected by Covid-19 restrictions. In the absence of actual 2019 data an estimated value has been calculated using both TII Growth Factors and accounting for displaced traffic assumed to have previously used New Street. The 2019 figures were estimated using the following methodology and assumptions;

- Using TII growth factors 2019 figures were reverse calculated from 2023. The resulting scenario assumes pedestrianisation of New Street.
- It was assumed that traffic that would have travelled south along New Street pre-pedestrianisation now travels south along James Terrace. 50% of the surveyed 2019 traffic travelling south on New Street at Junction 4 was subtracted from the reverse calculated 2019 figures.

The junction is operating around the design threshold in 2023 with maximum queuing of 4.7 PCUs experienced at the peak hour. This is an increase of 3.6 PCUs from the 2019 survey results however it is within the norms of an urban environment accounting for the rerouted traffic as a result of the pedestrianisation of New Street.

### 7.1.8 Junction 8 - The Rise and the R106

The Junction 8 output is summarised below and the full detailed output is included in greater detail in Appendix J.

**Table 7-8: Summary of Junctions 9 Analysis Results for Junction 8**

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.47
AM 2020 Existing Survey	-
AM 2019 Existing Survey	0.43
PM 2023 Existing Survey	0.15
PM 2020 Existing Survey	-
PM 2019 Existing Survey	0.18

The above analysis compares the current performance of the junction using 2023 survey data with the available 2019 survey data. No survey was completed for the junction in 2020. The junction is operating well within the design threshold in both 2023 and 2020. There is little difference between the 2019 and 2023 results. The junction is also located at a significant distance from the site and thus would not be overly impacted by the pedestrianisation of New Street. The results indicate low volumes of traffic resulting in negligible queuing at this junction.

### 7.1.9 Junction 9 - Grove Road and the R106

The Junction 9 output is summarised below and the full detailed output is included in greater detail in Appendix K.

**Table 7-9: Summary of Junctions 9 Analysis Results for Junction 9**

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.20
AM 2020 Existing Survey	-
AM 2019 Existing Survey	0.26
PM 2023 Existing Survey	0.23
PM 2020 Existing Survey	-
PM 2019 Existing Survey	0.34

The above analysis compares the current performance of the junction using 2023 survey data with the available 2019 survey data. No survey was completed for the junction in 2020. The junction is operating well within the design threshold in both 2023 and 2020. There is little difference between the 2019 and 2023 results. The junction is also located at a significant distance from the site and thus would not be

overly impacted by the pedestrianisation of New Street. The results indicate low volumes of traffic resulting in negligible queuing at this junction.

#### 7.1.10 Junction 10 - Grove Road and Church Road

The Junction 10 output is summarised below and the full detailed output is included in greater detail in Appendix L.

**Table 7-10: Summary of Junctions 9 Analysis Results for Junction 10**

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.24
AM 2020 Existing Survey	-
AM 2019 Existing Survey	0.32
PM 2023 Existing Survey	0.26
PM 2020 Existing Survey	-
PM 2019 Existing Survey	0.12

The above analysis compares the current performance of the junction using 2023 survey data with the available 2019 survey data. No survey was completed for the junction in 2020. The junction is operating well within the design threshold in both 2023 and 2020. There is little difference between the 2019 and 2023 results. The junction is also located at a significant distance from the site and thus would not be overly impacted by the pedestrianisation of New Street. The results indicate low volumes of traffic resulting in negligible queuing at this junction.



### 7.1.11 Junction 11 - Grove Road and Church Road

The Junction 11 output is summarised below and the full detailed output is included in greater detail in Appendix M.

Table 7-11: Summary of Junctions 9 Analysis Results for Junction 11

Peak Hour Flow	Maximum RFC
AM 2023 Existing Survey	0.11
AM 2020 Existing Survey	-
AM 2019 Existing Survey	0.10
PM 2023 Existing Survey	0.49
PM 2020 Existing Survey	-
AM 2019 Existing Survey	0.51

The above analysis compares the current performance of the junction using 2023 survey data with the available 2019 survey data. No survey was completed for the junction in 2020. The junction is operating well within the design threshold in both 2023 and 2020. There is little difference between the 2019 and 2023 results. The junction is also located at a significant distance from the site and thus would not be overly impacted by the pedestrianisation of New Street. The results indicate low volumes of traffic resulting in negligible queuing at this junction.

### 7.1.12 Analysis Summary

The junction capacity analysis has been carried out to include for the existing 2023 traffic, the surveyed 2020 traffic and the estimated/surveyed 2019 traffic, summary results are shown in the table below.

**Table 7-12: Summary Maximum Results for all Surrounding Junctions**

Junction	2023 Surveyed RFC/DOS	2020 Surveyed RFC/DOS	2019 Surveyed RFC/DOS	2019 Estimated RFC/DOS
Junction 1 - New Street and the Strand (signalised junction)	53.1	49.0	-	77.5
Junction 2 - Old Street and the Strand	0.56	0.47	-	*see note below
Junction 3 - Townyard Lane and the Strand	0.47	-	-	*see note below
Junction 4 - New Street and the R106 (signalised junction)	79.6	136.4	170.7	-
Junction 5 - Townyard Lane and the R106	0.32	0.36	-	0.23
Junction 6 - Old Street and the R106	0.26	0.21	-	0.14
Junction 7 - James' Terrace and the R106	0.84	0.84	-	0.53
Junction 8 - The Rise and the R106	0.47	-	0.43	-
Junction 9 - Grove Road and the R106	0.23	-	0.34	-
Junction 10 - Grove Road and The Rise	0.26	-	0.32	-
Junction 11 - Grove Road and Church Road	0.49	-	0.51	-

*\*Note: Junction operating within design threshold for the 2023 survey year. It is expected that flows would have been less in 2019 as 2023 values would be subject to normal growth as per the TII growth factors, therefore it was not deemed necessary to complete any further analysis.*

It is considered that in urban areas a certain level of congestion is to be expected during peak times. From the above modelling results, it is concluded that the pedestrianisation of New St has had little impact on the operational capacity of the surrounding network of roads and junctions and has resulted in improvements in efficiencies at the Diamond.

## **8 Road Safety**

A Road Safety Audit for the proposed public realm improvements for a pedestrianised New Street has been undertaken by Bruton Consulting Engineers and supplied as a separate report. The recommendations of the report have been addressed where appropriate within the proposed layout design.



## **9 Internal Layout**

The layout of the proposed public realm improvements is detailed in the landscape architect's drawings submitted as part of this pre-planning assessment pack.

The development consists of public realm improvements for a pedestrianised New Street in Malahide, Co. Dublin.

1. The southern portion of the proposed public realm improvements facilitates one-way restricted traffic movements from the southern end of New Street during designated hours to accommodate deliveries, refuse collection and emergency vehicles. Loading bays and accessible parking coincident with the HSE Building are also provided.
2. The northern portion of the proposed public realm improvements provides two-way access from the northern end of New Street to allow for local residential and emergency vehicle access to Ross Cottages dwellings and environs.



Figure 9-1: Proposed Site Layout (© DFLA)

## 9.1 DMURS

The roads layout together with pedestrian and cycle facilities for the site have been developed considering the design principles set out in the Design Manual for Roads and Streets (2019). The design speed for the site is 10 kph, and appropriate speed restriction signs will be set out at the entrances to New Street.

The car has a significant impact on how street networks and streets are designed and how people interact with them. The relationship between cars and people can be illustrated via four distinct models:

- a. The first model is where traffic and people are segregated, and the car is dominant.
- b. The second model is where the car and people are segregated from each other.
- c. The third model is where traffic and people mix, although on a more equitable basis.
- d. The fourth model is where the car is excluded altogether.

The proposed public realm improvements for a pedestrianised New Street actively migrates from the pre-existing car dominant streetscape and promotion of private motor vehicle use to a pedestrian/cyclist dominated streetscape.

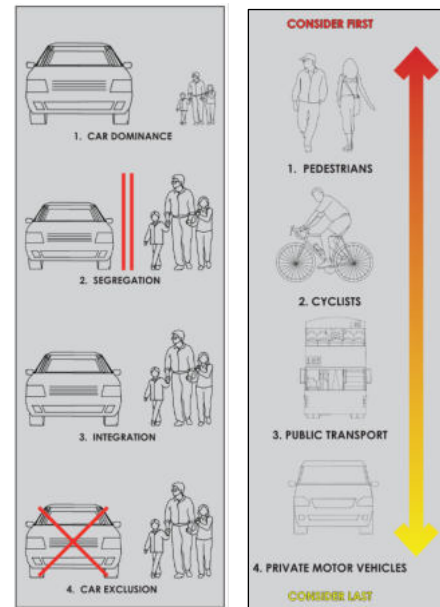


Figure 9-2: DMURS Figure Extracts

A sense of place is established in the public realm design proposals through satisfying the core design principles of:

- **Connectivity:** The creation of vibrant and active places requires pedestrian activity. This in turn requires walkable street networks that can be easily navigated and are well connected.
- **Enclosure:** A sense of enclosure spatially defines streets and creates a more intimate and supervised environment. A sense of enclosure is achieved by orientating buildings toward the street and placing them along its edge as in the case of New Street. The use of street trees and soft and hard landscaping features will also enhance the feeling of enclosure.
- **Active Edge:** An active frontage enlivens the edge of the street creating a more interesting and engaging environment. An active frontage is achieved with frequent entrances and openings that ensure the street is overlooked and generate pedestrian activity as people come and go from buildings, as is naturally the case with New Street and the rejuvenation of activity through the proposed pedestrianisation.
- **Pedestrian Activity/Facilities:** The sense of intimacy, interest and overlooking that is created by a street that is enclosed and lined with active frontages enhances a pedestrian's feeling of security and well-being. Good pedestrian facilities (such as wide footpaths and well-designed crossings) also make walking a more convenient and pleasurable experience that will further encourage pedestrian activity.

## 9.2 Visibility Splays

The site layout has been developed to provide adequate turning provision for refuse vehicles and fire tender access. Forward visibility and visibility splays have been provided on the basis of the requirements of Sections 4.4.4 and 4.4.5 of the DMURS manual. Compliance with the requirements is set out on the relevant PUNCH drawings.



### **9.3 Vehicle Manoeuvring**

Autotrack analysis has been undertaken to ensure there are no issues with swept paths and manoeuvrability of fire appliances, refuse vehicles and other design vehicles including but not limited to the following:

- Access to the Marina for oversized vehicles carrying boats to/from the Marina, with access required via New Street.
- Fire tender access (to include Turn Table ladder Fire Unit) to New St. & Ross Cottages.
- HGV Access for deliveries
- Accessible parking at HSE Building
- Refuse collection on New Street and Ross Cottages

Please refer to the Vehicle Swept Path drawings prepared by PUNCH for illustration of the various vehicle movements throughout the site extents.

## 10 Parking

### 10.1 Car Parking

Due to the nature of the proposed public realm improvements, parking facilities are intentionally limited. Specifically, parking facilities are restricted to a single accessible parking facility at the HSE building location.

It is noted that access to private residential parking is accommodated to existing residential dwellings located on New Street and Ross Cottages.

The ‘standard’ parking spaces will be demarcated with white lines. All car parking spaces will be 2.4m by 4.8m, with disabled spaces providing an additional width and length of 1.2m.

### 10.2 Cycle Parking

Cycling is to be significantly encouraged as part of the proposed public realm improvements. Cycle parking serving the public realm improvements is provided as follows:

Table 10-1: Proposed Cycle Parking Quantum for the New Street Public Realm Development

	Standard Bicycle Stands	E-Bike Stands	Cargo Bike Spaces
Total	15	5	3

### 10.3 Service and Delivery Trips

Vehicular set-down access is provided within the site. Delivery and service access will be facilitated through the loadings bays and designated loading areas distributed throughout the street.

All deliveries will be restricted to designated hours to minimize any potential conflict with non-motorised users. Any non-standard vehicle access, e.g. oversized vehicles carrying boats to/from the Marina, will be scheduled and notified in advance.

## **11 Construction Stage Traffic**

### **11.1 Construction Phase**

The volumes of traffic that will be generated during the construction phase of the proposed public realm improvements will be small in comparison to the existing traffic volumes in the general area.

The construction stage therefore does not require quantitative traffic analysis.

### **11.2 Construction Traffic Management Plan**

The successful contractor will be required to carry out a traffic management plan for the duration of the works. This will involve consultation with the local authority and/or the Gardaí, and once agreed will be adhered to for all aspects of construction that involves movement of vehicles in and out of the site.



## 12 Public Transport, Pedestrians/ Cyclists

To ensure future transport sustainability and to endeavour to make new developments as accessible as possible to travel by other modes of transport, an assessment has been made of the existing pedestrian, cyclist, and public transport facilities.

### 12.1 Public Transport

#### 12.1.1 Train Services

Malahide Train Station is served by the following Iarnród Éireann and DART & Dublin Commuter services:

- Dublin - Dundalk/ Newry (Iarnród Éireann)
- Gorey/ Bray - Dublin - Howth/ Newry (DART & Dublin Commuter)
- Newry/ Howth - Dublin - Bray/ Gorey (DART & Dublin Commuter)

As shown in Figure 12-1, the site is connected to the Dublin Area Train and Tram services via the Northwest Commuter Line and to the DART Line. Connection to the Irish Rail network is shown in Figure 12-2. The station is approximately 150m (2-minute walk) from the top entrance of New Street. Please refer to Figure 3-10 for the location of Malahide Train Station with respect to the site boundary.

Train routes are daily.

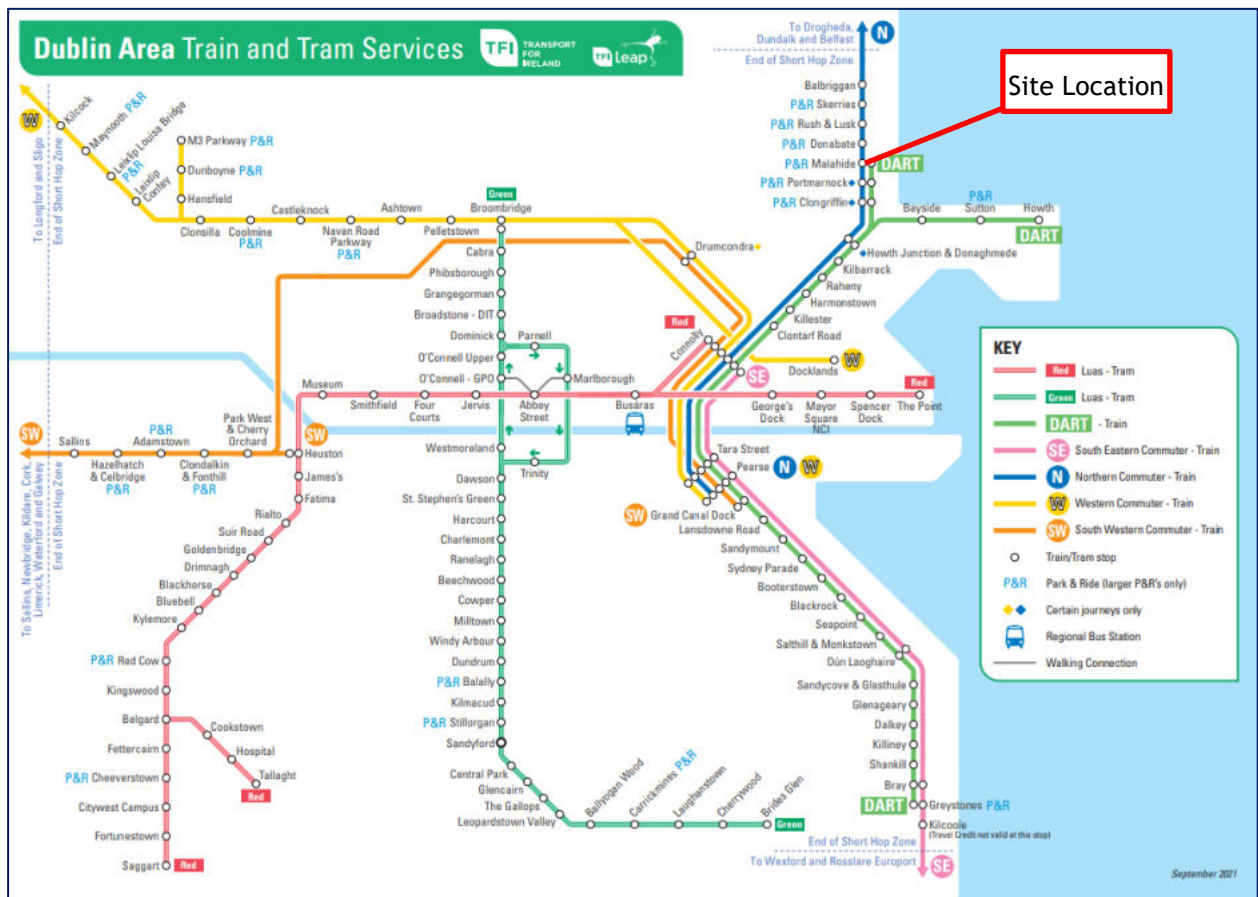


Figure 12-1: Site Location Relative to Dublin Public Transport Network (Ref: <https://www.transportforireland.ie>)



Figure 12-2: Site Location Relative to National Rail Network (Ref: <https://www.irishrail.ie>)

### 12.1.2 Bus Services

The site is in a good location to avail of the majority of bus services available nearby. Figure 12-2 below shows the location of nearby public transport infrastructure in the vicinity of the proposed public realm improvements, and Table 12-1 shows the routes serving the various bus stops.

Bus routes are daily.



Figure 12-3: Existing Bus Stops/ Train Stations in the vicinity of the proposed public realm improvements.



Table 12-1: Bus routes adjacent to the proposed public realm improvements.

Route No.	Route Name	Operated By	Bus Stop ID:				
			3585	3634	4387	3624	3586
32X	Swords Road (Lawson Spinney) - University College Dublin	Dublin Bus	✓	✓	✓		
42	Talbot Street (opp. Bank of Ireland) - Coast Road	Dublin Bus	✓	✓			
42d	The Helix - Strand Road (St. Anne's Estate)	Dublin Bus	✓	✓			
42n	Dublin City South, D'Olier Str - Portmarnock, Strand Road	Nitelink/ Dublin Bus	✓				✓
102	Dublin Airport - Sutton Station	Go-Ahead	✓	✓	✓		✓
102a	Sutton - Swords	Go-Ahead		✓	✓		
102c	Clarehall - Sutton	Go-Ahead	✓	✓	✓		✓
102p	River Valley - Portmarnock	Go-Ahead	✓	✓	✓		✓
102t	Swords - Sutton	Go-Ahead	✓	✓	✓		✓
142	Wendell Avenue - University College of Dublin UCD	Dublin Bus	✓	✓			
H2	National Lottery Head Quarters - Malahide Garda Station	Dublin Bus			✓	✓	✓

It is noted that the H2 bus, terminating on James's Terrace, has been diverted down Old Street to accommodate the pedestrianisation of New Street. The frequency of this service is limited and therefore this diversion has had minimal impact on Old Street. No change has been made to the service near the estuary.

### 12.1.3 Taxi Services

Taxis are available on request.

As per Fingal Development Plan (2017-2023), the objective of the plan is to facilitate and promote the development of accessible taxi services. It is also the objective of the plan to facilitate the provision of taxi ranks at appropriate locations on streets. The accessibility of these taxi services is an important element in the public transport mix, in providing a demand responsive 24-hour door to door service.

The taxi rank was moved from New Street to James's Terrace to accommodate the pedestrianisation of New Street. This is currently under review by FCC.

## 12.2 Pedestrians

The proposed public realm improvements will increase the number of pedestrian trips to and from New Street. It is therefore important that the public realm improvements is properly integrated into the existing footpath network. The integration of the footpath to connect to existing pedestrian routes on The Mall (R106) and Strand Street will provide direct pedestrian routes from New Street to/ from surrounding areas. The pedestrian network also provides routes to/ from the surrounding public transport network, including nearby bus routes on The Mall and Dublin Road (R106), as well as Malahide Train Station.

Pedestrian surveys taken in December 2019 on New Street pre-pedestrianisation indicate a total of 2988 pedestrians travelling along New Street over a 13-hour period between 7am and 8pm. The peak hour occurred between 1-2pm with a total of 385 pedestrians travelling along New Street in the hour.

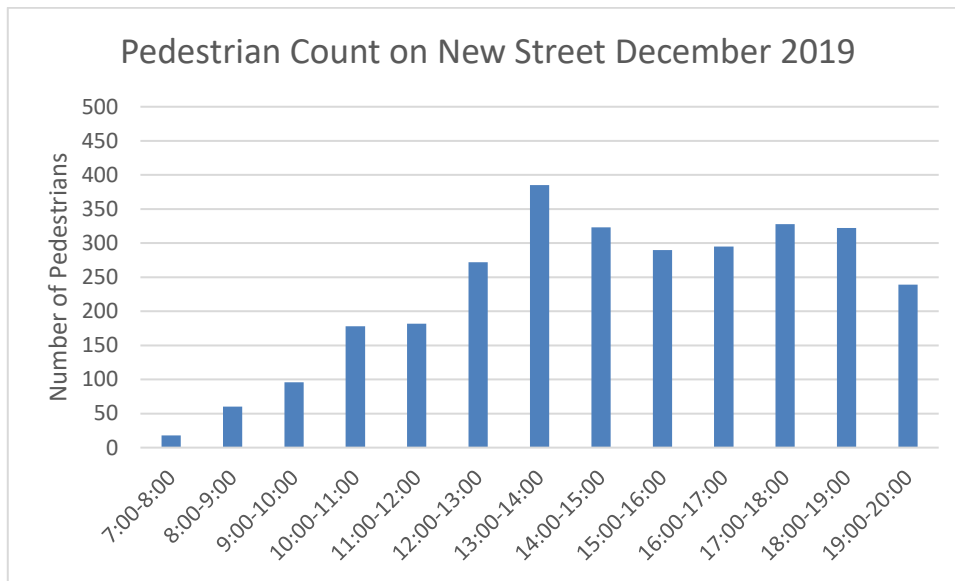


Figure 12-4: Pedestrian Count on New Street (December 2019).

Pedestrian numbers taken in January 2023 show a 23% increase in the number of pedestrians travelling along New Street post pedestrianisation with a total of 3679 pedestrians recorded over the same time period. The peak hour remained 1-2pm with a total of 461 pedestrians travelling along New Street in the hour.

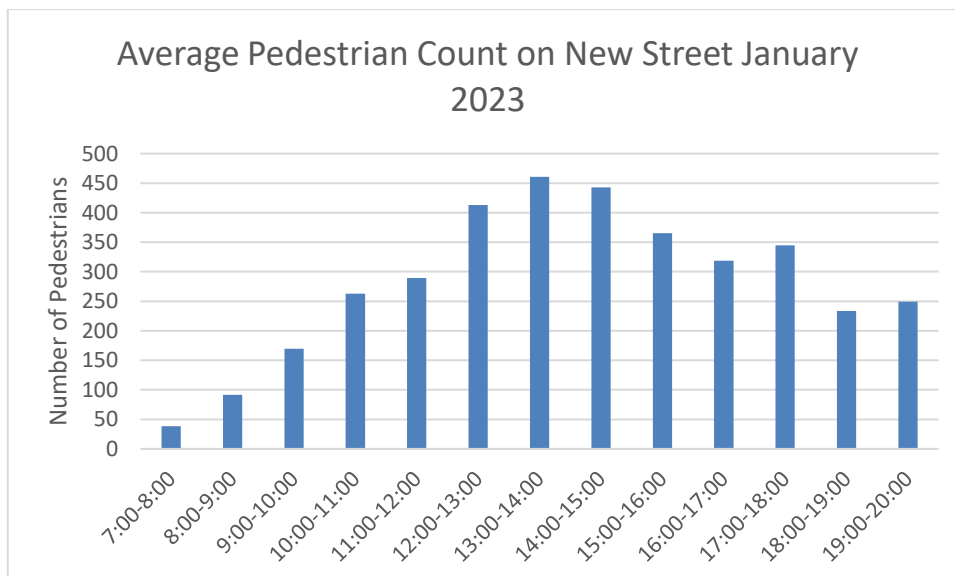


Figure 12-5: Pedestrian Count on New Street (January 2023).

Both surveys were taken during a weekday in winter months, December and January respectively, allowing for a direct comparison to be made. It is expected that the number of pedestrians would increase in the warmer/drier periods of the year.

### **12.3 Cycling**

Cycling is to be significantly encouraged as part of the proposed public realm improvements. Bike stand parking is provided at various locations along the street. Cycling enhances both the environment and quality of life of the surrounding area. Cycling has an important transport role, in reducing car usage. The consequential reduction in emissions improves air quality, aids the ecological system and results in less noise pollution.

Providing cycle and pedestrian links that are free of motorised traffic will encourage the use of cycling.

The primary access points to the proposed public realm improvements are via The Diamond, The Mall/Main Street/Dublin Road (R106) to the south and to the north via Strand Street. While there are no existing cycle lanes on either The Mall (R106) or Strand Street, the Fingal Development Plan (2017-2023) outlines proposals for an indicative cycle/pedestrian route on The Mall/Main Street/Dublin Road (R106) at the southern border of New Street. The Greater Dublin Area (GDA) Cycle Network is also proposed on The Mall/Main Street/Dublin Road (R106) which will provide a cycle route from Malahide to Swords. Please refer to Figure 3-39.

The proposed public realm improvements for a pedestrianised New Street will make New Street a focal point with Fingal's Greenway network. New Street would provide connection to numerous alternative Greenway/ cycle way projects that are being proposed or at various planning stages including, the Fingal Coastal Way, Sutton to Malahide Greenway, and Broadmeadow Way. These proposed greenways (shared footpath and cycleways) will provide excellent connection points to and from the proposed public realm improvements at New Street to/ from surrounding areas including: Newbridge Demesne in Donabate to Fingal county boundary, north of Balbriggan (Fingal Coastal Way), Sutton Cross to Baldoyle and Portmarnock to Malahide (Sutton to Malahide Greenway), and Malahide Demesne to Newbridge Demesne via the railway causeway across the Malahide Estuary (Broadmeadow Way).

General proposals and objectives as noted in the Development Plan are to reduce car dependency and promote walking and cycling as sustainable modes of transport. The inclusion of indicative cycle/ pedestrian routes and the GDA Cycle Network proposed on The Mall/Main Street/Dublin Road (R106) at the southern end of New Street as well as proposed Greenways will improve connectivity to the site.



### **13 Access for People with Disabilities**

Parking facilities for disabled users are provided within the proposed public realm improvements at the HSE facility. It is noted that FCC have also provided disabled and age-friendly parking spaces on The Mall and The Green, thus improving facilities in the immediate vicinity of New Street.

## 14 Summary and Conclusion

1. The development consists of public realm improvements for a pedestrianised New Street in Malahide, Co. Dublin.
2. A number of traffic surveys were compared in order to assess any change in traffic flows due to the proposed public realm improvements for a pedestrianised New Street.
3. It is proposed to access the development as follows:
  - a. A one-way restricted vehicular traffic system (northbound).
  - b. Deliveries permitted from 7am-11am each day, with vehicle bollards at the Diamond and at the junction with Ross Cottages as control measure.
  - c. Unrestricted vehicular access to Ross Cottages (from the north).
4. Capacity analysis was carried out on 11 no. junctions:
  1. Junction of New Street, Strand Street, The Green, Marina Village (signalised junction)
  2. Junction of Old Street and Strand Street
  3. Junction of Townyard Lane and Strand Street
  4. The Diamond - Junction of New Street and the R106 (signalised junction)
  5. Junction of Townyard Lane and The Mall (R106)
  6. Junction of Old Street and Dublin Road (R106)
  7. Junction of James' Terrace and The Mall (R106)
  8. Junction of the Rise and The Mall (R106)
  9. Junction of Grove Road and The Mall (R106)
  10. Junction of Grove Road and the Rise
  11. Junction of Grove Road and Church Road

The analysis shows that, when comparing the 2023 post-pedestrianisation with the 2019 pre-pedestrianisation scenarios, there are minimal effects on the capacity for the surrounding junctions and there are significant improvements at The Diamond, the main junction in the village.

5. Parking spaces for the proposed development are restricted to a single accessible parking facility at the HSE building location.
6. Secure cycle parking facilities have been provided within the proposed public realm improvements to meet the requirements set out in the Fingal Development Plan.

**Appendix A Existing Survey Data (2019, 2020, 2023)**



**IDASO**  
Innovative Data Solutions



Idaso Ltd  
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Co Westmeath, Ireland



Office  
Ph: +353 (0) 4493 18019  
Email: info@idaso.ie



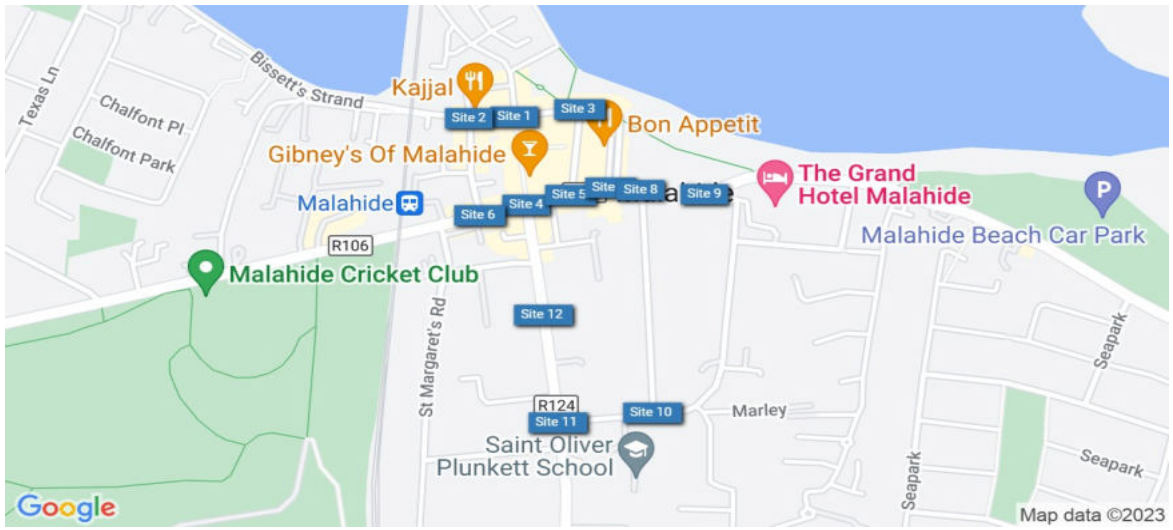
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**Data Analysis Services**  
Traffic-Transportation- Commercial-Innovation

## 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2

**with compliments**

Survey Name: 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
Date: Tue 10 Jan 2023



Survey Name: 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2

Date: Tue 10 Jan 2023

<p>CAR</p>	<ul style="list-style-type: none"> <li>• Saloon</li> <li>• Estate</li> <li>• People Carrier</li> <li>• Taxi</li> <li>• Three-wheel Cars</li> <li>• Car towing Trailer</li> </ul>
<p>LGV (Light Goods Vehicles)</p>	<ul style="list-style-type: none"> <li>• Van</li> <li>• Pick-up</li> <li>• Car Delivery Vans</li> <li>• Minibus</li> <li>• Commercial Vehicles &lt; 3.5 Tonnes – single rear tyres</li> </ul>
<p>OGV1 (Other Goods Vehicles)</p>	<ul style="list-style-type: none"> <li>• 2-Axles Rigid Truck</li> <li>• 3-Axles Rigid Truck</li> <li>• Commercial Vehicles &gt; 3.5 Tonnes – single rear tyres</li> </ul>
<p>OGV2 (Other Goods Vehicles)</p>	<ul style="list-style-type: none"> <li>• 4 or more Axles Rigid Truck</li> <li>• 3 Axle or more Articulated Truck</li> <li>• Vehicles in Category OGV1 towing trailer</li> </ul>
<p>PSV (Passenger Service Vehicles)</p>	<ul style="list-style-type: none"> <li>• Single Deck Bus or Coach</li> <li>• Double Deck Bus or Coach</li> </ul>
<p>M/C (Motorcycle)</p>	<ul style="list-style-type: none"> <li>• Motorcycles</li> <li>• Motor Scooters</li> <li>• Mopeds</li> <li>• Three-wheel motorcycles</li> </ul>
<p>P/C (Pedal Cycle)</p>	<ul style="list-style-type: none"> <li>• Two-wheel pushbike</li> <li>• Three-wheel pushbike</li> </ul>





**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 1  
**Location:** Marina Village/The Green/New St/Strand St  
**Date:** Tue 10-Jan-2023

TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
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07:45	0	0	0	0	0	0	0	0	0	0	1	8	1	0	0	0	10	9.2	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>44</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>46.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
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<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>69</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
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09:45	0	0	0	0	0	0	0	0	0	0	0	12	0	1	0	0	13	13.5	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>41</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>45.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
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11:45	0	0	0	0	0	0	0	0	0	0	0	23	2	0	0	0	25	25	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>66</b>	<b>66.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
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12:45	0	0	0	0	0	0	0	0	0	0	0	13	1	0	0	0	14	14	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>62</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>67</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
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13:45	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	1	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>49</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>54.7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	
14:00	0	0	0	0	0	0	0	0	0	0	3	15	1	1	0	0	20	18.1	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>53</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>57.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
15:00	0	0	0	0	0	0	0	0	0	0	0	13	3	0	0	0	16	16	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	16	1	0	0	0	17	17	1	0	0	0	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>70</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
16:00	0	0	0	0	0	0	0	0	0	0	0	10	2	0	0	0	12	12	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	30	30	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>72</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
17:00	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	24	1	0	0	0	25	25	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	31	2	0	0	0	33	33	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>97</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
18:00	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	12	2	0	0	0	14	14	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>712</b>	<b>47</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>773</b>	<b>772.2&lt;/</b>								



B => C								B => D								C => A													
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C		
0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0		
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	0		
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0	0	0	0	0	0	0	0	0	0	1	0	11	0	0	0	0	12	11.2	0	0	2	2	0	0	0	4	4	0	
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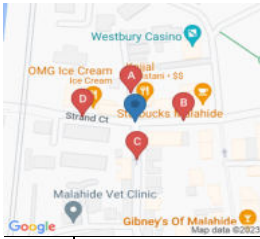


C => B						C => C						C => D															
M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C
0	1	0	1	0	0	2	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	1.2	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	2	5	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	4	0	0	
0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	0	0	
0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	
0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	3	1	0	0	0	5	4.2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	0	0	
0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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0	3	2	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	
0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	
0	1	0	0	0	0	2	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	2	0	0	0	0	3	2.2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	1	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	2.2	1	0	
0	42	21	9	0	0	74	76.9	0	0	0	0	0	0	0	0	0	5	0	35	11	1	0	52	48.5	1	1	

D => A						D => B						D => C																
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	
4	0	0	0	0	4	4	0	0	6	1	1	0	0	8	8.5	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	3	3	0	0	45	2	2	0	2	51	54	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	7	7	0	0	13	0	1	0	0	14	14.5	0	0	0	0	0	0	0	0	0	0	0	0	0
15	1	0	0	0	16	16	0	0	15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0
29	1	0	0	0	30	30	0	0	79	4	4	0	2	89	93	0	0	0	0	0	0	0	0	0	0	0	0	0
19	2	0	0	0	21	21	1	0	34	3	0	0	1	39	39.2	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	11	11	0	0	56	4	0	1	0	61	62.3	0	0	0	1	0	0	0	0	1	1	0	0	0
20	1	1	0	0	22	22.5	1	0	63	4	3	0	1	72	73.7	0	0	1	0	0	0	0	0	1	1	0	0	0
21	0	0	0	0	21	21	3	0	38	3	1	0	0	45	43.1	0	0	1	0	0	0	0	0	1	1	0	0	0
71	3	1	0	0	75	75.5	5	0	191	14	4	1	2	217	218.3	0	0	2	1	0	0	0	0	3	3	0	0	0
22	1	0	0	0	23	23	1	1	37	5	0	0	0	44	42.6	0	0	1	0	0	0	0	0	1	1	0	0	0
21	0	0	0	0	22	21.4	2	0	30	1	1	0	0	34	32.9	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1	0	0	0	14	14	0	0	17	2	0	0	1	20	21	0	0	0	0	0	0	0	0	0	0	0	0	0
22	1	1	0	0	24	24.5	0	0	34	2	1	0	0	37	37.5	0	0	0	0	0	0	0	0	0	0	0	0	0
78	3	1	0	0	83	82.9	3	1	118	10	2	0	1	135	134	0	0	1	0	0	0	0	0	1	1	0	0	0
14	0	0	0	0	14	14	1	0	44	5	0	0	1	51	51.2	0	0	0	0	0	0	0	0	0	0	0	0	0
15	3	0	0	0	18	18	1	0	45	0	1	0	1	48	48.7	0	0	0	0	0	0	0	0	0	0	0	0	0
22	1	1	0	0	24	24.5	0	0	42	2	1	0	0	45	45.5	0	0	0	0	0	0	0	0	0	0	0	0	0
15	2	0	0	0	17	17	0	0	29	3	1	0	0	33	33.5	0	0	0	0	0	0	0	0	0	0	0	0	0
66	6	1	0	0	73	73.5	2	0	160	10	3	0	2	177	178.9	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	17	17	0	1	28	4	1	0	1	35	35.9	0	0	1	1	0	0	0	0	2	2	0	0	0
8	1	0	0	0	9	9	1	0	25	4	0	0	0	30	29.2	0	0	1	0	0	0	0	0	1	1	0	0	0
16	1	0	0	0	17	17	0	0	32	0	0	0	0	32	32	0	0	1	0	0	0	0	0	1	1	0	0	0
16	1	0	0	0	17	17	0	0	24	1	0	0	1	26	27	0	0	1	1	0	0	0	0	2	2	0	0	0
57	3	0	0	0	60	60	1	1	109	9	1	0	2	123	124.1	0	0	4	2	0	0	0	0	6	6	0	0	0
13	2	0	0	0	15	15	0	0	30	3	0	0	0	33	33	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	1	0	0	12	12.5	0	0	36	2	0	0	0	38	38	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	13	13	0	1	28	1	0	0	1	31	31.4	0	1	0	1	0	0	0	0	2	1.4	0	0	0
12	5	0	0	0	17	17	0	0	33	5	0	0	0	38	38	0	0	0	0	0	0	0	0	0	0	0	0	0
48	8	1	0	0	57	57.5	0	1	127	11	0	0	1	140	140.4	0	1	0	1	0	0	0	0	2	1.4	0	0	0
16	0	0	0	0	16	16	2	0	30	2	0	0	1	35	34.4	0	0	1	0	0	0	0	0	1	1	0	0	0
12	1	0	0	0	13	13	0	0	37	1	0	0	0	38	38	0	0	1	1	0	0	0	0	2	2	0	0	0
12	3	0	0	0	15	15	0	0	27	2	0	0	1	30	31	0	0	0	0	0	0	0	0	0	0	0	0	0
13	1	0	0	0	14	14	0	0	32	3	0	0	0	35	35	0	0	1	0	0	0	0	0	1	1	0	0	0
53	5	0	0	0	58	58	2	0	126	8	0	0	2	138	138.4	0	0	3	1	0	0	0	0	4	4	0	0	0
13	2	0	0	0	15	15	0	0	26	1	2	0	1	30	32	1	0	1	0	0	0	0	0	2	1.2	0	0	0
14	0	0	0	0	14	14	0	0	47	0	0	0	0	47	47	0	0	2	0	0	0	0	0	2	2	0	0	0
16	0	0	0	0	16	16	1	0	35	1	2	0	1	40	41.2	0	0	1	0	0	0	0	0	1	1	0	0	0
25	2	0	0	0	27	27	0	0	35	5	1	0	0	41	41.5	0	0	0	0	0	0	0	0	0	0	0	0	0
68	4	0	0	0	72	72	1	0	143	7	5	0	2	158	161.7	1	0	4	0	0	0	0	0	5	4.2	0	0	0
13	0	0	0	0	13	13	0	0	42	1	0	0	0	43	43	0	0	1	0	0	0	0	0	1	1	0	0	0
11	0	0	0	0	11	11	1	0	32	1	2	0	1	37	38.2	0	0	0	1	0	0	0	0	1	1	0	0	1
11	1	0	0	0	12	12	0	0	32	4	0	0	1	37	38	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	15	15	0	0	47	0	0	0	0	47	47	0	0	1	1	0	0	0	0	2	2	0	0	0
50	1	0	0	0	51	51	1	0	153	6	2	0	2	164	166.2	0	0	2	2	0	0	0	0	4	4	0	0	1
16	0	0	0	0	16	16	0	0	30	2	0	0	0	32	32	0	0	1	0	0	0	0	0	1	1	0	0	0
20	0	0	0	0	20	20	0	0	33	0	0	0	1	34	35	0	0	0	0	0	0	0	0	0	0	0	0	0
24	2	0	0	0	26	26	0	0	55	1	0	0	1	57	58	0	0	1	0	0	0	0	0	1	1	0	0	0
26	4	0	0	0	30	30	0	0	40	1	1	0	1	43	44.5	0	0	0	0	0	0	0	0	0	0	0	0	0
86	6	0	0	0	92	92	0	0	158	4	1	0	3	166	169.5	0	0	2	0	0	0	0	0	2	2	0	0	0
29	0	0	0	0	29	29	0	1	40	1	0	0	0	42	41.4	0	0	1	0	0	0	0	0	1	1	0	0	0
27	1	0	0	0	28	28	0	0	28	3	0	0	1	32	33	0	0	0	1	0	0	0	0	1	1	0	0	0
32	0	0	0	0	32	32	0	0	40	1	0	0	1	42	43	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	13	13	0	0	52	2	0	0	0	54	54	0	0	0	0	0	0	0	0	0	0	0	0	0
101	1	0	0	0	102	102	0	1	160	7	0	0	2	170	171.4	0	0	1	1	0	0	0	0	2	2	0	0	0
19	0	0	0	0	19	19	1	0	60	1	0	0	1	63	63.2	0	0	0	0	0	0	0	0	0	0	0	0	0
27	2	0	0	0	29	29	0	0	36	1	0	0	0	37	37	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	14	13.2	0	0	25	1	0	0	1	27	28	0	0	0	0	0	0	0	0	0	0	0	0	0
14	1	0	0	0	15	15	0	0	45	2	0	0	0	47	47.2	0	0	1	0	0	0	0	0	1	1	0	0	0
73	3	0	0	0	77	76.2	1	0	166	5	0	0	2	174	175.2	0	0	1	0	0	0	0	0	1	1	0	0	0
780	44	4	0	0	830	830.6	16	4	1690	95	22	1	23	1851	1871.1	1	1	20	8	0	0	0	0	30	28.6	0	0	1







**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 2  
**Location:** Gas Yard Ln/Strand St/Old St/Strand Ct  
**Date:** Tue 10-Jan-2023

TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	4	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 TOT</b>	0	0	0	0	0	0	0	0	0	0	0	10	2	2	0	14	15	0	0	0	0	0	0	0	0	0



B => C									B => D									C => A									
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C
0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	5	4.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	7	1	0	0	0	8	8	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	25	3	0	0	0	29	28.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	19	0	0	0	0	20	19.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	21	3	0	0	0	24	24	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	79	4	0	0	0	84	83.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	4	21	3	1	0	0	29	26.3	0	0	0	0	0	0	0	0	1	
0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	12	3	0	0	0	15	15	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	17	2	0	0	0	20	19.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	5	70	8	1	0	0	84	80.5	0	0	0	0	0	0	0	0	1	
0	0	0	0	0	0	0	0	0	0	0	18	2	0	0	0	20	20	0	0	0	0	0	0	0	0	1	
0	0	0	0	0	0	0	0	0	0	0	22	2	0	0	0	24	24	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	3	29	2	0	0	0	34	31.6	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	2	20	2	0	0	0	24	22.4	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	5	89	8	0	0	0	102	98	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	16	2	0	0	0	18	18	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	17	3	0	0	0	20	20	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18	18	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	2	22	0	0	0	0	24	22.4	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	2	73	5	0	0	0	80	78.4	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	14	3	0	0	0	18	17.2	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	16	3	0	0	0	19	19	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	23	5	0	0	0	28	28	0	0	0	1	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	2	28	0	0	0	0	30	28.4	0	0	0	1	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	3	81	11	0	0	0	95	92.6	0	0	1	2	0	0	0	3	3	
0	0	0	0	0	0	0	0	0	0	0	24	8	0	0	0	32	32	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	24	2	0	0	0	26	26	0	0	0	0	1	0	0	1	1.5	
0	0	0	0	0	0	0	0	0	0	0	29	5	0	0	0	34	34	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	32	1	0	0	0	33	33	0	0	1	0	0	0	0	1	1	
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0	0	0	0	0	0	0	0	0	0	0	29	2	0	0	0	31	31	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	2	12	2	0	0	0	16	14.4	0	0	1	0	1	0	0	2	2.5	
0	0	0	0	0	0	0	0	0	0	1	17	2	0	0	0	20	19.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	19	1	1	0	0	21	21.5	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	3	77	7	1	0	0	88	86.1	0	0	1	0	1	0	0	2	2.5	
0	0	0	0	0	0	0	0	0	0	1	21	6	0	0	0	28	27.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	21	2	0	0	0	23	23	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	28	1	0	0	0	29	29	0	0	0	1	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	1	24	2	0	0	0	27	26.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	2	94	11	0	0	0	107	105.4	0	0	1	1	0	0	0	2	2	
0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	24	24	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	1	19	2	0	0	0	22	21.2	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	22	4	2	0	0	28	29	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	36	0	0	0	0	36	36	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	1	101	6	2	0	0	110	110.2	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	44	1	0	0	0	45	45	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	35	3	0	0	0	38	38	0	0	0	0	0	0	0	0	0	
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0	0	0	0	0	0	0	0	0	0	0	143	7	0	0	0	150	150	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	28	28	0	0	0	0	0	0	0	0	1	
0	0	0	0	0	0	0	0	0	0	1	21	1	0	0	0	23	22.2	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	1	26	0	0	0	0	27	26.2	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	25	25	0	0	1	0	0	0	0	1	1	
0	0	0	0	0	0	0	0	0	0	2	100	1	0	0	0	103	101.4	0	0	3	0	0	0	0	3	3	
0	0	0	0	0	0	0	0	0	0	25	1041	87	4	0	0	1157	1139	0	0	9	3	2	0	0	14	15	



C => B						C => C										C => D													
M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C		
0	5	1	1	0	0	7	7.5	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	0	0	0	
0	42	1	2	0	2	47	50	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	32	32	0	0	0	
0	10	0	1	0	0	11	11.5	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	16	16	0	0	0	
0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	16	16	0	0	0	
0	68	2	4	0	2	76	80	0	0	0	0	0	0	0	0	0	0	0	72	0	0	0	0	72	72	0	0	0	
0	21	1	0	0	1	23	24	0	0	0	0	0	0	0	0	0	0	0	22	0	0	1	0	23	24.3	0	0	0	
0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	10	10.5	0	0	0	
0	10	1	1	0	1	13	14.5	0	0	0	0	0	0	0	0	0	0	0	16	0	1	0	0	17	17.5	0	0	0	
0	10	0	1	0	0	11	11.5	0	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0	12	12	0	0	0	
0	56	2	2	0	2	62	65	0	0	0	0	0	0	0	0	0	0	0	58	1	2	1	0	62	64.3	0	0	0	
0	23	1	0	0	0	25	24.2	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14	14	0	0	0	
1	20	0	0	0	0	21	20.4	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	6	6	0	0	0	
0	9	1	0	0	1	11	12	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	0	
0	27	1	1	0	0	29	29.5	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	0	
1	79	3	1	0	1	86	86.1	0	0	0	0	0	0	0	0	0	0	0	34	1	0	0	0	35	35	0	0	0	
0	32	4	0	0	1	38	38.2	0	0	0	0	0	0	0	0	0	0	0	9	0	1	0	0	10	10.5	0	0	0	
0	42	3	0	0	1	46	47	0	0	0	0	0	0	0	0	0	0	1	0	7	0	0	0	8	7.2	0	0	0	
0	36	3	2	0	0	41	42	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0	0	0	
0	31	1	0	0	0	32	32	0	0	0	0	0	0	0	0	0	0	0	7	2	1	0	0	10	10.5	0	0	0	
0	141	11	2	0	2	157	159.2	0	0	0	0	0	0	0	0	0	0	1	0	29	3	2	0	35	35.2	0	0	0	
0	30	3	1	0	1	35	36.5	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0	0	0	
0	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	0	
0	28	2	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9	9	0	0	0	
0	21	2	0	0	1	24	25	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	0	
0	95	7	1	0	2	105	107.5	0	0	0	0	0	0	0	0	0	0	0	30	1	0	0	0	31	31	0	0	0	
0	22	3	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	0	
0	21	2	1	0	0	24	24.5	0	0	0	0	0	0	0	0	0	0	2	0	8	0	0	0	10	8.4	0	0	0	
1	23	0	0	0	1	25	25.4	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	0	
0	22	5	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	12	0	0	0	
1	88	10	1	0	1	101	101.9	0	0	0	0	0	0	0	0	0	0	2	0	37	0	0	0	39	37.4	0	0	0	
0	21	1	0	0	1	23	24	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	0	
0	20	1	1	0	0	22	22.5	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	0	
0	13	3	0	0	1	17	18	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	0	
0	16	2	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	
0	70	7	1	0	2	80	82.5	0	0	0	0	0	0	0	0	0	0	0	30	1	0	0	0	31	31	0	0	0	
0	19	1	0	0	1	21	22	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	0	
0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	0	
0	21	0	1	0	1	23	24.5	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	0	
0	32	2	0	0	0	34	34	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	0	11	11	0	0	0	
0	85	3	1	0	2	91	93.5	0	0	0	0	0	0	0	0	0	0	0	41	2	0	0	0	43	43	0	0	0	
0	21	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	0	
0	20	3	2	0	1	26	28	0	0	0	0	0	0	0	0	0	0	1	0	6	1	1	0	9	8.7	0	0	0	
0	18	1	0	0	1	20	21	0	0	0	0	0	0	0	0	0	0	0	15	2	0	0	0	17	17	0	0	0	
0	24	1	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	0	0	
0	83	5	2	0	2	92	95	0	0	0	0	0	0	0	0	0	0	1	0	42	3	1	0	47	46.7	0	0	0	
0	25	1	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	0	26	1	0	0	0	27	27	0	0	0	
0	31	0	0	0	1	32	33	0	0	0	0	0	0	0	0	0	0	0	26	1	0	0	0	27	27	0	0	0	
0	41	3	0	0	1	45	46	0	0	0	0	0	0	0	0	0	0	0	17	1	1	0	0	19	19.5	0	0	0	
0	31	1	0	0	1	33	34	0	0	0	0	0	0	0	0	0	0	0	32	1	0	0	0	33	33	0	0	0	
0	128	5	0	0	3	136	139	0	0	0	0	0	0	0	0	0	0	0	101	4	1	0	0	106	106.5	0	0	0	
0	28	0	0	0	0	28	28	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	15	15	0	0	0	
0	29	2	0	0	1	32	33	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18	18	0	0	0	
0	33	0	0	0	1	34	35	0	0	0	0	0	0	0	0	0	0	0	18	1	0	0	0	19	19	0	0	0	
0	23	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	20	0	0	0	
0	113	2	0	0	2	117	119	0	0	0	0	0	0	0	0	0	0	0	71	1	0	0	0	72	72	0	0	0	
0	48	0	0	0	1	50	50.2	0	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0	31	31	0	0	0	
0	28	1	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	21	21	0	0	0	
0	22	1	0	0	1	24	25	0	0	0	0	0	0	0	0	0	0	0	12	1	0	0	0	13	13	0	0	0	
0	26	1	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	19	1	0	0	0	20	20	0	0	0	
0	124	3	0	0	2	130	131.2	0	0	0	0	0	0	0	0	0	0	0	83	2	0	0	0	85	85	0	0	0	
2	1130	60	15	0	23	1233	1259.9	0	0	0	0	0	0	0	0	0	0	4	0	628	19	6	1	0	658	659.1	0	0	0

D => A						D => B						D => C															
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR
0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	5	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	
0	1	0	0	0	1	1	0	0	19	1	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	
0	1	0	0	0	1	1	0	0	39	2	0	0	0	41	41	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	33	4	0	0	0	38	37.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	53	6	1	1	0	61	62.8	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	3	72	4	2	0	0	81	79.6	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	51	2	0	0	0	54	53.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	5	0	209	16	3	1	0	234	232.8	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	39	4	0	0	0	44	43.4	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	1	1	2	0	33	1	1	0	0	37	35.9	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	23	2	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	1	1	0	0	31	2	0	0	0	33	33	0	0	0	0	0	0	0	0	0	0	0	
2	0	0	0	0	2	2	2	1	126	9	1	0	0	139	137.3	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	26	2	1	0	0	29	29.5	0	0	1	0	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	1	0	19	0	0	0	0	20	19.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	26	1	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	10	4	1	0	0	15	15.5	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	81	7	2	0	0	91	91.2	0	0	1	0	0	0	0	1	1	0	0	
0	0	0	0	0	0	0	0	1	16	1	0	0	0	18	17.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	17	4	0	0	0	22	21.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	1	75	6	0	0	0	83	81.6	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	22	1	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	22	1	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	20	3	0	0	0	24	23.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	25	3	0	0	0	28	28	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	89	8	0	0	0	98	97.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	2	0	28	0	0	0	0	30	28.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	30	1	0	0	0	31	31	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	25	2	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	1	1	0	0	31	2	0	0	0	33	33	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	1	1	2	0	114	5	0	0	0	121	119.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	22	2	0	0	0	25	24.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	52	0	0	0	0	52	52	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	33	2	1	0	0	37	36.7	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	24	5	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	2	0	131	9	1	0	0	143	141.9	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	32	1	0	0	0	33	33	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	23	1	0	0	0	25	24.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	27	3	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	36	0	0	0	0	36	36	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	118	5	0	0	0	124	123.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	23	1	0	0	0	24	24	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	26	0	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	33	0	0	0	0	33	33	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	36	3	1	0	0	40	40.5	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	118	4	1	0	0	123	123.5	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	1	41	1	0	0	0	43	42.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	25	2	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	38	0	0	0	0	38	38	0	0	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	3	3	0	0	43	2	0	0	0	45	45	0	0	0	0	0	0	0	0	0	0	0	
3	0	0	0	0	3	3	0	1	147	5	0	0	0	153	152.4	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	30	1	0	0	0	31	31	0	0	1	0	0	0	0	1	1	0	0	
1	0	0	0	0	1	1	0	0	40	2	0	0	0	42	42	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	1	0	11	1	0	0	0	13	12.2	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	33	2	0	0	0	35	35	0	0	0	0	0	0	0	0	0	0	0	
1	0	0	0	0	1	1	1	0	114	6	0	0	0	121	120.2	0	0	1	0	0	0	0	1	1	0	0	
7	1	0	0	0	8	8	15	4	1361	82	8	1	0	1471	1461.9	0	0	2	0	0	0	0	2	2	0	0	









C => A									C => B									C => C								
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	4	0	0	0	0	4	4	0	0	2	1	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	7	2	0	0	0	10	9.2	0	0	0	1	2	0	0	3	4	0	0	0	0	0	0	0	0	0
0	0	7	1	0	0	0	8	8	0	0	2	0	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0
1	0	20	3	0	0	0	24	23.2	0	0	4	2	4	0	0	10	12	0	0	0	0	0	0	0	0	0
0	0	15	3	0	0	0	18	18	0	0	1	0	1	0	0	2	2.5	0	0	0	0	0	0	0	0	0
1	0	14	0	0	0	0	15	14.2	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	28	1	0	0	0	29	29	0	0	11	3	2	0	0	16	17	0	0	0	0	0	0	0	0	0
1	0	71	4	0	0	0	76	75.2	0	0	18	4	3	0	0	25	26.5	0	0	0	0	0	0	0	0	0
3	0	21	1	1	0	0	26	24.1	1	0	16	2	0	0	0	19	18.2	0	0	0	0	0	0	0	0	0
0	0	14	1	0	0	0	15	15	0	0	11	3	0	0	0	14	14	0	0	0	0	0	0	0	0	0
0	0	12	2	0	0	0	14	14	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0
0	0	13	3	0	0	0	16	16	0	0	20	3	0	0	0	23	23	0	0	0	0	0	0	0	0	0
3	0	60	7	1	0	0	71	69.1	1	0	62	8	0	0	0	71	70.2	0	0	0	0	0	0	0	0	0
0	0	19	0	0	0	0	19	19	0	0	10	1	1	0	0	12	12.5	0	0	0	0	0	0	0	0	0
0	0	26	4	0	0	0	30	30	0	0	17	1	2	0	0	20	21	0	0	0	0	0	0	0	0	0
3	0	22	1	0	0	0	26	23.6	0	0	22	2	0	0	0	24	24	0	0	0	0	0	0	0	0	0
2	0	15	1	0	0	0	18	16.4	1	0	22	1	0	0	0	24	23.2	0	0	0	0	0	0	0	0	0
5	0	82	6	0	0	0	93	89	1	0	71	5	3	0	0	80	80.7	0	0	0	0	0	0	0	0	0
0	0	18	2	0	0	0	20	20	0	0	19	4	2	0	0	25	26	0	0	0	0	0	0	0	0	0
1	0	19	2	0	0	0	22	21.2	0	0	18	1	0	0	0	19	19	0	0	0	0	0	0	0	0	0
1	0	16	0	0	0	0	17	16.2	0	0	23	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0
0	0	25	0	0	0	0	25	25	1	0	13	3	0	0	0	17	16.2	0	0	0	0	0	0	0	0	0
2	0	78	4	0	0	0	84	82.4	1	0	73	8	2	0	0	84	84.2	0	0	0	0	0	0	0	0	0
1	0	15	3	0	0	0	19	18.2	0	0	20	0	1	0	0	21	21.5	0	0	0	0	0	0	0	0	0
0	0	18	3	0	0	0	21	21	0	0	28	2	0	0	0	30	30	0	0	0	0	0	0	0	0	0
1	0	21	3	0	0	0	25	24.2	0	0	24	0	0	0	0	24	24	0	0	0	0	0	0	0	0	0
0	0	30	1	0	0	0	31	31	0	0	11	3	0	0	0	14	14	0	0	0	0	0	0	0	0	0
2	0	84	10	0	0	0	96	94.4	0	0	83	5	1	0	0	89	89.5	0	0	0	0	0	0	0	0	0
0	0	19	4	0	0	0	23	23	0	0	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0	0
0	0	16	1	0	0	0	17	17	0	0	16	0	1	0	0	17	17.5	0	0	0	0	0	0	0	0	0
0	0	28	3	0	0	0	31	31	0	0	17	0	3	0	0	20	21.5	0	0	0	0	0	0	0	0	0
0	0	29	1	0	0	0	30	30	0	0	16	5	0	0	0	21	21	0	0	0	0	0	0	0	0	0
0	0	92	9	0	0	0	101	101	0	0	69	6	4	0	0	79	81	0	0	0	0	0	0	0	0	0
1	0	22	1	0	0	0	24	23.2	0	0	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0	0
1	0	15	3	0	0	0	19	18.2	0	0	10	2	1	0	0	13	13.5	0	0	0	0	0	0	0	0	0
1	0	14	2	0	0	0	17	16.2	0	0	15	3	1	0	0	19	19.5	0	0	0	0	0	0	0	0	0
0	0	19	2	2	0	0	23	24	0	0	30	1	0	0	0	31	31	0	0	0	0	0	0	0	0	0
3	0	70	8	2	0	0	83	81.6	0	0	75	7	2	0	0	84	85	0	0	0	0	0	0	0	0	0
0	0	17	2	0	0	0	19	19	0	0	23	1	0	0	0	24	24	0	0	0	0	0	0	0	0	0
0	0	25	3	0	0	0	28	28	0	0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0
0	0	16	1	1	0	0	18	18.5	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0
0	0	32	0	0	0	0	32	32	0	0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0
0	0	90	6	1	0	0	97	97.5	0	0	81	1	0	0	0	82	82	0	0	0	0	0	0	0	0	0
0	0	21	0	0	0	0	21	21	1	0	17	0	0	0	0	18	17.2	0	0	0	0	0	0	0	0	0
1	0	29	5	0	0	0	35	34.2	0	0	21	1	0	0	0	22	22	0	0	0	0	0	0	0	0	0
0	0	30	3	0	0	0	33	33	0	0	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0
0	0	30	1	0	0	0	31	31	0	0	23	2	0	0	0	25	25	0	0	0	0	0	0	0	0	0
1	0	110	9	0	0	0	120	119.2	1	0	78	4	0	0	0	83	82.2	0	0	0	0	0	0	0	0	0
0	0	28	3	0	0	0	31	31	0	0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0
0	0	25	3	0	0	0	28	28	0	0	21	1	0	0	0	22	22	0	0	0	0	0	0	0	0	0
0	0	28	1	0	0	0	29	29	0	0	19	1	0	0	0	20	20	0	0	0	0	0	0	0	0	0
0	0	14	2	0	0	0	16	16	0	0	21	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0
0	0	95	9	0	0	0	104	104	0	0	80	2	0	0	0	82	82	0	0	0	0	0	0	0	0	0
1	0	27	3	0	0	0	31	30.2	0	0	14	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0
1	0	17	0	0	0	0	18	17.2	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
1	0	15	1	0	0	0	17	16.2	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0
1	0	24	0	0	0	0	25	24.2	0	0	19	1	0	0	0	20	20	0	0	0	0	0	0	0	0	0
4	0	83	4	0	0	0	91	87.8	0	0	53	1	0	0	0	54	54	0	0	0	0	0	0	0	0	0
22	0	935	79	4	0	0	1040	1024.4	4	0	747	53	19	0	0	823	829.3	0	0	0	0	0	0	0	0	0





**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 4  
**Location:** New St/The Mall R106/Church Rd/Main St R106  
**Date:** Tue 10-Jan-2023

TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
10:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0.4	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>12 TOT</b>	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0.6	3	0	0	1	0	0	4



B => C									B => D									C => A									
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C
0	0	2	0	2	0	0	4	5	0	0	38	6	1	1	4	50	55.8	0	0	2	0	0	0	0	2	2	0
0	0	8	1	0	0	0	9	9	0	0	83	3	0	0	2	88	90	0	0	0	0	0	0	0	0	0	0
0	0	5	1	0	0	0	6	6	0	0	74	1	2	0	2	79	82	0	0	1	0	0	0	0	1	1	0
0	0	6	2	0	0	1	9	10	1	0	60	2	5	0	1	69	71.7	0	0	5	0	0	0	0	5	5	0
0	0	21	4	2	0	1	28	30	1	0	255	12	8	1	9	286	299.5	0	0	8	0	0	0	0	8	8	0
0	0	13	2	0	0	0	15	15	1	0	87	9	3	1	3	104	109	0	0	3	1	0	0	0	4	4	0
0	0	21	2	0	0	0	23	23	1	0	73	5	0	1	0	80	80.5	0	0	5	1	0	0	0	6	6	0
0	0	40	2	0	0	0	42	42	1	0	86	4	3	1	5	100	107	0	0	3	0	0	0	0	3	3	0
2	0	29	2	1	0	0	34	32.9	2	0	81	5	1	1	0	90	90.2	0	0	8	0	1	0	0	9	9.5	0
2	0	103	8	1	0	0	114	112.9	5	0	327	23	7	4	8	374	386.7	0	0	19	2	1	0	0	22	22.5	0
0	0	23	2	1	0	0	26	26.5	1	0	99	7	1	0	2	110	111.7	0	0	7	1	0	0	0	8	8	1
0	0	11	1	0	0	0	12	12	0	0	79	5	3	0	1	88	90.5	0	0	1	1	0	0	0	2	2	0
0	0	15	1	0	0	0	16	16	0	0	69	4	1	0	1	75	76.5	0	0	0	1	0	0	0	1	1	0
0	0	16	1	2	0	0	19	20	1	0	59	2	0	0	0	62	61.2	0	0	1	0	0	0	0	1	1	0
0	0	65	5	3	0	0	73	74.5	2	0	306	18	5	0	4	335	339.9	0	0	9	3	0	0	0	12	12	1
0	0	17	1	1	0	0	19	19.5	1	0	70	4	1	0	2	78	79.7	0	0	2	2	0	0	0	4	4	0
0	0	25	2	0	0	0	27	27	0	0	69	7	5	0	1	82	85.5	0	0	3	0	0	0	0	3	3	0
0	0	23	1	0	0	0	24	24	0	0	65	7	0	0	1	73	74	0	0	1	0	0	0	0	1	1	0
0	0	16	2	0	0	0	18	18	0	0	73	10	1	0	2	86	88.5	0	0	2	0	0	0	0	2	2	0
0	0	81	6	1	0	0	88	88.5	1	0	277	28	7	0	6	319	327.7	0	0	8	2	0	0	0	10	10	0
0	0	9	3	1	0	0	13	13.5	1	0	80	11	3	0	0	95	95.7	0	0	1	0	0	0	0	1	1	0
0	0	21	1	1	0	0	23	23.5	1	0	58	9	3	0	2	73	75.7	0	0	0	0	0	0	0	0	0	0
0	0	22	2	2	0	0	26	27	0	0	75	9	1	0	0	85	85.5	0	0	0	0	0	0	0	0	0	0
0	0	23	1	0	0	0	24	24	1	0	66	4	1	0	1	73	73.7	0	0	0	0	0	0	0	0	0	0
0	0	75	7	4	0	0	86	88	3	0	279	33	8	0	3	326	330.6	0	0	1	0	0	0	0	1	1	0
0	0	10	1	0	0	0	11	11	0	0	88	14	2	1	1	106	109.3	0	0	0	0	0	0	0	0	0	0
0	0	19	1	0	0	0	20	20	0	0	56	8	1	0	0	65	65.5	0	0	0	0	0	0	0	0	0	0
0	0	18	1	0	0	0	19	19	0	0	71	13	1	1	2	88	91.8	0	0	0	0	0	0	0	0	0	0
0	0	19	2	0	0	0	21	21	0	0	80	7	0	0	1	88	89	0	0	0	0	0	0	0	0	0	0
0	0	66	5	0	0	0	71	71	0	0	295	42	4	2	4	347	355.6	0	0	0	0	0	0	0	0	0	0
0	0	31	2	0	0	0	33	33	1	0	79	9	3	0	2	94	96.7	0	0	0	0	0	0	0	0	0	0
0	0	19	1	0	0	0	20	20	0	0	72	7	2	0	1	82	84	0	0	0	0	0	0	0	0	0	0
0	0	23	4	0	0	0	27	27	0	0	73	5	4	0	1	83	86	0	0	0	0	0	0	0	0	0	0
0	0	29	2	0	0	0	31	31	0	0	59	7	5	0	1	72	75.5	0	0	0	0	0	0	0	0	0	1
0	0	102	9	0	0	0	111	111	1	0	283	28	14	0	5	331	342.2	0	0	0	0	0	0	0	0	0	1
0	0	28	1	0	0	0	29	29	0	0	63	10	5	0	1	79	82.5	0	0	0	0	0	0	0	0	0	0
0	0	22	1	0	0	0	23	23	0	0	79	9	0	0	1	89	90	0	0	0	0	0	0	0	0	0	0
0	0	35	2	0	0	0	37	37	0	0	70	5	4	1	2	82	87.3	0	0	0	0	0	0	0	0	0	0
0	0	20	2	0	0	0	22	22	0	0	76	13	2	0	0	91	92	0	0	0	0	0	0	0	0	0	0
0	0	105	6	0	0	0	111	111	0	0	288	37	11	1	4	341	351.8	0	0	0	0	0	0	0	0	0	0
0	0	17	0	0	0	0	17	17	0	0	75	9	5	2	1	92	98.1	0	0	0	0	0	0	0	0	0	0
0	0	25	1	0	0	0	26	26	0	0	69	6	2	0	1	78	80	0	0	0	0	0	0	0	0	0	0
0	0	17	0	0	0	0	17	17	0	0	84	12	0	1	2	99	102.3	0	0	0	0	0	0	0	0	0	0
0	0	21	4	0	0	0	25	25	1	0	67	5	2	0	1	76	77.2	1	0	0	0	0	0	0	1	0.2	2
0	0	80	5	0	0	0	85	85	1	0	295	32	9	3	5	345	357.6	1	0	0	0	0	0	0	1	0.2	2
0	0	22	0	0	0	0	22	22	0	0	68	7	2	0	2	79	82	0	0	0	0	0	0	0	0	0	1
0	0	18	0	0	0	1	19	20	1	1	67	12	1	0	5	87	91.1	0	0	0	0	0	0	0	0	0	0
0	0	14	1	0	0	0	15	15	0	0	87	8	0	0	3	98	101	0	0	0	0	0	0	0	0	0	0
0	0	19	2	0	0	0	21	21	0	0	66	5	0	1	1	73	75.3	0	0	0	0	0	0	0	0	0	0
0	0	73	3	0	0	1	77	78	1	1	288	32	3	1	11	337	349.4	0	0	0	0	0	0	0	0	0	1
0	0	19	2	0	0	0	21	21	0	1	70	3	1	0	3	78	80.9	0	0	0	0	0	0	0	0	0	0
0	0	12	2	0	0	0	14	14	0	0	82	5	0	0	0	87	87	0	0	0	0	0	0	0	0	0	0
0	0	20	1	0	0	0	21	21	1	0	82	3	1	0	2	89	90.7	0	0	0	0	0	0	0	0	0	0
0	0	14	2	0	0	0	16	16	0	0	57	2	1	0	0	60	60.5	0	0	0	0	0	0	0	0	0	0
0	0	65	7	0	0	0	72	72	1	1	291	13	3	0	5	314	319.1	0	0	0	0	0	0	0	0	0	0
0	0	22	1	0	0	0	23	23	1	0	76	0	1	0	4	82	85.7	0	0	0	0	0	0	0	0	0	1
0	0	14	1	0	0	0	15	15	0	0	69	4	1	0	2	76	78.5	0	0	0	0	0	0	0	0	0	0
0	0	17	1	0	0	0	18	18	0	0	68	2	0	0	2	72	74	0	0	0	0	0	0	0	0	0	0
0	0	14	1	0	0	0	15	15	0	0	54	0	0	0	0	54	54	0	0	0	0	0	0	0	0	0	0
0	0	67	4	0	0	0	71	71	1	0	267	6	2	0	8	284	292.2	0	0	0	0	0	0	0	0	0	1
2	0	903	69	11	0	2	987	992.9	17	2	3451	304	81	12	72	3939	4052.3	1	0	45	7	1	0	0	54	53.7	6



C => B						C => C						C => D															
M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C
0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	12	0	1	0	1	14	15.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	3	0	0	2	21	23	0	0	
0	5	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	1	14	0	0	0	3	18	20.4	0	0	
0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	17	0	1	0	2	20	22.5	0	0	
0	12	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	1	59	3	2	0	8	73	81.4	0	0	
0	9	1	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	16	0	0	0	2	18	20	0	0	
0	13	1	1	0	0	15	15.5	0	0	0	0	0	0	0	0	0	0	52	0	1	0	1	54	55.5	1	0	
0	19	3	0	0	0	22	22	0	0	0	0	0	0	0	0	0	2	27	2	0	0	1	32	31.4	0	0	
0	29	1	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0	39	0	0	0	1	40	41	0	0	
0	70	6	1	0	0	77	77.5	0	0	0	0	0	0	0	0	0	2	0	134	2	1	0	5	144	147.9	1	0
0	24	1	0	0	0	26	25.2	0	0	0	0	0	0	0	0	0	0	33	1	0	0	0	34	34	0	0	
0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	22	5	2	0	1	30	32	0	0	
0	9	2	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	15	3	0	0	1	19	20	0	0	
0	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	23	0	2	0	1	26	28	0	0	
0	65	4	0	0	0	70	69.2	0	0	0	0	0	0	0	0	0	0	93	9	4	0	3	109	114	0	0	
0	12	1	0	0	0	13	13	0	0	0	0	0	0	0	0	0	0	26	2	0	0	0	28	28	0	0	
0	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	34	4	1	0	1	40	41.5	0	0	
0	16	1	1	0	0	18	18.5	0	0	0	0	0	0	0	0	0	0	18	1	0	0	0	19	19	0	0	
0	14	1	0	0	0	15	15	0	0	0	0	0	0	0	0	0	1	21	3	1	0	1	27	27.9	0	0	
0	59	3	1	0	0	63	63.5	0	0	0	0	0	0	0	0	0	0	1	99	10	2	0	2	114	116.4	0	0
0	16	2	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	26	1	0	0	0	27	27	0	0	
0	12	3	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	30	2	0	0	1	33	34	0	0	
0	13	2	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	21	8	1	0	0	30	30.5	0	0	
0	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	21	2	0	0	0	24	25	1	0	
0	58	8	0	0	0	66	66	0	0	0	0	0	0	0	0	0	0	98	13	1	0	2	114	116.5	1	0	
0	18	2	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	15	1	0	0	0	16	16	0	0	
0	15	2	0	0	0	17	17	0	0	0	0	0	0	0	0	0	1	19	2	0	1	1	24	25.5	0	0	
0	15	3	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	1	15	3	2	0	0	21	21.4	0	0
0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	19	1	0	0	1	21	22	0	0	
0	70	7	0	0	0	77	77	0	0	0	0	0	0	0	0	0	1	1	68	7	2	1	2	82	84.9	0	0
0	34	0	0	0	0	34	34	0	0	0	0	0	0	0	0	0	0	23	3	0	0	0	26	26	1	0	
0	19	1	1	0	0	21	21.5	0	0	0	0	0	0	0	0	0	0	27	2	2	1	1	33	36.3	0	0	
0	21	3	0	0	0	24	24	0	0	0	0	0	0	0	0	0	0	22	1	0	0	0	23	23	0	0	
0	24	0	0	0	0	25	24.2	0	0	1	0	0	0	0	1	1	0	23	0	0	0	1	24	25	1	0	
0	98	4	1	0	0	104	103.7	0	0	1	0	0	0	0	1	1	0	95	6	2	1	2	106	110.3	2	0	
0	25	1	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	22	2	2	0	0	26	27	0	0	
0	26	3	0	0	1	30	31	0	0	0	0	0	0	0	0	0	0	17	1	1	0	1	20	21.5	0	0	
0	27	2	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	18	2	0	1	0	21	22.3	0	0	
0	25	0	1	0	0	26	26.5	0	0	0	0	0	0	0	0	0	0	40	1	0	0	1	42	43	0	0	
0	103	6	1	0	1	111	112.5	0	0	0	0	0	0	0	0	0	0	97	6	3	1	2	109	113.8	0	0	
0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0	28	28	1	0	
0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	21	1	1	0	1	24	25.5	0	0	
0	18	0	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	23	2	0	0	0	25	25	0	0	
0	16	0	0	0	0	18	16.4	0	0	0	0	0	0	0	0	0	0	31	0	0	0	1	32	33	0	0	
0	71	0	0	0	0	73	71.4	0	0	0	0	0	0	0	0	0	0	103	3	1	0	2	109	111.5	1	0	
0	21	1	0	0	0	23	22.2	0	0	0	0	0	0	0	0	0	3	56	2	1	0	0	62	60.1	0	0	
0	21	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0	0	48	4	0	0	1	53	54	0	0	
0	24	1	0	0	0	25	25	0	0	0	0	0	0	0	0	0	1	29	3	0	0	1	34	34.2	0	0	
0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	14	2	0	0	1	17	18	0	0	
0	85	2	0	0	0	88	87.2	0	0	0	0	0	0	0	0	0	4	0	147	11	1	0	3	166	166.3	0	0
0	23	3	0	0	0	26	26	0	0	0	0	0	0	0	0	0	1	0	33	1	0	0	1	36	36.2	0	0
0	13	2	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	42	3	1	0	1	47	48.5	0	0	
0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	34	0	0	0	1	35	36	0	0	
0	21	1	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	32	1	0	0	1	34	35	0	0	
0	79	6	0	0	0	85	85	0	0	0	0	0	0	0	0	0	1	0	141	5	1	0	4	152	155.7	0	0
0	18	3	0	0	0	22	21.2	0	0	0	0	0	0	0	0	0	1	0	36	2	0	0	0	39	38.2	0	0
0	25	0	0	0	0	25	25	0	0	1	0	0	0	0	1	1	1	0	27	4	0	0	1	33	33.2	0	0
0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	29	2	1	0	0	32	32.5	0	0	
0	15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0	1	0	22	1	1	0	1	26	26.7	0	0
0	77	4	0	0	0	82	81.2	0	0	1	0	0	0	0	1	1	3	0	114	9	2	0	2	130	130.6	0	0
0	847	51	4	0	1	909	907.2	0	0	2	0	0	0	0	2	2	11	3	1248	84	22	3	37	1408	1449.3	5	0

D => A						D => B						D => C															
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR
0	0	0	0	0	0	0	1	0	19	8	2	1	2	33	36.5	0	0	4	1	0	0	0	5	5	0	0	0
0	0	0	0	0	0	0	0	0	21	5	0	0	3	29	32	0	0	11	0	0	0	1	12	13	0	0	0
3	1	0	0	0	4	4	0	0	32	10	3	0	4	49	54.5	1	0	11	3	0	0	1	16	16.2	0	0	0
1	0	2	0	0	3	4	1	0	46	11	0	0	4	62	65.2	0	0	13	1	0	0	1	15	16	0	0	0
4	1	2	0	0	7	8	2	0	118	34	5	1	13	173	188.2	1	0	39	5	0	0	3	48	50.2	0	0	0
1	0	0	0	0	1	1	0	0	48	6	1	0	3	58	61.5	0	0	35	2	1	0	0	38	38.5	0	0	0
0	1	0	0	0	2	1.2	0	0	42	2	2	1	0	47	49.3	0	0	45	1	0	0	2	48	50	0	0	0
0	0	0	0	0	0	0	0	0	54	10	3	0	1	68	70.5	0	0	46	0	0	0	0	46	46	0	0	0
2	1	0	0	0	3	3	2	0	62	6	3	0	2	75	76.9	0	0	14	2	0	0	1	17	18	0	0	0
3	2	0	0	0	6	5.2	2	0	206	24	9	1	6	248	258.2	0	0	140	5	1	0	3	149	152.5	0	0	0
3	0	0	0	0	3	3	1	0	50	8	3	0	1	63	64.7	0	0	19	1	1	0	1	22	23.5	0	0	0
2	1	0	0	0	3	3	0	0	61	7	2	1	1	72	75.3	0	0	13	2	0	0	1	16	17	0	0	0
1	1	3	0	0	5	6.5	3	0	39	9	0	0	1	52	50.6	0	0	5	2	0	0	0	7	7	0	0	0
3	1	1	0	0	5	5.5	1	0	57	6	4	0	0	68	69.2	1	0	11	1	1	0	1	15	15.7	0	0	0
9	3	4	0	0	16	18	5	0	207	30	9	1	3	255	259.8	1	0	48	6	2	0	3	60	63.2	0	0	0
0	1	0	0	0	1	1	0	0	54	4	3	0	1	62	64.5	1	0	6	3	1	0	1	12	12.7	0	0	0
3	1	0	0	0	4	4	0	0	61	3	1	1	0	66	67.8	0	0	15	0	0	0	0	15	15	0	0	0
2	2	1	0	0	5	5.5	1	0	55	3	1	0	1	61	61.7	0	0	6	0	0	0	1	7	8	0	0	0
2	0	0	0	0	2	2	0	0	53	6	1	0	0	60	60.5	0	0	11	2	1	0	0	14	14.5	0	0	0
7	4	1	0	0	12	12.5	1	0	223	16	6	1	2	249	254.5	1	0	38	5	2	0	2	48	50.2	0	0	0
1	2	0	0	0	3	3	1	0	57	6	2	1	0	67	68.5	0	0	5	2	0	0	1	8	9	0	0	0
1	1	0	0	0	2	2	0	0	53	10	0	0	1	64	65	0	0	4	2	0	0	0	6	6	0	0	0
0	0	0	0	0	0	0	0	0	44	3	2	0	0	49	50	0	0	9	2	0	0	0	11	11	0	0	0
0	0	0	0	0	1	0.2	1	1	55	5	1	0	1	64	64.1	0	0	11	0	0	0	1	12	13	0	0	0
2	3	0	0	0	6	5.2	2	1	209	24	5	1	2	244	247.6	0	0	29	6	0	0	2	37	39	0	0	0
0	0	0	0	0	0	0	0	0	69	4	1	0	1	75	76.5	0	0	8	0	0	0	0	8	8	0	0	0
0	0	0	0	0	0	0	2	0	55	6	1	0	0	64	62.9	0	0	6	2	1	0	1	10	11.5	0	0	0
0	0	0	0	0	0	0	0	0	61	8	0	0	1	70	71	0	0	8	0	0	1	0	9	10.3	0	0	0
0	0	0	0	0	0	0	0	0	76	9	2	0	0	87	88	0	0	14	0	0	0	1	15	16	0	0	0
0	0	0	0	0	0	0	2	0	261	27	4	0	2	296	298.4	0	0	36	2	1	1	2	42	45.8	0	0	0
0	0	0	0	0	1	0.2	0	0	64	6	1	1	1	73	75.8	0	0	7	2	0	0	0	9	9	0	0	1
0	0	0	0	0	0	0	0	0	74	4	1	0	0	79	79.5	0	0	14	0	0	0	1	15	16	0	0	0
0	0	0	0	0	0	0	1	0	54	6	4	0	1	66	68.2	0	0	12	0	1	0	0	13	13.5	0	0	0
0	0	0	0	0	1	0.2	1	0	53	4	4	1	0	63	65.5	0	0	10	0	0	0	1	11	12	0	0	0
0	0	0	0	0	2	0.4	2	0	245	20	10	2	2	281	289	0	0	43	2	1	0	2	48	50.5	0	0	1
0	0	0	0	0	0	0	0	0	43	5	0	0	1	49	50	0	0	9	1	1	0	0	11	11.5	0	0	0
0	0	0	0	0	0	0	1	0	58	10	3	0	1	73	74.7	0	0	15	0	0	0	1	16	17	0	0	0
0	0	0	0	0	0	0	0	0	70	3	1	0	1	75	76.5	1	0	7	0	0	0	0	8	7.2	0	0	1
0	0	0	0	0	0	0	1	0	56	4	1	0	1	63	63.7	0	0	9	2	2	0	2	15	18	0	0	0
0	0	0	0	0	0	0	2	0	227	22	5	0	4	260	264.9	1	0	40	3	3	0	3	50	53.7	0	0	1
0	0	0	0	0	1	0.2	0	0	50	5	0	0	2	57	59	0	0	6	0	0	0	0	6	6	0	0	0
0	0	0	0	0	0	0	0	0	59	4	1	0	0	64	64.5	0	0	18	3	0	0	1	22	23	0	0	0
0	0	0	0	0	0	0	0	0	61	2	0	0	1	64	65	0	0	41	2	1	0	0	44	44.5	0	0	0
0	0	0	0	0	0	0	0	0	55	3	0	0	3	61	64	1	0	36	1	0	0	1	39	39.2	0	0	0
0	0	0	0	0	1	0.2	0	0	225	14	1	0	6	246	252.5	1	0	101	6	1	0	2	111	112.7	0	0	0
0	0	0	0	0	0	0	0	1	64	5	0	0	0	70	69.4	1	0	13	1	0	0	0	15	14.2	0	0	0
0	0	0	0	0	0	0	0	0	71	5	1	0	2	79	81.5	0	0	6	1	0	0	1	8	9	0	0	1
0	0	0	0	0	0	0	0	0	66	2	0	0	2	70	72	0	0	8	2	0	0	0	10	10	0	0	0
0	0	0	0	0	0	0	0	0	77	4	0	0	1	82	83	0	0	10	0	1	0	1	12	13.5	0	0	0
0	0	0	0	0	0	0	0	1	278	16	1	0	5	301	305.9	1	0	37	4	1	0	2	45	46.7	0	0	1
0	0	0	0	0	0	0	0	0	58	4	0	0	0	62	62	0	0	16	0	1	0	1	18	19.5	0	0	1
0	0	0	0	0	0	0	0	0	69	4	0	0	1	74	75	0	1	16	0	0	0	1	18	18.4	0	0	0
0	0	0	0	0	0	0	1	0	67	3	0	0	1	72	72.2	0	0	12	0	0	0	0	12	12	0	0	1
0	0	0	0	0	0	0	0	0	84	2	0	0	0	86	86	0	0	32	0	0	0	3	35	38	0	0	0
0	0	0	0	0	0	0	1	0	278	13	0	0	2	294	295.2	0	1	76	0	1	0	5	83	87.9	0	0	2
0	0	0	0	0	0	0	2	0	70	0	0	0	1	73	72.4	0	0	16	3	0	0	2	21	23	0	0	0
0	0	0	0	0	0	0	0	0	72	3	0	0	0	75	75	0	0	23	0	0	0	2	25	27	0	0	0
0	0	0	0	0	0	0	0	0	70	2	0	0	1	73	74	0	0	20	0	0	0	1	21	22	0	0	0
0	0	0	0	0	0	0	1	0	82	2	1	0	0	86	85.7	0	0	30	0	0	0	2	32	34	0	0	0
0	0	0	0	0	0	0	3	0	294	7	1	0	2	307	307.1	0	0	89	3	0	0	7	99	106	0	0	0
25	13	7	0	0	50	49.5	22	2	2771	247	56	7	49	3154	3221.3	6	1	716	47	13	1	36	820	858.4	0	0	5







B => A										B => B										B => C									
PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU		
0	0	0	4	0	1	0	0	5	5.5	0	0	0	0	0	0	0	0	0	0	0	40	7	4	1	4	56	63.3		
0	0	0	2	1	2	0	0	5	6	0	0	0	0	0	0	0	0	0	0	1	0	94	4	0	0	2	101	102.2	
0	0	0	7	2	0	0	0	9	9	0	0	1	0	0	0	0	0	1	1	0	1	82	2	4	0	2	91	94.4	
0	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	2	0	69	4	5	0	2	82	84.9	
0	0	0	20	3	3	0	0	26	27.5	0	0	1	0	0	0	0	0	1	1	3	1	285	17	13	1	10	330	344.8	
0	0	0	12	1	1	0	0	14	14.5	0	0	0	0	0	0	0	0	0	0	0	0	98	11	4	1	3	117	123.3	
0	0	0	14	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	2	0	104	7	1	1	0	115	115.2	
0	0	0	17	1	2	0	0	20	21	0	0	0	0	0	0	0	0	0	0	1	0	131	6	3	1	5	147	154	
0	1	0	33	1	0	0	0	35	34.2	0	0	0	0	0	0	0	0	0	0	4	0	114	9	2	1	0	130	129.1	
0	1	0	76	3	3	0	0	83	83.7	0	0	0	0	0	0	0	0	0	0	7	0	447	33	10	4	8	509	521.6	
0	2	0	32	0	0	0	0	34	32.4	0	0	0	0	0	0	0	0	0	0	1	0	119	12	3	0	2	137	139.7	
0	0	0	15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	1	99	101		
0	0	0	19	1	1	0	0	21	21.5	0	0	0	0	0	0	0	0	0	0	0	0	85	4	1	0	1	91	92.5	
0	0	0	18	1	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	1	0	74	3	2	0	0	80	80.2	
0	2	0	84	3	1	0	0	90	88.9	0	0	0	0	0	0	0	0	0	0	2	0	368	25	8	0	4	407	413.4	
0	0	0	30	1	1	0	0	32	32.5	0	0	0	0	0	0	0	0	0	0	1	0	89	8	2	0	2	102	104.2	
0	0	0	30	6	0	0	0	36	36	0	0	0	0	0	0	0	0	0	0	0	0	96	8	5	0	2	111	115.5	
0	2	0	34	2	1	0	0	39	37.9	0	0	0	0	0	0	0	0	0	0	0	1	88	9	1	0	0	99	98.9	
0	1	0	27	1	0	0	0	29	28.2	0	0	0	0	0	0	0	0	0	0	0	0	90	10	0	0	2	102	104	
0	3	0	121	10	2	0	0	136	134.6	0	0	0	0	0	0	0	0	0	0	1	1	363	35	8	0	6	414	422.6	
0	0	0	13	3	1	0	0	17	17.5	0	0	0	0	0	0	0	0	0	0	1	0	89	14	4	0	0	108	109.2	
0.2	0	0	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0	0	0	1	0	79	11	4	0	2	97	100.2	
0	0	0	26	0	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	0	0	97	9	3	0	0	109	110.5	
0	0	0	19	3	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	1	0	92	6	1	0	1	101	101.7	
0.2	0	0	75	7	1	0	0	83	83.5	0	0	0	0	0	0	0	0	0	0	3	0	357	40	12	0	3	415	421.6	
0	1	0	19	4	1	0	0	25	24.7	0	0	0	0	0	0	0	0	0	0	1	0	96	15	2	1	1	116	118.5	
0	0	0	24	1	0	0	0	25	25	0	0	1	0	0	0	0	0	1	1	0	0	79	9	1	0	1	90	91.5	
0	0	0	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	0	86	14	1	1	1	103	105.8	
0	0	0	28	3	0	0	0	31	31	0	0	0	0	0	0	0	0	0	0	0	0	98	9	0	0	1	108	109	
0	1	0	87	8	1	0	0	97	96.7	0	0	1	0	0	0	0	0	1	1	1	0	359	47	4	2	4	417	424.8	
0	1	0	24	1	0	0	0	26	25.2	0	0	0	0	0	0	0	0	0	0	0	0	110	11	4	0	2	127	131	
0	0	0	13	0	2	0	0	15	16	0	0	0	0	0	0	0	0	0	0	0	0	88	10	2	0	1	101	103	
0	0	0	27	3	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	96	7	4	0	1	108	111	
0	1	0	26	1	0	0	0	28	27.2	0	0	0	0	0	0	0	0	0	0	0	0	88	9	5	0	1	103	106.5	
0	2	0	90	5	2	0	0	99	98.4	0	0	0	0	0	0	0	0	0	0	0	0	382	37	15	0	5	439	451.5	
0	2	0	20	1	1	0	0	24	22.9	0	0	0	0	0	0	0	0	0	0	0	0	98	11	4	0	1	114	117	
0	1	0	19	4	0	0	0	24	23.2	0	0	0	0	0	0	0	0	0	0	0	0	93	10	0	0	1	104	105	
0	0	0	16	3	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	1	109	4	4	1	2	121	125.7	
0	0	0	26	3	2	0	0	31	32	0	0	0	0	0	0	0	0	0	0	0	0	94	16	2	0	0	112	113	
0	3	0	81	11	3	0	0	98	97.1	0	0	0	0	0	0	0	0	0	0	0	1	394	41	10	1	4	451	460.7	
0	0	0	22	3	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	0	92	9	6	2	1	110	116.6	
0	0	0	21	1	1	0	0	23	23.5	0	0	0	0	0	0	0	0	0	0	0	0	94	7	1	0	1	103	104.5	
0	0	0	25	0	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	0	101	9	0	1	2	113	116.3	
0	0	0	27	1	0	0	0	28	28	0	0	0	0	0	0	0	0	0	0	1	0	89	8	2	0	1	101	102.2	
0	0	0	95	5	1	0	0	101	101.5	0	0	0	0	0	0	0	0	0	0	1	0	376	33	9	3	5	427	439.6	
0	0	0	26	0	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	0	0	92	7	2	0	3	104	108	
0	0	0	22	6	0	0	0	28	28	0	0	0	0	0	0	0	0	0	0	1	1	84	14	1	0	6	107	112.1	
0	0	0	36	2	0	0	0	38	38	0	0	0	0	0	0	0	0	0	0	0	0	101	8	0	0	2	111	113	
0	0	0	33	2	0	0	0	35	35	0	0	0	0	0	0	0	0	0	0	1	0	81	8	1	1	1	93	95	
0	0	0	117	10	0	0	0	127	127	0	0	0	0	0	0	0	0	0	0	2	1	358	37	4	1	12	415	428.1	
0	0	0	27	0	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	1	89	6	2	0	3	101	104.4	
0	0	0	17	2	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	0	0	93	7	0	0	0	100	100	
0	0	0	25	1	0	0	0	26	26	0	0	0	0	0	0	0	0	0	0	0	0	103	4	1	0	2	110	112.5	
0.2	0	0	21	2	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	76	5	0	0	1	82	83	
0.2	0	0	90	5	0	0	0	95	95	0	0	0	0	0	0	0	0	0	0	0	1	361	22	3	0	6	393	399.9	
0	0	0	22	1	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	0	0	93	1	0	0	3	97	100	
0	1	0	13	0	0	0	0	14	13.2	0	0	0	0	0	0	0	0	0	0	0	0	83	4	1	0	2	90	92.5	
0	2	0	18	1	0	0	0	21	19.4	0	0	0	0	0	0	0	0	0	0	0	0	84	3	0	0	2	89	91	
0	0	0	29	0	0	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	72	0	0	0	0	72	72	
0	3	0	82	2	0	0	0	87	84.6	0	0	0	0	0	0	0	0	0	0	0	0	332	8	1	0	7	348	355.5	
0.4	15	0	1018	72	17	0	0	1122	1118.5	0	0	2	0	0	0	0	0	2	2	20	5	4382	375	97	12	74	4965	5084.1	

C => A								C => B								C => C										
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
1	0	0	0	0	0	0	1	0.2	0	0	21	7	2	1	2	33	37.3	0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	1	1	0	0	20	6	0	0	3	29	32	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1	0	0	35	11	3	0	4	53	58.5	0	0	0	0	0	0	0	0	0
0	0	4	1	0	0	0	5	5	1	0	48	12	0	0	4	65	68.2	0	0	0	0	0	0	0	0	0
1	0	5	2	0	0	0	8	7.2	1	0	124	36	5	1	13	180	196	0	0	0	0	0	0	0	0	0
0	0	7	2	1	0	0	10	10.5	0	0	48	6	0	0	3	57	60	0	0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	2	2	0	0	52	2	3	1	0	58	60.8	0	0	0	0	0	0	0	0	0
0	0	9	1	0	0	0	10	10	0	0	64	10	3	0	1	78	80.5	0	0	0	0	0	0	0	0	0
0	0	7	2	0	0	0	9	9	0	0	81	6	3	0	2	92	95.5	0	0	0	0	0	0	0	0	0
0	0	24	6	1	0	0	31	31.5	0	0	245	24	9	1	6	285	296.8	0	0	0	0	0	0	0	0	0
1	0	17	2	0	0	0	20	19.2	1	1	55	10	3	0	1	71	72.1	0	0	0	0	0	0	0	0	0
0	0	12	1	0	0	0	13	13	0	0	64	6	2	1	1	74	77.3	0	0	1	0	0	0	0	1	1
0	0	13	4	0	0	0	17	17	2	0	36	6	0	0	1	45	44.4	0	0	1	0	0	0	0	1	1
0	0	17	2	1	0	0	20	20.5	1	0	50	6	3	0	0	60	60.7	0	0	1	0	0	0	0	1	1
1	0	59	9	1	0	0	70	69.7	4	1	205	28	8	1	3	250	254.5	0	0	3	0	0	0	0	3	3
0	0	14	1	0	0	0	15	15	0	0	56	3	3	0	1	63	65.5	0	0	0	0	0	0	0	0	0
0	0	23	1	0	0	0	24	24	0	1	54	2	1	1	0	59	60.2	0	0	0	0	0	0	0	0	0
1	0	17	1	0	0	0	19	18.2	1	0	51	4	2	0	1	59	60.2	0	0	0	0	0	0	0	0	0
0	0	15	2	0	0	0	17	17	0	0	56	5	1	0	0	62	62.5	0	0	0	0	0	0	0	0	0
1	0	69	5	0	0	0	75	74.2	1	1	217	14	7	1	2	243	248.4	0	0	0	0	0	0	0	0	0
0	0	20	2	0	0	0	22	22	0	0	54	3	2	1	0	60	62.3	0	0	0	0	0	0	0	0	0
1	0	18	3	0	0	0	22	21.2	0	0	46	10	0	0	1	57	58	0	0	0	0	0	0	0	0	0
1	0	10	0	0	0	0	11	10.2	0	0	45	5	2	0	0	52	53	0	0	0	0	0	0	0	0	0
0	0	16	1	0	0	0	17	17	0	1	57	6	1	0	1	66	66.9	0	0	0	0	0	0	0	0	0
2	0	64	6	0	0	0	72	70.4	0	1	202	24	5	1	2	235	240.2	0	0	0	0	0	0	0	0	0
0	0	20	1	0	0	0	21	21	0	0	67	6	1	0	1	75	76.5	0	0	0	0	0	0	0	0	0
0	0	20	0	0	0	0	20	20	0	0	53	7	1	0	0	61	61.5	0	0	0	0	0	0	0	0	0
0	0	18	3	0	0	0	21	21	1	0	57	8	0	0	1	67	67.2	0	0	0	0	0	0	0	0	0
0	0	19	2	0	0	0	21	21	0	0	74	6	2	0	0	82	83	0	0	0	0	0	0	0	0	0
0	0	77	6	0	0	0	83	83	1	0	251	27	4	0	2	285	288.2	0	0	0	0	0	0	0	0	0
0	0	20	1	1	0	0	22	22.5	0	0	79	4	0	1	1	85	87.3	0	0	0	0	0	0	0	0	0
0	0	20	1	0	0	0	21	21	0	0	76	3	2	0	0	81	82	0	0	0	0	0	0	0	0	0
0	0	12	3	1	0	0	16	16.5	1	0	62	8	3	0	1	75	76.7	0	0	0	0	0	0	0	0	0
1	0	15	2	0	0	0	18	17.2	1	0	60	4	3	1	0	69	71	0	0	0	0	0	0	0	0	0
1	0	67	7	2	0	0	77	77.2	2	0	277	19	8	2	2	310	317	0	0	0	0	0	0	0	0	0
0	0	11	1	0	0	0	12	12	0	0	58	5	1	0	1	65	66.5	0	0	0	0	0	0	0	0	0
0	0	12	3	1	0	0	16	16.5	0	0	70	5	0	0	2	77	79	0	0	0	0	0	0	0	0	0
1	0	20	1	0	0	0	22	21.2	0	0	82	8	3	0	1	94	96.5	0	0	0	0	0	0	0	0	0
0	0	25	0	0	0	0	25	25	0	0	54	4	2	0	1	61	63	0	0	0	0	0	0	0	0	0
1	0	68	5	1	0	0	75	74.7	0	0	264	22	6	0	5	297	305	0	0	0	0	0	0	0	0	0
0	0	18	1	0	0	0	19	19	0	0	54	3	0	0	2	59	61	0	0	0	0	0	0	0	0	0
0	0	21	0	0	0	0	21	21	0	0	55	3	1	0	0	59	59.5	0	0	0	0	0	0	0	0	0
0	0	16	0	0	0	0	16	16	1	0	61	2	0	0	1	65	65.2	0	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	2	0	52	3	0	0	3	60	61.4	0	0	0	0	0	0	0	0	0
0	0	69	1	0	0	0	70	70	3	0	222	11	1	0	6	243	247.1	0	0	0	0	0	0	0	0	0
1	0	15	0	0	0	0	16	15.2	0	1	76	6	0	0	0	83	82.4	0	0	0	0	0	0	0	0	0
0	0	21	1	0	0	0	22	22	0	0	67	3	1	0	2	73	75.5	0	0	0	0	0	0	0	0	0
0	0	21	1	0	0	0	22	22	0	0	68	1	0	0	2	71	73	0	0	0	0	0	0	0	0	0
0	0	23	0	0	0	0	23	23	0	0	80	4	0	0	1	85	86	0	0	0	0	0	0	0	0	0
1	0	80	2	0	0	0	83	82.2	0	1	291	14	1	0	5	312	316.9	0	0	0	0	0	0	0	0	0
0	0	18	2	0	0	0	20	20	0	0	63	4	0	0	0	67	67	0	0	0	0	0	0	0	0	0
0	0	12	1	0	0	0	13	13	0	1	69	4	0	0	1	75	75.4	0	0	1	0	0	0	0	1	1
0	0	16	1	0	0	0	17	17	1	0	72	3	0	0	1	77	77.2	0	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	0	0	92	4	0	0	0	96	96	1	0	0	0	0	0	0	1	0.2
0	0	60	4	0	0	0	64	64	1	1	296	15	0	0	2	315	315.6	1	0	1	0	0	0	0	2	1.2
0	0	12	1	0	0	0	13	13	3	0	76	2	0	0	1	82	80.6	0	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	0	0	82	3	0	0	0	85	85	0	0	0	0	0	0	0	0	0
1	0	11	0	0	0	0	12	11.2	1	0	77	2	0	0	1	81	81.2	0	0	0	0	0	0	0	0	0
0	0	12	1	0	0	0	13	13	0	0	85	2	1	0	0	88	88.5	0	0	0	0	0	0	0	0	0
1	0	49	2	0	0	0	52	51.2	4	0	320	9	1	0	2	336	335.3	0	0	0	0	0	0	0	0	0
9	0	691	55	5	0	0	760	755.3	17	5	2914	243	55	7	50	3291	3361	1	0	4	0	0	0	0	5	4.2





B => A									B => B									B => C										
PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	
0	0	0	1	1	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0	0	48	7	1	1	5	62	68.8		
0	0	0	9	1	0	0	2	12	14	0	0	0	0	0	0	0	0	0	0	91	6	0	0	1	98	99		
0	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	85	2	2	0	5	95	100.4		
0	0	0	6	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	68	1	6	0	4	80	86.2		
0	0	0	21	3	1	0	2	27	29.5	0	0	0	0	0	0	0	0	0	0	1	1	292	16	9	1	15	335	354.4
0	0	0	8	1	1	0	1	11	12.5	0	0	0	0	0	0	0	0	0	0	96	5	2	1	4	110	114.7		
0	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	108	5	1	1	1	116	118.8		
0	1	0	13	1	1	0	1	17	17.7	0	0	0	0	0	0	0	0	0	0	107	6	2	1	5	122	128.5		
0	0	0	22	0	1	0	0	23	23.5	0	0	0	0	0	0	0	0	0	0	95	5	0	1	1	103	104.5		
0	1	0	58	2	3	0	2	66	68.7	0	0	0	0	0	0	0	0	0	0	4	0	406	21	5	4	11	451	466.5
0	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	113	9	1	0	2	126	127.7		
0	0	0	10	2	1	0	0	13	13.5	0	0	0	0	0	0	0	0	0	0	93	9	4	0	2	108	112		
0	0	0	7	0	0	0	1	8	9	0	0	0	0	0	0	0	0	0	0	81	8	1	0	1	91	92.5		
0	0	0	15	0	1	0	0	16	16.5	0	0	0	0	0	0	0	0	0	0	65	2	1	0	1	69	70.5		
0	0	0	44	2	2	0	1	49	51	0	0	0	0	0	0	0	0	0	0	1	0	352	28	7	0	6	394	402.7
0	0	0	15	3	0	0	1	19	20	0	0	0	0	0	0	0	0	0	0	77	4	1	0	1	84	84.7		
0	0	0	24	1	1	0	1	27	28.5	0	0	0	0	0	0	0	0	0	0	81	10	5	0	1	97	100.5		
0	0	0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	59	9	0	0	1	69	70		
0	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	1	0	77	11	2	0	2	93	95.4
0	0	0	76	4	1	0	2	83	85.5	0	0	0	0	0	0	0	0	0	0	1	1	294	34	8	0	5	343	350.6
0	0	0	12	0	0	0	1	13	14	0	0	0	0	0	0	0	0	0	0	99	13	3	0	0	117	116.9		
0	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	1	0	75	10	2	0	3	91	94.2
0	0	0	19	1	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	80	17	3	0	0	100	101.5		
0	0	0	6	1	0	0	1	8	9	0	0	0	0	0	0	0	0	0	0	1	0	81	5	1	0	1	89	89.7
0	0	0	46	2	0	0	2	50	52	0	0	0	0	0	0	0	0	0	0	4	0	335	45	9	0	4	397	402.3
0	0	0	14	1	0	0	0	15	15	0	0	0	0	0	0	0	0	0	0	1	0	90	14	2	1	1	109	111.5
0	2	0	16	0	0	0	0	18	16.4	0	0	0	0	0	0	0	0	0	0	0	0	60	9	1	1	1	72	74.8
0	0	1	11	3	0	0	1	16	16.4	0	0	0	0	0	0	0	0	0	0	0	0	74	13	3	1	1	92	95.8
0	0	0	9	1	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	88	8	0	0	1	97	98
0	2	1	50	5	0	0	1	59	57.8	0	0	0	0	0	0	0	0	0	0	1	0	312	44	6	3	4	370	380.1
0	0	0	11	0	1	0	1	13	14.5	0	0	0	0	0	0	0	0	0	0	1	0	97	9	2	0	2	111	113.2
0	0	0	12	0	1	0	0	13	13.5	0	0	0	0	0	0	0	0	0	0	1	0	87	8	3	1	2	102	106
0	0	0	13	2	0	0	1	16	17	0	0	0	0	0	0	0	0	0	0	0	0	80	5	4	0	0	89	91
0	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	78	6	3	0	1	88	90.5
0	0	0	43	2	2	0	2	49	52	0	0	0	0	0	0	0	0	0	0	2	0	342	28	12	1	5	390	400.7
0	0	0	12	0	1	0	1	14	15.5	0	0	0	0	0	0	0	0	0	0	0	0	69	9	8	0	1	87	92
0	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	89	9	1	0	2	101	103.5
0	0	0	14	0	1	0	1	16	17.5	0	0	0	0	0	0	0	0	0	0	0	1	78	6	3	2	1	91	95.5
0	0	0	18	1	0	0	0	19	19	0	0	0	0	0	0	0	0	0	0	1	0	98	14	2	0	1	116	117.2
0	0	0	53	1	2	0	2	58	61	0	0	0	0	0	0	0	0	0	0	1	1	334	38	14	2	5	395	408.2
0	0	0	16	1	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	86	7	5	2	1	101	107.1
0	0	0	16	1	0	0	1	18	19	0	0	0	0	0	0	0	0	0	0	1	0	77	7	3	0	1	89	90.7
0	0	0	18	3	0	0	1	22	23	0	0	0	0	0	0	0	0	0	0	0	0	90	10	0	1	1	102	104.3
0	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	82	7	2	0	2	93	96
0	0	0	62	5	0	0	2	69	71	0	0	0	0	0	0	0	0	0	0	1	0	335	31	10	3	5	385	398.1
0	0	0	18	1	0	0	1	20	21	0	0	0	1	0	0	0	1	1	4	0	109	7	3	0	1	124	123.3	
0	0	0	29	2	0	0	0	31	31	0	0	0	0	0	0	0	0	0	0	1	1	83	16	1	0	6	108	113.1
0	0	0	18	2	0	0	1	21	22	0	0	0	0	0	0	0	0	0	0	1	0	100	9	0	0	3	113	115.2
0	0	0	13	1	0	0	1	15	16	0	0	0	0	0	0	0	0	0	0	0	0	68	6	0	1	1	76	78.3
0	0	0	78	6	0	0	3	87	90	0	0	0	1	0	0	0	1	1	6	1	360	38	4	1	11	421	429.9	
0	0	0	16	1	0	0	1	18	19	0	0	0	0	0	0	0	0	0	0	1	1	92	4	1	0	2	101	102.1
0	0	0	25	2	0	0	0	27	27	0	0	0	0	0	0	0	0	0	0	0	0	95	5	1	0	2	103	105.5
0	0	0	17	1	0	0	1	19	20	0	0	0	0	0	0	0	0	0	0	0	0	98	3	1	0	2	104	106.5
0.2	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	1	0	67	5	1	0	0	74	73.7
0.2	0	0	78	4	0	0	2	84	86	0	0	0	0	0	0	0	0	0	0	2	1	352	17	4	0	6	382	387.8
0	0	0	17	0	0	0	1	18	19	0	0	0	0	0	0	0	0	0	0	2	0	97	2	1	0	4	106	108.9
0	0	0	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	1	0	77	9	1	0	3	91	93.7
0	0	0	11	1	0	0	1	13	14	0	0	0	0	0	0	0	0	0	0	0	0	84	4	1	0	1	90	91.5
0	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	1	0	61	1	1	0	1	65	65.7
0	0	0	57	1	0	0	2	60	62	0	0	0	0	0	0	0	0	0	0	4	0	319	16	4	0	9	352	359.8
0.2	3	1	666	37	11	0	23	741	766.5	0	0	0	1	0	0	0	1	1	28	5	4033	356	92	15	86	4615	4741.1	

C => A								C => B								C => C										
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	7	1	0	0	0	8	8	1	0	22	9	2	1	1	36	38.5	0	0	0	0	0	0	0	0	0
0	0	19	0	2	0	0	21	22	0	0	32	6	0	0	4	42	46	0	0	1	0	0	0	0	1	1
0	0	6	0	1	0	0	7	7.5	1	0	47	15	3	0	5	71	76.7	0	0	0	0	0	0	0	0	0
0	0	12	0	0	0	0	12	12	1	0	63	11	2	0	5	82	87.2	0	0	1	0	0	0	0	1	1
0	0	44	1	3	0	0	48	49.5	3	0	164	41	7	1	15	231	248.4	0	0	2	0	0	0	0	2	2
0	0	26	2	0	1	0	29	30.3	0	0	81	8	2	0	3	94	98	0	0	0	0	0	0	0	0	0
0	0	10	1	0	0	0	11	11	1	0	96	6	2	1	2	108	111.5	0	0	0	0	0	0	0	0	0
0	0	10	0	1	0	0	11	11.5	0	0	89	7	3	0	1	100	102.5	0	0	0	0	0	0	0	0	0
0	0	15	2	0	0	0	17	17	2	0	80	10	3	0	3	98	100.9	0	0	0	0	0	0	0	0	0
0	0	61	5	1	1	0	68	69.8	3	0	346	31	10	1	9	400	412.9	0	0	0	0	0	0	0	0	0
0	0	19	0	0	0	0	19	19	1	0	74	10	4	0	2	91	94.2	0	0	0	0	0	0	0	0	0
0	0	16	1	0	0	0	17	17	0	0	74	10	2	1	2	89	93.3	0	0	0	0	0	0	0	0	0
0	0	5	2	1	0	0	8	8.5	3	0	48	12	4	0	1	68	68.6	0	0	0	0	0	0	0	0	0
0	0	17	0	0	0	0	17	17	2	0	68	9	5	0	1	85	86.9	0	0	0	0	0	0	0	0	0
0	0	57	3	1	0	0	61	61.5	6	0	264	41	15	1	6	333	343	0	0	0	0	0	0	0	0	0
1	0	23	2	0	0	0	26	25.2	1	0	62	7	4	0	2	76	79.2	0	0	0	0	0	0	0	0	0
0	0	31	0	1	0	0	32	32.5	0	0	81	5	1	1	0	88	89.8	0	0	0	0	0	0	0	0	0
0	0	16	4	1	0	0	21	21.5	1	0	61	4	3	0	2	71	73.7	0	0	0	0	0	0	0	0	0
0	0	23	5	0	0	0	28	28	0	0	65	8	1	0	0	74	74.5	0	0	0	0	0	0	0	0	0
1	0	93	11	2	0	0	107	107.2	2	0	269	24	9	1	4	309	317.2	0	0	0	0	0	0	0	0	0
0	0	17	3	1	0	0	21	21.5	1	0	63	10	2	1	1	78	80.5	0	0	0	0	0	0	0	0	0
0	0	16	0	0	0	0	16	16	0	0	60	13	0	0	1	74	75	0	0	0	0	0	0	0	0	0
0	0	13	1	0	0	0	14	14	0	0	54	5	2	0	0	61	62	0	0	0	0	0	0	0	0	0
0	0	20	1	0	0	0	21	21	2	1	71	6	1	0	2	83	83.3	0	0	0	0	0	0	0	0	0
0	0	66	5	1	0	0	72	72.5	3	1	248	34	5	1	4	296	300.8	0	0	0	0	0	0	0	0	0
0	0	22	2	0	0	0	24	24	0	0	71	3	1	0	1	76	77.5	0	0	0	0	0	0	0	0	0
1	0	12	2	2	0	0	17	17.2	2	0	60	8	2	0	1	73	73.4	0	0	0	0	0	0	0	0	0
0	0	13	0	0	0	0	13	13	0	0	71	9	0	1	1	82	84.3	0	0	0	0	0	0	0	0	0
0	0	17	4	0	0	0	21	21	0	0	87	8	2	0	1	98	100	0	0	0	0	0	0	0	0	0
1	0	64	8	2	0	0	75	75.2	2	0	289	28	5	1	4	329	335.2	0	0	0	0	0	0	0	0	0
0	0	14	1	0	0	0	15	15	1	0	70	10	1	1	1	84	86	0	0	0	0	0	0	0	0	0
0	0	17	2	1	0	0	20	20.5	0	0	86	4	1	0	1	92	93.5	0	0	0	0	0	0	0	0	0
0	0	10	3	0	0	0	13	13	1	0	66	7	5	0	1	80	82.7	0	0	0	0	0	0	0	0	0
0	0	11	2	0	0	0	13	13	2	0	67	4	4	1	1	79	81.7	0	0	0	0	0	0	0	0	0
0	0	52	8	1	0	0	61	61.5	4	0	289	25	11	2	4	335	343.9	0	0	0	0	0	0	0	0	0
1	0	13	0	0	0	0	14	13.2	0	0	53	7	1	0	1	62	63.5	0	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	1	1	80	8	3	0	2	95	97.1	0	0	0	0	0	0	0	0	0
0	0	14	2	0	0	0	16	16	1	0	70	4	1	0	1	77	77.7	0	0	0	0	0	0	0	0	0
0	0	22	1	0	0	0	23	23	1	0	65	6	3	0	3	78	81.7	0	0	0	0	0	0	0	0	0
1	0	63	3	0	0	0	67	66.2	3	1	268	25	8	0	7	312	320	0	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	1	0	56	5	0	0	3	65	67.2	0	0	0	0	0	0	0	0	0
1	0	16	2	1	0	0	20	19.7	0	0	84	7	1	0	0	92	92.5	0	0	0	0	0	0	0	0	0
0	0	11	1	0	0	0	12	12	0	0	102	3	1	0	1	107	108.5	0	0	0	0	0	0	0	0	0
0	0	17	3	0	0	0	20	20	1	0	93	4	0	0	4	102	105.2	0	0	0	0	0	0	0	0	0
1	0	58	6	1	0	0	66	65.7	2	0	335	19	2	0	8	366	373.4	0	0	0	0	0	0	0	0	0
0	0	15	1	0	0	0	16	16	1	1	71	5	0	0	0	78	76.6	0	0	0	0	0	0	0	0	0
0	0	31	0	0	0	0	31	31	0	0	75	6	1	0	3	85	88.5	0	0	0	0	0	0	0	0	0
0	0	15	3	0	0	0	18	18	0	0	71	5	0	0	2	78	80	0	0	0	0	0	0	0	0	0
0	0	30	0	0	0	0	30	30	0	0	90	3	1	0	2	96	98.5	0	0	0	0	0	0	0	0	0
0	0	91	4	0	0	0	95	95	1	1	307	19	2	0	7	337	343.6	0	0	0	0	0	0	0	0	0
0	0	21	0	0	0	0	21	21	0	0	75	5	1	0	1	82	83.5	0	0	0	0	0	0	0	0	0
0	0	19	2	0	0	0	21	21	0	1	88	5	0	0	2	96	97.4	0	0	0	0	0	0	0	0	0
0	0	26	0	0	0	0	26	26	1	0	78	3	0	0	1	83	83.2	0	0	0	0	0	0	0	0	0
0	0	23	0	0	0	0	23	23	1	0	116	3	0	0	3	123	125.2	0	0	0	0	0	0	0	0	0
0	0	89	2	0	0	0	91	91	2	1	357	16	1	0	7	384	389.3	0	0	0	0	0	0	0	0	0
0	0	26	0	0	0	0	26	26	1	0	89	2	0	0	3	95	97.2	0	0	0	0	0	0	0	0	0
0	0	21	1	0	0	0	22	22	0	0	92	3	1	0	2	98	100.5	0	0	0	0	0	0	0	0	0
0	0	17	1	0	0	0	18	18	0	0	88	2	0	0	2	92	94	0	0	0	0	0	0	0	0	0
0	0	15	0	0	0	0	15	15	1	0	116	2	0	0	2	121	122.2	0	0	0	0	0	0	0	0	0
0	0	79	2	0	0	0	81	81	2	0	385	9	1	0	9	406	413.9	0	0	0	0	0	0	0	0	0
4	0	817	58	12	1	0	892	896.1	33	4	3521	312	76	8	84	4038	4141.6	0	0	2	0	0	0	0	2	2





**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 7  
**Location:** James's Terrace/The Mall R106  
**Date:** Tue 10-Jan-2023

TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
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14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	
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15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	



B => C										B => D										C => A																	
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU		P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU		P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C								
0	0	5	0	1	0	1	7	8.5		0	0	11	2	3	0	0	16	17.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	18	2	0	0	1	21	22		0	0	29	0	0	0	0	29	29		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	15	4	1	0	0	20	20.5		0	0	19	1	3	0	0	23	24.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	12	0	2	0	1	15	17		0	0	16	1	3	0	0	20	21.5		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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0	0	50	4	0	0	1	55	56		0	0	24	4	1	1	0	30	31.8		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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1	0																																				



C => B						C => C						C => D																
M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	
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0	0	0	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	1	114	3	2	1	5	126	132.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	119	6	0	1	0	131	128.3	0	0	
0	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0	0	8	421	21	4	3	8	465	472.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	124	7	2	0	2	137	138.4	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	85	2	1	0	1	89	90.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	76	2	1	0	1	81	81.7	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93	10	3	0	2	108	111.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	72	10	2	0	0	87	85.8	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	319	36	5	0	5	370	373.7	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	66	6	1	0	2	76	77.7	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	8	3	0	0	97	98.5	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	307	26	9	0	4	349	355.1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	79	14	2	1	0	98	98.7	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	5	1	0	1	80	81.5	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	7	2	0	1	85	87	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	7	1	0	1	96	97.5	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	334	32	8	3	5	383	395.1	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	5	2	0	3	98	102	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	98	7	0	0	2	109	109.4	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	8	0	1	1	100	102.3	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	352	39	3	1	12	411	422.8	0	0	
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	4	0	0	0	77	77	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	3	1	0	2	90	92.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	3	0	0	1	77	78	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	318	14	3	0	6	341	348.5	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	2	0	0	3	91	94	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	60	3	1	0	2	68	68.9	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	78	3	0	0	2	84	85.2	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	0	0	0	0	77	77	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	301	8	1	0	7	320	325.1	0	0	
0	0	0	0	0	0	0	2	0.4	0	0	0	0	0	0	0	0	0	36	4	3973	326	69	11	74	4493	4584.6	0	0

D => A					D => B					D => C																	
CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	18	7	2	1	2	30	34.3	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	4	0	0	3	28	31	0	0	0
0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	38	9	3	0	4	55	59.7	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	48	14	0	0	4	67	70.2	0	0	0
1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	2	0	125	34	5	1	13	180	195.2	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	46	7	0	0	3	56	59	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	3	3	1	0	58	60.8	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	10	3	0	1	75	77.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	74	5	3	0	2	84	87.5	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	232	25	9	1	6	273	284.8	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	52	9	3	0	1	67	68.1	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	60	5	2	1	1	69	72.3	0	0	1
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	35	7	0	0	1	45	44.4	0	0	0
2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	1	0	44	6	3	0	0	54	54.7	0	0	0
5	1	0	0	0	6	6	0	0	0	0	0	0	0	0	0	4	1	191	27	8	1	3	235	239.5	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	3	0	1	58	60.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	52	4	1	1	0	59	60.2	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	0	48	2	2	0	1	54	55.2	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	50	4	1	0	0	55	55.5	0	0	1
5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	1	1	204	10	7	1	2	226	231.4	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	5	2	1	0	60	62.3	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	43	8	0	0	1	52	53	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	45	5	1	0	0	51	51.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	54	7	1	0	1	64	64.9	0	0	0
3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	194	25	4	1	2	227	231.7	0	0	0
0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	64	4	1	0	1	70	71.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	51	6	1	0	0	58	58.5	0	0	1
2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	1	0	54	7	0	0	1	63	63.2	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	5	2	0	0	75	76	0	0	0
3	2	0	0	0	5	5	0	0	0	0	0	0	0	0	0	1	0	237	22	4	0	2	266	269.2	0	0	1
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	72	5	0	1	1	79	81.3	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	71	3	1	0	0	75	75.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	60	8	4	0	1	74	76.2	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	53	5	3	1	0	63	65	0	0	0
4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	2	0	256	21	8	2	2	291	298	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	55	4	1	0	1	61	62.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	67	6	0	0	2	75	77	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	79	7	3	0	1	90	92.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	48	4	1	0	1	54	55.5	0	0	0
4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	249	21	5	0	5	280	287.5	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	51	4	0	0	2	57	59	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	49	4	1	0	0	54	54.5	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	60	2	0	0	1	64	64.2	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	47	2	0	0	3	54	55.4	0	0	0
4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	3	0	207	12	1	0	6	229	233.1	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	72	7	0	0	0	80	79.4	0	0	1
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	60	3	1	0	2	66	68.5	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	70	1	0	0	2	73	75	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	0	79	5	0	0	1	86	86.2	0	0	0
5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	1	1	281	16	1	0	5	305	309.1	0	0	1
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	64	3	0	0	0	67	67	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	67	4	0	0	1	73	73.4	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	65	4	0	0	1	71	71.2	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	4	0	0	0	95	95	0	0	0
2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	1	1	287	15	0	0	2	306	306.6	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	70	2	0	0	1	74	74.2	0	0	0
1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	74	3	0	0	0	78	77.2	0	0	0
3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	1	0	70	3	0	0	1	75	75.2	0	0	0
5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	75	2	1	0	0	78	78.5	0	0	0
10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	3	0	289	10	1	0	2	305	305.1	0	0	0
48	4	0	0	0	52	52	0	0	0	0	0	0	0	0	0	18	5	2752	238	53	7	50	3123	3191.2	0	0	4









C => A									C => B									C => C								
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	10	10	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	22	0	0	0	0	22	22	0	0	13	0	0	0	0	0	13	13	0	0	0	0	0	0	0	0
0	0	36	0	0	0	0	36	36	0	0	33	0	0	0	0	0	33	33	0	0	0	0	0	0	0	0
0	0	62	0	0	0	0	62	62	0	0	50	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0
0	0	27	1	0	0	1	29	30	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	37	1	0	0	1	39	40	0	0	13	0	0	0	0	0	13	13	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	22	0	0	0	0	22	22	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	16	0	0	0	0	16	16	0	0	4	1	0	0	0	0	5	5	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	10	1	0	0	0	11	11	0	0	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0
0	0	5	2	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	19	0	0	0	0	19	19	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	36	2	0	0	0	38	38	0	0	13	0	0	0	0	0	13	13	0	0	0	0	0	0	0	0
0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	4	1	0	0	0	5	5	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	30	1	0	0	0	31	31	0	0	13	2	0	0	0	0	15	15	0	0	0	0	0	0	0	0
0	0	3	1	0	0	0	4	4	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	47	4	0	0	0	51	51	0	0	16	2	0	0	0	0	18	18	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	2	1	0	0	0	3	3	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	22	1	0	0	0	23	23	0	0	12	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	3	1	0	0	0	4	4	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	8	0	0	0	0	8	8	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	24	1	0	0	0	25	25	0	0	12	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	10	10	0	0	6	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	8	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0
0	0	27	0	0	0	0	27	27	0	0	18	0	0	0	0	0	18	18	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	4	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	0	0	7	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0
0	0	14	0	0	0	0	14	14	0	0	19	0	0	0	0	0	19	19	0	0	0	0	0	0	0	0
0	0	327	10	0	0	1	338	339	0	0	170	3	0	0	0	0	173	173	0	0	0	0	0	0	0	0





**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 9  
**Location:** R106 Coast Rd/Grove Rd  
**Date:** Tue 10-Jan-2023

TIME	A => A							TOT	PCU	A => B							TOT	PCU	A => C							TOT	
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV		
07:00	0	0	0	0	0	1	0	1	2.3	0	0	18	4	2	0	3	27	31	0	0	5	0	0	0	0	5	
07:15	0	0	0	0	0	0	0	0	0	0	0	33	4	1	0	4	42	46.5	0	0	4	0	0	0	0	4	
07:30	0	0	0	0	0	0	0	0	0	1	0	38	13	4	0	4	60	65.2	0	0	10	3	0	0	0	13	
07:45	0	0	0	0	0	0	0	0	0	0	0	57	11	2	0	5	75	81	0	0	7	2	0	0	0	9	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2.3</b>	<b>1</b>	<b>0</b>	<b>146</b>	<b>32</b>	<b>9</b>	<b>0</b>	<b>16</b>	<b>204</b>	<b>223.7</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	
08:00	0	0	0	0	0	0	0	0	0	0	0	55	6	0	0	2	63	65	0	0	11	1	0	0	0	12	
08:15	0	0	0	0	0	0	0	0	0	0	0	72	3	3	1	2	81	85.8	0	0	12	2	0	0	0	14	
08:30	0	0	0	0	0	0	0	0	0	0	0	91	11	3	0	1	106	108.5	0	0	22	1	0	0	0	23	
08:45	0	0	1	0	0	0	0	1	1	0	0	101	10	6	0	2	119	124	0	0	41	1	1	0	1	44	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>319</b>	<b>30</b>	<b>12</b>	<b>1</b>	<b>7</b>	<b>369</b>	<b>383.3</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>93</b>	
09:00	0	0	0	0	0	0	0	0	0	0	2	1	77	14	3	0	1	98	98.3	1	0	15	2	0	0	0	18
09:15	0	0	0	0	0	0	0	0	0	0	0	70	9	2	1	1	83	86.3	0	0	15	0	0	0	0	15	
09:30	0	0	3	0	0	0	0	3	3	1	0	47	8	0	0	1	57	57.2	1	0	6	1	0	0	0	8	
09:45	0	0	0	1	0	0	0	1	1	1	0	55	6	2	0	0	64	64.2	0	0	10	0	1	0	0	11	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>249</b>	<b>37</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>302</b>	<b>306</b>	<b>2</b>	<b>0</b>	<b>46</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>52</b>	
10:00	0	0	1	0	0	0	0	1	1	1	0	70	3	1	0	2	77	78.7	0	0	11	1	1	0	0	13	
10:15	0	0	0	0	0	0	0	0	0	2	1	64	4	4	1	0	76	77.1	0	0	9	0	0	0	0	9	
10:30	0	0	1	0	0	0	0	1	1	1	0	72	7	2	0	2	84	86.2	0	0	13	1	0	0	0	14	
10:45	0	0	0	0	0	0	0	0	0	0	0	61	10	1	0	0	72	72.5	0	0	10	1	0	0	0	11	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>267</b>	<b>24</b>	<b>8</b>	<b>1</b>	<b>4</b>	<b>309</b>	<b>314.5</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>47</b>	
11:00	0	0	2	0	0	0	0	2	2	0	1	69	7	2	1	1	81	83.7	0	0	10	1	0	0	0	11	
11:15	0	0	1	0	0	0	0	1	1	1	0	65	10	1	0	2	79	80.7	0	0	5	1	0	0	0	6	
11:30	0	0	0	0	0	0	0	0	0	0	0	65	4	1	0	0	70	70.5	0	0	9	2	1	0	0	12	
11:45	0	0	1	0	0	0	0	1	1	1	0	74	8	2	0	1	86	87.4	0	0	9	3	0	0	0	12	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>273</b>	<b>29</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>316</b>	<b>322.3</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>41</b>	
12:00	0	0	0	0	0	0	0	0	0	0	0	80	6	1	0	1	88	89.5	0	0	10	0	0	0	0	10	
12:15	0	0	1	0	0	0	0	1	1	1	0	75	6	1	0	1	83	84.5	0	0	9	0	0	0	0	9	
12:30	0	0	1	0	0	0	0	1	1	1	0	85	8	0	0	1	95	95.2	0	0	13	0	0	0	0	13	
12:45	0	0	2	0	0	0	0	2	2	0	0	80	6	1	0	0	87	87.5	0	0	15	2	1	0	0	18	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>320</b>	<b>26</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>353</b>	<b>356.7</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>50</b>	
13:00	0	0	0	0	0	0	0	0	0	3	0	83	6	0	1	2	95	95.9	0	0	22	0	0	0	0	22	
13:15	0	0	2	0	0	0	0	2	2	0	0	87	3	0	0	0	90	90	0	0	19	0	1	0	0	20	
13:30	0	0	0	0	0	0	0	0	0	1	0	86	4	4	0	2	97	100.2	0	0	13	1	0	0	0	14	
13:45	0	0	0	0	0	0	0	0	0	0	0	84	9	3	1	0	97	99.8	0	0	11	0	0	0	0	11	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>340</b>	<b>22</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>379</b>	<b>385.9</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>67</b>	
14:00	0	0	0	0	0	0	0	0	0	1	0	64	5	0	0	2	72	73.2	0	0	17	1	0	0	0	18	
14:15	0	0	1	0	0	0	0	1	1	0	0	76	6	0	0	2	84	86	0	0	18	0	0	0	0	18	
14:30	0	0	1	0	0	0	0	1	1	1	0	109	11	4	0	2	127	130.2	0	0	17	1	0	0	0	18	
14:45	0	0	1	0	0	0	0	1	1	0	0	70	7	0	0	1	78	79	0	0	13	1	0	0	0	14	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>319</b>	<b>29</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>361</b>	<b>368.4</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>68</b>	
15:00	0	0	1	0	0	0	0	1	1	0	0	91	6	1	0	2	100	102.5	0	0	11	0	0	0	0	11	
15:15	0	0	2	0	0	0	0	2	2	0	0	80	3	2	0	1	86	88	0	0	9	1	0	0	0	10	
15:30	0	0	0	0	0	0	0	0	0	1	0	94	5	0	0	2	102	103.2	0	0	8	1	0	0	0	9	
15:45	0	0	0	0	0	0	0	0	0	2	0	86	2	0	0	4	94	96.4	0	0	9	0	0	0	0	9	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>351</b>	<b>16</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>382</b>	<b>390.1</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>	
16:00	0	0	0	0	0	0	0	0	0	1	1	88	7	0	0	0	97	95.6	0	0	7	0	0	0	0	7	
16:15	0	0	0	0	0	0	0	0	0	0	0	84	5	1	0	3	93	96.5	0	0	10	0	0	0	0	10	
16:30	0	0	0	0	0	0	0	0	0	0	0	98	2	0	0	3	103	106	0	0	13	0	0	0	0	13	
16:45	0	0	1	0	0	0	0	1	1	0	0	101	6	0	0	1	108	109	0	0	18	1	0	0	0	19	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>371</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>401</b>	<b>407.1</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49</b>	
17:00	0	0	0	0	0	0	0	0	0	0	0	99	4	0	0	1	104	105	0	0	12	1	0	0	0	13	
17:15	0	0	0	0	0	0	0	0	0	0	0	91	4	0	0	1	96	97	0	0	11	2	0	0	0	13	
17:30	0	0	0	0	0	0	0	0	0	2	0	94	8	0	0	2	106	106.4	0	0	16	0	0	0	0	16	
17:45	0	0	0	0	0	0	0	0	0	1	0	133	4	0	0	0	138	137.2	0	0	12	1	0	0	0	13	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>417</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>444</b>	<b>445.6</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>	
18:00	0	0	0	0	0	0	0	0	0	1	0	109	3	0	0	2	115	116.2	0	0	15	0	0	0	0	15	
18:15	0	0	1	0	0	0	0	1	1	0	0	88	3	0	0	0	91	91	1	0	11	1	0	0	0	13	
18:30	0	0	0	0	0	0	0	0	0	1	0	96	4	0	0	2	103	104.2	0	0	6	0	0	0	0	6	
18:45	0	0	2	0	0	0	0	2	2	0	0	101	4	1	0	0	106	106.5	0	0	9	0	0	0	0	9	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>39</b>															



C => A								C => B								C => C										
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	2	0	0	0	0	2	2	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	6	1	1	0	0	8	8.5	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	19	1	1	0	0	21	21.5	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	10	10	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	8	0	0	0	0	8	8	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
1	0	16	1	0	1	0	19	19.5	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	12	1	0	0	0	13	13	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0
1	0	46	2	0	1	0	50	50.5	0	0	21	1	0	0	0	22	22	0	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	10	1	0	0	0	11	11	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	4	1	0	0	0	5	5	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	24	2	0	0	0	26	26	0	0	29	0	0	0	0	29	29	0	0	0	0	0	0	0	0	0
0	0	6	1	0	0	0	7	7	0	0	6	2	1	0	0	9	9.5	0	0	0	0	0	0	0	0	0
0	0	11	0	1	0	0	12	12.5	0	0	3	2	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	1	7	3	0	0	0	11	10.4	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	10	1	0	0	0	11	11	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	1	34	5	1	0	0	41	40.9	0	0	20	4	1	0	0	25	25.5	0	0	0	0	0	0	0	0	0
0	0	8	1	0	0	0	9	9	0	0	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	6	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0
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0	0	34	1	1	0	0	36	36.5	0	0	28	3	0	0	0	31	31	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	3	1	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	7	1	1	0	0	9	9.5	0	0	0	0	0	0	0	0	0
0	0	5	1	0	0	0	6	6	0	0	5	0	1	0	0	6	6.5	0	0	0	0	0	0	0	0	0
0	0	13	0	0	0	0	13	13	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	25	1	0	0	0	26	26	0	0	19	2	2	0	0	23	24	0	0	0	0	0	0	0	0	0
0	0	10	1	0	0	0	11	11	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	10	1	2	0	0	13	14	1	0	18	1	0	0	0	20	19.2	0	0	0	0	0	0	0	0	0
0	0	9	0	0	0	0	9	9	0	0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0
0	0	36	2	2	0	0	40	41	1	0	36	2	0	0	0	39	38.2	0	0	0	0	0	0	0	0	0
1	0	14	1	0	0	0	16	15.2	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	10	10	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	1	14	0	1	0	0	16	15.9	0	0	31	0	0	0	0	31	31	0	0	0	0	0	0	0	0	0
0	0	11	1	0	0	0	12	12	1	0	21	0	0	0	0	22	21.2	0	0	0	0	0	0	0	0	0
1	1	49	2	1	0	0	54	53.1	1	0	62	0	0	0	0	63	62.2	0	0	0	0	0	0	0	0	0
0	0	6	2	0	0	0	8	8	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	4	2	0	0	0	6	6	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0
0	0	6	1	0	0	0	7	7	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	8	1	0	0	0	9	9	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
0	0	24	6	0	0	0	30	30	0	0	40	0	0	0	0	40	40	0	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	10	6	0	0	0	16	16	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	8	2	0	0	0	10	10	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0
0	0	31	8	0	0	0	39	39	0	0	43	0	0	0	0	43	43	0	0	0	0	0	0	0	0	0
0	0	8	0	0	0	0	8	8	0	0	16	1	1	0	0	18	18.5	0	0	0	0	0	0	0	0	0
0	0	9	1	0	0	0	10	10	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	15	0	0	0	0	15	15	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	13	1	0	0	0	14	14	0	0	21	0	0	0	0	21	21	0	0	0	0	0	0	0	0	0
0	0	45	2	0	0	0	47	47	0	0	58	2	1	0	0	61	61.5	0	0	0	0	0	0	0	0	0
0	0	15	0	0	0	0	15	15	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0
0	0	5	1	0	0	0	6	6	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0
0	0	5	2	0	0	0	7	7	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	10	0	0	0	0	10	10	0	0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0
0	0	35	3	0	0	0	38	38	0	0	53	0	0	0	0	53	53	0	0	0	0	0	0	0	0	0
2	2	402	35	6	1	0	448	449.5	2	0	417	14	4	0	0	437	437.4	0	0	0	0	0	0	0	0	0





**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 10  
**Location:** The Rise/Grove Rd  
**Date:** Tue 10-Jan-2023

TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	7	0	0	0	0	7
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	7	0	0	0	0	7
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	
08:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	12	0	0	0	0	12	
08:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	23	1	0	0	0	24	
08:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4	5.3	0	0	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>10.3</b>	<b>1</b>	<b>0</b>	<b>35</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>37</b>	
09:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	3	0	0	0	3	
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>14</b>	
10:00	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	6	0	0	0	0	6	
10:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	11	1	0	0	0	12	
10:30	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	7	0	0	0	7	
10:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	14	0	0	0	0	14	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>39</b>	
11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	9	0	0	0	0	9	
11:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	3	0	0	0	3	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	4	
11:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	7	0	0	0	0	7	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>23</b>	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	
12:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	8	0	0	0	0	8	
12:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	3	0	0	0	0	3	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	
13:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	
13:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	
13:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0	0	0	0	0	0	0	
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
14:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	
14:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	
14:30	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	4	3.9	0	0	0	0	0	0	0	
14:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	3	0	1	0	0	4	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>9.9</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	
15:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	9	0	0	0	0	9	
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	
15:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	22	0	0	0	23	
15:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	17	0	0	0	0	17	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>57</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>59</b>	
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	11	0	0	0	0	11	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	2	1	0	0	19		
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	26	3	0	0	0	29	
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	25	1	0	0	0	26	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>78</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>85</b>	
17:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	22	0	0	0	0	22	
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	12	0	0	0	0	12	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	23	
17:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	17	0	0	0	0	17	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>	
18:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	28	0	0	0	0	28	
18:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	11	0	0	0	0	11	
18:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	15	0	0	0	0	15	
18:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	13	1	0	0	0	14	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>68</b>	
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>56</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>61</b>	<b>62.2</b>	<b>1</b>	<b>1</b>	<b>432</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>449</b>	

PCU	B => A							TOT	PCU	B => B							TOT	PCU	B => C							TOT	PCU	
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			
1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	9	
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	
23	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	20	20	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	12	
24	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	20	20.5	20	20.5	
0	0	0	43	0	0	0	0	43	43	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0.4	2	0.4
0.2	0	0	75	0	0	0	1	76	77	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	3
36.2	0	0	119	0	0	0	1	120	121	0	0	0	0	0	0	0	0	0	0	0	0	0	2	37	35.9	37	35.9	
0	0	0	15	0	0	0	0	15	15	0	0	3	0	0	0	0	0	0	0	0	0	0	3	1	1	1	1	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	14	14	14	14	14
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	10.5	10	10.5	10	10.5
6	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	9	9.5	9	9.5	9
14	0	0	16	0	0	0	0	16	16	0	0	3	0	0	0	0	0	0	0	0	0	3	34	35	34	35	34	35
6	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	10	10	9	10	9
12	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	9	9	9
7	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6	7	7	7	7	7
14	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10	10
39	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	32	36	35	36	35	36
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13.2	10	13.2	10	13.2
3	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10	10
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	13	13	13	13	13
7	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	13	13	13	13	13
23	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	42	50	49.2	50	49.2	50
6	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7	7	7	7
5	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15	17	17	17	17	17
8	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	12	12	12
3	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	8	9	9	9	9	9
22	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	42	45	45	45	45	45
0	0	0	2	2	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	11	0	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0	1	0.2	0
0	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	38	2	0	0	0	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.2	0	1	0.2	0
0	0	0	9	1	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
0	0	0	10	1	0	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	30	2	0	0	0	32	32	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2.2	3	2.2	3	2.2
4.5	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7	7	7	7
4.5	0	0	51	4	0	0	0	55	55	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10.2	11	10.2	11	10.2
9	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	9	9	9
10	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	12	12	12
22.4	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	24.2	25	24.2	25	24.2	25
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	28	28	28	28	28
58.4	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	1	74	73.2	74	73.2	74	73.2
11	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	14	14	14	14
19.5	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	14	14	14	14
29	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11	12	12	12	12	12
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	16	16	16	16	16
85.5	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	53	56	56	56	56	56
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19	19	19	19	19
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	18	18	18	18	18
23	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	13	13	13	13
17	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	17	18	18	18	18	18
74	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	65	68	68	68	68	68
28	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	16	16	16	16	16	16
11	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	13	13	13	13
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	6	6
14	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	9	9	9	9	9	9
68	0	0	2	0	0	0	0	2	2	0	0	2	0	0	0	0	0	0	0	0	0	2	44	44	44	44	44	44
448.6	0	0	258	6	0	0	1	265	266	0	0	5	0	0	0	0	0	0	0	0	0	5	475	472.7	475	472.7	475	472.7

C => A								C => B								C => C										
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	0	0	3	0	0	0	0	3	3	0	0	0	0	1	0	0	1	1.5
0	0	4	0	0	0	0	4	4	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	8	0	0	0	0	8	8	0	0	11	0	0	0	0	11	11	0	0	0	0	1	0	0	1	1.5
0	0	2	0	0	0	0	2	2	0	0	6	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	5	0	0	1	0	6	7.3	0	0	4	0	0	0	0	4	4	0	0	1	0	0	0	0	1	1
0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	13	0	0	1	0	14	15.3	0	0	10	1	0	0	0	11	11	0	0	1	0	0	0	0	1	1
0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	9	0	1	0	0	10	10.5	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	9	0	1	0	0	10	10.5	0	0	0	0	0	0	0	0	0
0	0	13	0	0	0	0	13	13	0	0	30	0	2	0	0	32	33	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	8	1	0	0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	6	2	0	0	0	8	8	0	0	1	0	0	0	0	1	1
0	0	3	1	0	0	0	4	4	0	0	9	1	0	0	0	10	10	0	0	2	0	0	0	0	2	2
0	0	3	0	0	0	0	3	3	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0
0	0	17	1	0	0	0	18	18	0	0	32	4	0	0	0	36	36	0	0	3	0	0	0	0	3	3
0	0	1	0	0	0	0	1	1	0	0	3	1	1	0	0	5	5.5	0	0	0	0	0	0	0	0	0
0	0	4	0	0	0	0	4	4	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
0	0	15	0	0	0	0	15	15	0	0	23	1	1	0	0	25	25.5	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5	5	0	0	1	0	0	0	0	1	1
0	0	0	1	0	0	0	1	1	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	4	1	0	0	0	5	5	0	0	11	0	1	0	0	12	12.5	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	6	2	0	0	0	8	8	0	0	26	1	1	0	0	28	28.5	0	0	1	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2	0	0	0	0	2	2	1	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	1	0	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0	0
0	0	3	0	0	0	0	3	3	0	0	13	0	0	0	0	13	13	0	0	2	0	0	0	1	3	4
0	0	6	0	0	0	0	6	6	1	0	13	0	0	0	0	14	13.2	0	0	2	0	0	0	1	3	4
0	1	5	0	0	0	0	6	5.4	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	16	0	0	0	0	16	16	0	0	2	0	0	0	0	2	2
0	0	6	0	0	0	0	6	6	0	0	13	0	0	0	0	13	13	0	0	2	0	0	0	0	2	2
0	0	5	0	0	0	0	5	5	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	1	22	0	0	0	0	23	22.4	0	0	41	0	0	0	0	41	41	0	0	4	0	0	0	0	4	4
0	0	4	0	0	0	0	4	4	0	0	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0
0	0	7	1	1	0	0	9	9.5	0	0	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0
0	0	6	0	0	0	0	6	6	0	0	11	2	0	0	0	13	13	0	0	0	0	0	0	0	0	0
0	0	9	0	0	0	0	9	9	0	0	11	1	0	0	0	12	12	0	0	1	0	0	0	0	1	1
0	0	26	1	1	0	0	28	28.5	0	0	55	3	0	0	0	58	58	0	0	1	0	0	0	0	1	1
0	0	15	0	0	0	0	15	15	0	0	12	1	1	0	0	14	14.5	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0	0
0	0	5	0	0	0	0	5	5	0	0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0
0	0	15	0	0	0	0	15	15	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0
0	0	42	0	0	0	0	42	42	0	0	55	1	1	0	0	57	57.5	0	0	0	0	0	0	0	0	0
0	0	11	0	0	0	0	11	11	0	1	20	0	0	0	0	21	20.4	0	0	1	0	0	0	0	1	1
0	0	11	0	0	0	0	11	11	0	0	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0
0	0	7	0	0	0	0	7	7	0	0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0
0	0	8	0	0	0	0	8	8	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0
0	0	37	0	0	0	0	37	37	0	1	62	0	0	0	0	63	62.4	0	0	1	0	0	0	0	1	1
0	1	207	4	1	1	0	214	215.2	2	1	358	11	5	0	0	377	377.3	0	0	13	0	1	0	1	15	16.5





**IDASO**

Survey Name: 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
 Site: Site 11  
 Location: Church Rd/Grove Rd  
 Date: Tue 10-Jan-2023

TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1	2	0	0	15	
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	19	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1.5	1	0	18	3	0	0	22	
07:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	20	0	0	0	3	23	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	1	0	68	4	2	0	4	79
08:00	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	42	3	0	0	0	45	
08:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	84	4	0	0	2	90	
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	2	0	0	0	0	95	
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71	3	0	0	0	1	75	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	1	289	12	0	0	3	305	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	3	2	0	1	75		
09:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	30	4	1	0	1	36	
09:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	21	3	0	0	0	24	
09:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2.5	0	20	1	2	0	1	24	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	4	4.5	2	138	11	5	0	3	159	
10:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	21	6	1	0	1	29	
10:15	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	26	2	0	0	0	28	
10:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	21	4	0	0	1	26	
10:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	16	3	1	0	0	20	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	84	15	2	0	2	103	
11:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	0	20	5	0	0	1	26	
11:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	18	4	1	0	0	23	
11:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	24	6	1	0	0	32	
11:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	35	2	1	0	1	39	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	7	7.5	1	97	17	3	0	2	120	
12:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	22	1	0	0	0	23	
12:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	22	2	1	0	0	26	
12:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	28	1	0	1	0	31	
12:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	29	4	0	0	1	34	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	1	101	8	1	1	2	114	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	4	0	0	0	0	41	
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	3	1	0	0	1	32	
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	4	1	0	0	0	39	
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	1	0	0	1	0	48	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	143	12	2	0	2	160	
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	3	0	0	0	0	45	
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	1	0	0	1	1	32	
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	2	0	0	0	0	50	
14:45	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	34	2	2	0	2	41	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	2	152	8	2	0	3	168	
15:00	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	21	
15:15	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	34	3	0	0	1	38	
15:30	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	59	1	1	0	0	61	
15:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	62	5	0	0	1	68	
<b>H/TOT</b>	0	0	1	0	0	0	0	1	1	0	0	9	0	0	0	0	9	9	0	176	9	1	0	2	188	
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	32	1	0	0	0	33	
16:15	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	1	21	4	0	0	2	28	
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	17	3	0	0	0	20	
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	34	3	1	0	1	39	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	1	104	11	1	0	3	120	
17:00	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	7	7	0	30	2	1	0	1	34	
17:15	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	32	2	0	0	1	35	
17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	33	1	0	0	0	34	
17:45	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	8	0	45	1	0	0	3	49	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	21	1	0	0	0	22	22	0	140	6	1	0	5	152	
18:00	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	38	0	0	0	2	40	
18:15	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	33	1	0	0	2	36	
18:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	34	2	0	0	1	38	
18:45	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	30	0	0	0	1	31	
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	22	22	1	135	3	0	0	6	145	
<b>12 TOT</b>	0	0	1	0	0	0	0	1	1	0	0	94	3	3	0	0	100	101.5	11	1	1627	116	20	1	37	1813

PCU	B => A							TOT	PCU	B => B							TOT	PCU	B => C							TOT	PCU		
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV			P/C	M/C	CAR	LGV	OGV1	OGV2	PSV				
16	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3
20	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	11	11
21.2	0	0	3	0	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	12
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7	7	
83.2	0	0	6	0	1	0	0	7	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	33	33	33
45	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	13	13	
92	0	0	4	0	1	0	0	5	5.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	28	28	28	
94.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	0.4
307.2	0	0	6	0	1	0	0	7	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	43	41.4	41.4	41.4
75.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37.5	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	19	19	19	19
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	15	15.5	15.5	15.5
26	0	0	2	0	1	0	0	3	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	13	13	13	13
162.9	0	0	2	1	1	0	0	4	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	47	47.5	47.5	47.5
30.5	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	11	12	12	12
28	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	17	17	17	17
27	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	15	15	15	15
20.5	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	18	18	18
106	0	0	14	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	61	62	62	62
27	0	0	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	19	18.2	18.2	18.2	18.2
23.5	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	10	10
31.7	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	15	15	15	15
40.5	0	0	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	22	22	22	22
122.7	0	0	10	2	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	66	65.2	65.2	65.2	65.2
23	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	12	12
27.5	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	19	19	19	19
31.5	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	18	18	18
35	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	9	9	9	9
117	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	58	58	58	58
41	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
33.5	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162.2	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
44.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43.4	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	18	19	19	19
169.8	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	18	19	19	19
21	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	18	18.5	18.5	18.5
39	1	0	3	0	0	0	0	4	3.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	28	28	28	28	
61.5	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	48	46.6	46.6	46.6	46.6
69	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	46	46	46	46	46
190.5	1	0	18	0	0	0	0	19	18.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	140	139.1	139.1	139.1	139.1
33	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	25	25	25
29.2	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	31	31.5	31.5	31.5
20	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	44	44	44	44
40.5	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	40	40	40	40
122.7	0	0	22	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	140	140.5	140.5	140.5
35.5	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	36	36	36	36
36	0	0	6	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	27	27	27	27
34	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	34	34	34	34
52	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	32	32	32	32
157.5	0	0	24	1	0	0	0	25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127	129	129	129	129
42	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	50	50	50
38	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21	21	21
38.2	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21	21	21
32	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	22	22	22	22
150.2	0	0	20	0	0	0	0	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	114	114	114	114
1851.9	1	0	138	4	3	0	0	146	146.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	850	849.7	849.7	849.7	849.7

C => A								C => B								C => C										
P/C	M/C	CAR	LG	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LG	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LG	OGV1	OGV2	PSV	TOT	PCU
0	0	13	0	2	0	1	16	18	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	24	1	0	0	2	27	29	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
1	0	20	1	0	0	3	25	27.2	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0
0	0	33	1	0	0	2	36	38	0	0	10	0	0	1	0	11	12.3	0	0	0	0	0	0	0	0	0
1	0	90	3	2	0	8	104	112.2	0	0	22	0	0	1	0	23	24.3	0	0	0	0	0	0	0	0	0
0	0	42	3	0	0	2	47	49	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0
0	0	87	1	0	0	1	89	90	0	0	18	0	0	0	0	18	18	0	0	0	0	0	0	0	0	0
1	0	86	5	0	0	1	93	93.2	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
1	0	101	4	0	0	1	107	107.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	316	13	0	0	5	336	339.4	0	0	34	0	0	0	0	34	34	0	0	0	0	0	0	0	0	0
1	0	89	1	0	0	0	91	90.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	44	6	2	0	2	54	57	0	0	10	1	1	0	0	12	12.5	0	0	0	0	0	0	0	0	0
1	0	27	3	0	0	0	31	30.2	0	0	15	1	0	0	0	16	16	0	0	0	0	0	0	0	0	0
0	0	43	1	1	0	1	46	47.5	0	0	12	3	0	0	0	15	15	0	0	0	0	0	0	0	0	0
2	0	203	11	3	0	3	222	224.9	0	0	37	5	1	0	0	43	43.5	0	0	0	0	0	0	0	0	0
1	0	44	6	0	0	0	51	50.2	0	0	11	1	0	0	0	12	12	0	0	0	0	0	0	0	0	0
0	0	44	6	2	0	1	53	55	0	0	14	2	0	0	0	16	16	0	0	0	0	0	0	0	0	0
0	0	34	2	1	0	0	37	37.5	0	0	11	1	0	0	0	12	12	0	0	0	0	0	0	0	0	0
0	0	34	3	0	0	1	38	39	0	0	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0	0
1	0	156	17	3	0	2	179	181.7	0	0	45	4	0	0	0	49	49	0	0	0	0	0	0	0	0	0
0	0	34	3	0	0	0	37	37	0	0	6	1	0	0	0	7	7	0	0	0	0	0	0	0	0	0
0	0	46	7	0	0	1	54	55	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
0	0	35	8	1	0	0	44	44.5	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0
1	0	35	2	0	0	1	39	39.2	0	0	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0
1	0	150	20	1	0	2	174	175.7	0	0	36	1	0	0	0	37	37	0	0	0	0	0	0	0	0	0
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2	0	35	3	0	1	1	42	42.7	0	0	4	0	1	0	0	5	5.5	0	0	0	0	0	0	0	0	0
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0	0	33	2	0	0	1	36	37	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
2	1	126	12	2	1	2	146	148.1	0	0	26	2	1	0	0	29	29.5	0	0	0	0	0	0	0	0	0
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0	0	55	3	3	1	1	63	66.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	47	2	0	0	0	49	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	45	2	0	0	1	49	49.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	209	14	3	1	2	231	234.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	51	2	0	0	0	53	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	51	1	1	0	1	54	55.5	0	0	12	0	0	0	1	13	14	0	0	0	0	0	0	0	0	0
0	0	217	13	3	1	3	237	242.8	0	0	12	0	0	0	1	13	14	0	0	0	0	0	0	0	0	0
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0	0	42	2	1	0	1	46	47.5	0	0	25	0	0	0	0	25	25	0	0	0	0	0	0	0	0	0
1	0	36	2	0	0	0	39	38.2	0	0	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0	0
3	0	60	2	0	0	1	66	64.6	0	0	14	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0
4	0	180	6	1	0	2	193	192.3	0	1	67	0	0	0	0	68	67.4	0	0	0	0	0	0	0	0	0
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1	0	69	1	0	0	1	72	72.2	0	0	24	1	1	0	0	26	26.5	0	0	0	0	0	0	0	0	0
0	0	49	8	0	0	1	58	59	0	0	15	2	0	0	0	17	17	0	0	0	0	0	0	0	0	0
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3	0	237	20	1	0	3	264	265.1	0	0	88	4	1	0	0	93	93.5	0	0	0	0	0	0	0	0	0
0	0	45	5	0	0	1	51	52	0	0	26	0	1	0	0	27	27.5	0	0	0	0	0	0	0	0	0
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0	0	52	0	0	0	1	53	54	0	0	15	0	0	0	0	15	15	0	0	0	0	0	0	0	0	0
1	0	52	1	0	0	1	55	55.2	0	0	41	0	0	0	0	41	41	0	0	1	0	0	0	0	1	1
1	0	206	9	1	0	4	221	224.7	0	0	93	0	1	0	0	94	94.5	0	0	1	0	0	0	0	1	1
2	0	46	4	0	0	0	52	50.4	0	1	24	0	0	0	0	25	24.4	0	0	0	0	0	0	0	0	0
2	0	47	3	0	0	1	53	52.4	0	0	27	0	0	0	0	27	27	0	0	0	0	0	0	0	0	0
0	0	45	1	1	0	1	48	49.5	0	0	19	0	0	0	0	19	19	0	0	0	0	0	0	0	0	0
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5	0	182	8	2	0	2	199	198	0	1	99	0	0	0	0	100	99.4	0	0	0	0	0	0	0	0	0
24	1	2272	146	22	3	38	2506	2539.1	0	2	559	16	4	1	1	583	586.1	0	0	1	0	0	0	0	1	1





**IDASO**

**Survey Name:** 003 (23) 22718 MALAHIDE TRAFFIC SURVEY V2  
**Site:** Site 12  
**Location:** Church Rd/St Andrews N.S  
**Date:** Tue 10-Jan-2023

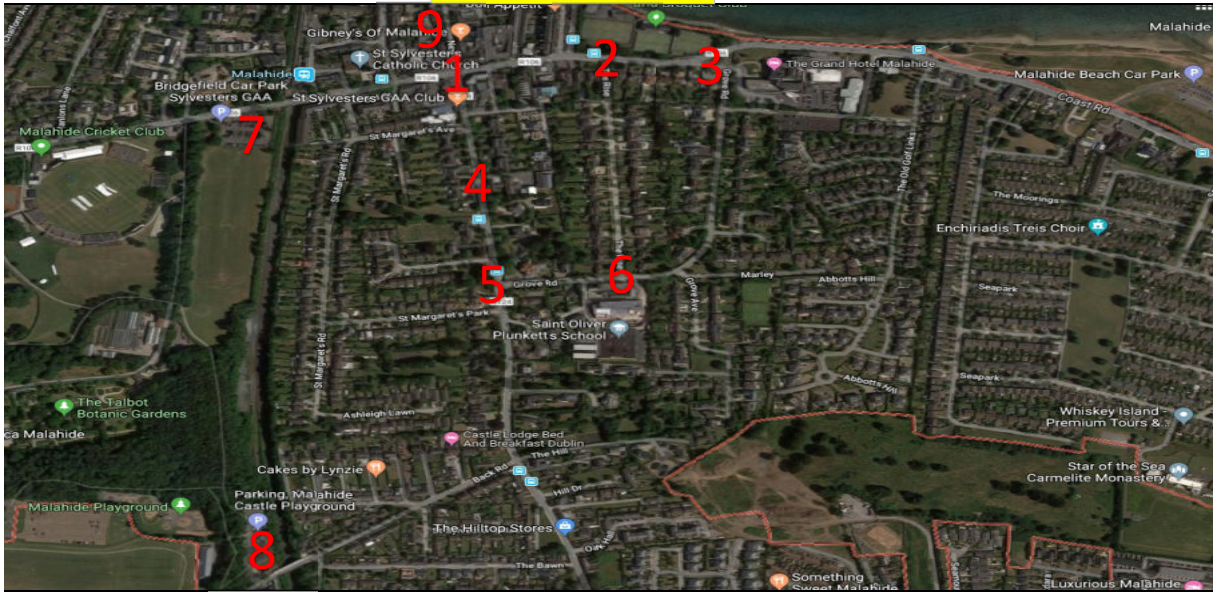
TIME	A => A								A => B								A => C									
	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1	2	0	0	14
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	1	19
07:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	20	1	1	0	1	24
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	1	0	0	2	24
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>70</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>81</b>	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	2	1	0	0	53	
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	3	0	0	2	91	
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	94	2	0	0	0	97	
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	3	0	0	1	58	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>284</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>299</b>	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	48	3	2	0	1	56	
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	5	1	0	1	30	
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	3	0	0	0	24	
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	2	3	0	1	28	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>114</b>	<b>13</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>138</b>	
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	7	1	0	1	32	
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	3	0	0	0	29	
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	4	0	0	1	31	
10:45	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	24	3	1	0	0	28	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>17</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>120</b>	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	5	1	0	1	27	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	4	1	0	0	27	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	30	6	1	0	0	38	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	3	1	0	1	42	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>109</b>	<b>18</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>134</b>	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	1	0	0	0	21	
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	2	1	0	1	27	
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	30	1	0	1	0	33	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	4	0	0	1	32	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>100</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>113</b>	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	5	0	0	0	43	
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	1	1	0	1	32	
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	5	1	0	0	40	
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	37	2	0	0	1	41	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>138</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>156</b>	
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	36	2	1	0	0	40	
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	36	1	0	0	1	39	
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	2	0	0	0	49	
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	3	2	0	2	31	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>142</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>159</b>	
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	22	
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	2	0	0	1	41	
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	1	1	0	0	64	
15:45	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	62	5	0	0	1	68	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>184</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>195</b>	
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16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	25	4	0	0	2	32	
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	15	3	0	0	0	18	
16:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	31	2	1	0	1	35	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>1</b>	<b>104</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>119</b>	
17:00	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	32	2	1	0	1	36	
17:15	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4	3.2	0	29	1	0	0	1	31	
17:30	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	36	1	0	0	0	37	
17:45	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	11	0	49	0	0	0	3	52	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>25.2</b>	<b>0</b>	<b>146</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>156</b>	
18:00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	44	0	0	0	2	46	
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	2	40	
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	38	0	0	0	1	40	
18:45	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7	7	0	34	0	0	0	2	36	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>11</b>	<b>1</b>	<b>154</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>162</b>	
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>46</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>46.2</b>	<b>11</b>	<b>1</b>	<b>1644</b>	<b>112</b>	<b>25</b>	<b>1</b>	<b>38</b>	<b>1832</b>



C => A								C => B								C => C										
P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU	P/C	M/C	CAR	LGV	OGV1	OGV2	PSV	TOT	PCU
0	0	14	0	2	0	1	17	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	25	1	0	0	2	28	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	25	1	1	0	3	31	33.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	32	1	0	0	2	35	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	96	3	3	0	8	111	119.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	41	4	1	0	2	48	50.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	82	1	1	0	1	85	86.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	73	5	0	0	1	80	80.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	85	3	0	0	1	90	90.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	281	13	2	0	5	303	307.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	80	1	0	0	0	82	81.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	41	8	2	0	2	53	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	30	3	0	0	0	34	33.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	45	1	2	0	1	49	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	196	13	4	0	3	218	221.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	48	6	0	0	0	55	54.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	47	6	2	0	1	56	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	37	2	1	0	0	40	40.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	40	3	0	0	1	44	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	172	17	3	0	2	195	197.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	43	4	0	0	0	47	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	49	5	0	0	1	55	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	36	7	1	0	0	44	44.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	36	3	0	0	1	40	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	164	19	1	0	2	186	188.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	37	3	0	0	0	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	37	3	0	1	1	44	44.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	34	4	2	0	0	41	41.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	35	1	0	0	1	37	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	143	11	2	1	2	162	164.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	59	7	0	0	0	67	66.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	54	2	3	1	1	61	64.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	44	2	0	0	0	46	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	45	1	0	0	1	48	48.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	202	12	3	1	2	222	225.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	48	2	2	0	0	52	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	55	6	1	1	2	65	68.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	44	4	0	0	0	48	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	66	2	1	0	1	70	71.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	213	14	4	1	3	235	241.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	49	0	0	0	0	49	49	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
1	0	43	2	1	0	1	48	48.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	36	1	0	0	0	38	37.2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
3	0	68	2	0	0	1	74	72.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	196	5	1	0	2	209	207.5	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1
2	0	93	7	1	0	0	103	101.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	66	4	0	0	1	72	72.2	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	51	7	0	0	1	59	60	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
0	0	36	2	0	0	1	39	40	0	0	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0
3	0	246	20	1	0	3	273	274.1	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0
0	0	52	3	0	0	1	56	57	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
0	0	61	4	1	0	1	67	68.5	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
0	0	49	0	0	0	1	50	51	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0
1	0	47	2	0	0	1	51	51.2	0	0	12	0	0	0	0	12	12	0	0	0	0	0	0	0	0	0
1	0	209	9	1	0	4	224	227.7	0	0	23	0	0	0	0	23	23	0	0	0	0	0	0	0	0	0
2	0	54	4	0	0	0	60	58.4	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
2	0	51	4	0	0	1	58	57.4	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
0	0	43	4	1	0	1	49	50.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	39	0	1	0	0	41	40.7	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0
5	0	187	12	2	0	2	208	207	0	0	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0
24	1	2305	148	27	3	38	2546	2581.6	0	0	43	0	0	0	0	43	43	0	0	1	0	0	0	0	1	1



## Sites Overview





## Irish Traffic Surveys

Survey Name :	ITS J-372 Malahide
Site:	1 to 9
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	53.4449143,-6.1781695,5326
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C,Peds

Survey Name :	ITS J-372 Malahide
Site:	Site 1
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	<a href="#">53.4507222,-6.153686</a>
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



TIME	A => A								TOT	A => B								TOT	CAR
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	CAR		LGV	OGV1	OGV2	PSV	M/C	P/C				
07:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	
07:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	8	
07:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	6	
07:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	17	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>33</b>	
08:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	16	
08:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	51	
08:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	39	
08:45	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4	25	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>131</b>	
09:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	30	
09:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	16	
09:30	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	8	
09:45	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7	6	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>60</b>	
10:00	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6	10	
10:15	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10	14	
10:30	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	8	8	
10:45	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7	13	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>45</b>	
11:00	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	0	5	12	
11:15	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6	10	
11:30	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	10	15	
11:45	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7	11	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>48</b>	
12:00	0	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	11	22	
12:15	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7	11	
12:30	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6	11	
12:45	0	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	11	12	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>56</b>	
13:00	0	0	0	0	0	0	0	0	0	5	6	0	0	0	0	0	11	19	
13:15	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	8	10	
13:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	9	
13:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	16	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>54</b>	
14:00	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	8	6	
14:15	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	8	15	
14:30	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9	17	
14:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	18	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>56</b>	
15:00	0	0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	10	12	
15:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5	18	
15:30	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	8	20	
15:45	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	8	24	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>74</b>	
16:00	0	0	0	0	0	0	0	0	0	9	2	0	0	0	0	0	11	18	
16:15	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	13	
16:30	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	9	
16:45	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9	11	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>51</b>	
17:00	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	18	
17:15	0	0	0	0	0	0	0	0	0	10	0	1	0	0	0	0	11	16	
17:30	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11	14	
17:45	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13	19	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>67</b>	
18:00	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9	15	
18:15	0	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	12	18	
18:30	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16	27	
18:45	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7	15	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>75</b>	
19:00	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	25	
19:15	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13	15	
19:30	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	18	
19:45	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13	16	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>74</b>	
<b>13 HR TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>345</b>	<b>45</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>392</b>	<b>824</b>	





A => C							A => D							B => A				
LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2
0	0	0	0	0	0	2	14	0	1	0	0	0	0	15	2	0	0	0
0	0	0	0	0	0	8	8	0	0	0	0	0	0	8	0	0	0	0
0	0	0	0	0	0	6	13	0	0	0	0	0	0	13	5	0	0	0
0	1	0	0	0	0	18	14	0	0	0	0	1	0	15	4	0	0	0
0	1	0	0	0	0	34	49	0	1	0	0	1	0	51	11	0	0	0
2	0	0	0	0	0	18	10	2	0	0	0	0	0	12	3	0	0	0
2	0	0	0	0	1	54	13	1	0	0	0	0	0	14	2	0	0	0
0	1	0	0	0	0	40	22	1	0	0	0	0	0	23	0	0	0	0
0	0	0	0	0	0	25	31	2	0	0	0	0	0	33	5	0	0	0
4	1	0	0	0	1	137	76	6	0	0	0	0	0	82	10	0	0	0
1	0	0	0	0	0	31	26	1	0	0	0	0	0	27	4	0	0	0
1	0	0	0	0	0	17	15	2	0	0	0	0	0	17	3	1	0	0
0	0	0	0	0	0	8	21	2	2	0	0	0	0	25	6	0	0	0
0	0	0	0	0	0	6	20	8	1	0	0	0	0	29	7	4	0	0
2	0	0	0	0	0	62	82	13	3	0	0	0	0	98	20	5	0	0
3	0	0	0	0	0	13	25	5	1	0	0	0	0	31	7	0	0	0
0	0	0	0	0	0	14	18	5	1	0	0	0	0	24	4	0	0	0
2	1	0	0	0	0	11	13	2	0	0	0	0	0	15	11	0	0	0
2	0	0	0	0	0	15	17	2	0	0	0	0	0	19	4	0	0	0
7	1	0	0	0	0	53	73	14	2	0	0	0	0	89	26	0	0	0
1	0	0	0	0	0	13	17	4	0	0	0	0	0	21	7	0	0	0
1	0	0	0	0	0	11	11	5	2	0	0	0	0	18	11	1	0	0
2	0	0	0	0	0	17	11	4	1	0	0	0	0	16	10	0	1	0
0	0	0	0	0	0	11	14	4	1	1	0	0	0	20	7	1	1	0
4	0	0	0	0	0	52	53	17	4	1	0	0	0	75	35	2	2	0
0	0	0	0	0	0	22	18	7	1	0	0	0	0	26	5	0	2	0
1	0	0	0	0	0	12	15	2	1	0	0	0	0	18	12	0	0	0
0	0	0	0	0	0	11	10	3	1	0	0	0	0	14	10	1	0	0
2	0	0	0	0	0	14	28	2	1	0	0	0	0	31	12	0	0	0
3	0	0	0	0	0	59	71	14	4	0	0	0	0	89	39	1	2	0
3	0	0	0	0	0	22	16	4	1	0	0	0	0	21	8	4	0	0
3	0	0	0	0	0	13	13	3	0	0	0	0	0	16	4	1	1	0
1	0	0	0	0	0	10	16	1	0	0	0	0	0	17	9	0	0	0
2	0	0	0	0	0	18	18	1	1	0	0	0	0	20	6	0	0	0
9	0	0	0	0	0	63	63	9	2	0	0	0	0	74	27	5	1	0
2	0	0	0	0	0	8	16	1	0	0	0	0	0	17	5	0	0	0
0	0	0	0	0	0	15	14	1	0	0	0	0	0	15	4	1	0	0
1	0	0	0	0	0	18	18	4	1	0	0	0	0	23	7	2	0	0
1	0	0	0	0	0	19	15	3	0	0	0	0	0	18	8	0	0	0
4	0	0	0	0	0	60	63	9	1	0	0	0	0	73	24	3	0	0
1	0	0	0	0	0	13	13	3	0	1	0	0	0	17	7	1	0	0
0	0	0	0	0	0	18	20	1	1	0	0	0	0	22	5	2	0	0
3	0	0	0	0	0	23	19	3	0	0	0	0	0	22	12	1	0	0
1	0	0	0	0	0	25	11	4	1	0	0	0	0	16	8	0	0	0
5	0	0	0	0	0	79	63	11	2	1	0	0	0	77	32	4	0	0
0	0	0	0	0	0	18	15	2	0	0	0	0	0	17	10	0	0	0
3	0	0	0	0	0	16	15	1	0	0	0	0	0	16	10	0	0	0
1	0	0	0	0	0	10	14	0	0	0	0	0	0	14	13	0	1	0
2	0	0	0	0	0	13	14	1	0	0	0	0	0	15	9	1	0	0
6	0	0	0	0	0	57	58	4	0	0	0	0	0	62	42	1	1	0
1	0	0	0	0	0	19	16	1	1	0	0	0	0	18	13	2	0	0
0	0	0	0	0	0	16	17	0	0	0	0	0	0	17	7	0	0	0
0	0	0	0	0	0	14	13	2	2	0	0	0	0	17	9	0	0	0
0	0	0	0	0	0	19	29	1	0	0	0	0	0	30	11	0	0	0
1	0	0	0	0	0	68	75	4	3	0	0	0	0	82	40	2	0	0
0	0	0	0	0	0	15	22	0	0	0	0	0	0	22	9	0	0	0
0	0	0	0	0	0	18	23	0	0	0	0	0	0	23	17	1	0	0
0	0	0	0	0	0	27	22	1	0	0	0	0	0	23	11	1	0	0
0	0	0	0	0	0	15	14	1	0	0	0	0	0	15	24	0	0	0
0	0	0	0	0	0	75	81	2	0	0	0	0	0	83	61	2	0	0
0	0	0	0	0	0	25	20	0	0	0	0	0	0	20	11	1	0	0
0	0	0	0	0	0	15	23	0	0	0	0	0	0	23	17	0	0	0
0	0	0	0	0	0	18	33	0	0	0	0	0	0	33	21	0	0	0
0	0	0	0	0	0	16	28	0	0	0	0	0	0	28	9	1	0	0
0	0	0	0	0	0	74	104	0	0	0	0	0	0	104	58	2	0	0
45	3	0	0	0	1	873	911	103	22	2	0	1	0	1039	425	27	6	0

				B => B								B => C							
PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
0	0	0	5	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
1	0	0	5	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
3	0	0	14	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0
1	0	0	4	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0
1	0	0	3	0	0	0	0	0	0	0	0	19	1	0	0	0	0	0	0
1	0	0	1	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0
0	0	0	5	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0
3	0	0	13	0	0	0	0	0	0	0	0	56	3	0	0	0	0	0	0
0	0	0	4	0	0	0	0	0	0	0	0	21	1	0	0	0	0	0	0
0	0	0	4	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0
1	0	0	7	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0
1	0	0	12	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0
2	0	0	27	0	0	0	0	0	0	0	0	60	3	0	0	0	0	0	0
1	0	0	8	0	0	0	0	0	0	0	0	7	3	0	0	0	0	0	0
0	0	0	4	0	0	0	0	0	0	0	0	13	1	0	0	0	0	0	0
0	0	0	11	0	0	0	0	0	0	0	0	12	2	0	0	0	0	0	0
0	0	0	4	0	0	0	0	0	0	0	0	11	2	0	0	0	0	0	0
1	0	0	27	0	0	0	0	0	0	0	0	43	8	0	0	0	0	0	0
1	0	0	8	0	0	0	0	0	0	0	0	6	1	1	1	0	0	0	0
0	0	0	12	0	0	0	0	0	0	0	0	22	1	0	0	0	0	0	0
0	0	0	11	0	0	0	0	0	0	0	0	13	1	1	0	0	0	0	0
0	0	0	9	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0
1	0	0	40	0	0	0	0	0	0	0	0	52	3	2	1	0	0	0	0
1	0	0	8	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0
0	0	0	12	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0
0	0	0	11	0	0	0	0	0	0	0	0	20	2	0	0	0	0	0	0
0	0	0	12	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
1	0	0	43	0	0	0	0	0	0	0	0	49	3	0	0	0	0	0	0
1	0	0	13	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0
0	0	0	6	0	0	0	0	0	0	0	0	16	2	1	0	0	0	0	0
0	0	0	9	0	0	0	0	0	0	0	0	14	0	1	0	0	0	0	0
0	0	0	6	0	0	0	0	0	0	0	0	16	1	1	0	0	0	0	0
1	0	0	34	0	0	0	0	0	0	0	0	63	3	3	0	0	0	0	0
1	0	0	6	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0
1	0	0	6	0	0	0	0	0	0	0	0	17	2	1	0	0	0	0	0
0	0	0	9	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0
0	0	0	8	0	0	0	0	0	0	0	0	21	1	0	0	0	0	0	0
2	0	0	29	0	0	0	0	0	0	0	0	64	4	1	0	0	0	0	0
0	0	0	8	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0
1	1	0	9	0	0	0	0	0	0	0	0	12	1	0	0	0	0	0	0
0	0	0	13	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
0	0	0	8	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
1	1	0	38	0	0	0	0	0	0	0	0	44	1	0	0	0	0	0	0
1	0	0	11	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
0	0	0	10	0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	0
0	0	0	14	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0
1	0	0	11	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
2	0	0	46	0	0	0	0	0	0	0	0	35	2	0	0	0	0	0	0
0	0	0	15	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0
1	1	0	9	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
0	0	0	9	0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	0
0	0	0	11	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0
1	1	0	44	0	0	0	0	0	0	0	0	39	2	0	0	0	0	0	0
1	0	0	10	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0
2	0	0	20	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0
0	0	0	12	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
0	0	0	24	0	0	0	0	0	0	0	0	12	0	0	0	1	0	0	0
3	0	0	66	0	0	0	0	0	0	0	0	38	1	0	0	1	0	0	0
0	0	0	12	0	0	0	0	0	0	0	0	7	0	0	0	1	0	0	0
0	0	0	17	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0
1	0	0	22	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0
0	0	0	10	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
1	0	0	61	0	0	0	0	0	0	0	0	33	1	0	0	1	0	0	0
22	2	0	482	0	0	0	0	0	0	0	0	594	34	6	1	2	0	0	0

B => D									C => A									
TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV
2	51	3	1	2	1	0	1	59	2	1	0	0	0	0	0	3	1	0
2	77	5	0	0	2	0	0	84	4	0	0	0	0	0	0	4	4	0
8	77	1	1	0	3	0	0	82	3	1	0	0	0	0	0	4	7	0
6	69	4	0	0	1	0	0	74	8	1	0	0	0	0	0	9	5	1
18	274	13	2	2	7	0	1	299	17	3	0	0	0	0	0	20	17	1
6	70	2	0	0	3	0	0	75	16	0	0	0	0	0	0	16	10	1
20	92	1	1	0	0	0	0	94	23	1	0	0	0	0	0	24	14	0
21	80	3	1	0	0	0	1	85	19	1	0	0	0	0	0	20	31	2
12	74	2	1	0	3	0	0	80	11	2	0	0	0	0	0	13	28	2
59	316	8	3	0	6	0	1	334	69	4	0	0	0	0	0	73	83	5
22	62	8	1	0	2	0	0	73	17	1	0	0	0	0	0	18	24	1
19	61	3	1	2	0	0	0	67	21	0	0	0	0	0	0	21	28	1
10	56	7	0	1	2	0	0	66	16	1	0	0	0	0	0	17	22	0
12	68	8	2	0	1	0	0	79	10	0	0	0	0	0	0	10	15	3
63	247	26	4	3	5	0	0	285	64	2	0	0	0	0	0	66	89	5
10	54	4	2	1	1	0	0	62	16	1	0	0	0	0	0	17	16	0
14	62	4	0	0	1	0	0	67	9	1	0	0	0	0	0	10	17	0
14	71	8	2	3	1	0	0	85	12	0	0	0	0	0	0	12	16	2
13	56	4	3	0	0	0	0	63	17	1	0	0	0	0	0	18	19	1
51	243	20	7	4	3	0	0	277	54	3	0	0	0	0	0	57	68	3
9	77	5	1	2	0	1	0	86	12	0	1	0	0	0	0	13	15	2
23	67	6	2	2	0	0	0	77	14	0	0	0	0	0	0	14	16	2
15	52	7	0	1	1	0	0	61	14	2	0	0	0	0	0	16	18	6
11	70	8	1	0	0	0	1	80	17	0	0	0	0	0	0	17	13	2
58	266	26	4	5	1	1	1	304	57	2	1	0	0	0	0	60	62	12
7	75	8	1	1	1	0	0	86	11	1	0	0	0	0	0	12	11	0
15	61	9	0	1	0	0	0	71	17	0	0	0	0	0	0	17	21	3
22	55	5	3	1	1	0	0	65	15	0	0	0	0	0	0	15	17	0
8	62	7	1	0	0	0	0	70	19	2	1	0	0	0	0	22	13	0
52	253	29	5	3	2	0	0	292	62	3	1	0	0	0	0	66	62	3
17	59	7	0	1	3	0	0	70	12	0	0	0	0	0	0	12	19	4
19	78	6	2	0	1	0	0	87	12	3	0	0	1	0	0	16	38	0
15	56	4	3	2	3	0	0	68	8	0	0	0	0	0	0	8	21	0
18	56	5	1	5	0	0	0	67	18	1	0	0	0	0	0	19	25	2
69	249	22	6	8	7	0	0	292	50	4	0	0	1	0	0	55	103	6
12	65	13	3	0	3	0	0	84	14	1	0	0	0	0	0	15	33	2
20	67	8	2	2	1	0	1	81	9	1	0	0	0	0	0	10	18	1
15	55	10	2	0	0	0	0	67	10	3	0	0	0	0	0	13	31	3
22	52	6	3	1	2	0	0	64	13	1	0	0	0	0	0	14	22	2
69	239	37	10	3	6	0	1	296	46	6	0	0	0	0	0	52	104	8
15	69	9	1	1	0	0	0	80	15	2	0	0	0	0	0	17	15	3
13	52	9	3	1	1	0	0	66	12	0	0	0	1	0	0	13	22	1
8	51	5	2	2	1	0	0	61	7	0	0	0	0	0	0	7	8	0
9	60	10	3	2	0	0	0	75	23	0	0	0	0	0	0	23	27	1
45	232	33	9	6	2	0	0	282	57	2	0	0	1	0	0	60	72	5
8	62	9	0	0	0	0	0	71	17	0	0	0	0	0	0	17	25	0
11	63	7	0	1	6	0	0	77	21	1	0	0	0	0	0	22	19	0
12	68	10	2	1	1	0	0	82	14	1	0	0	0	0	0	15	13	0
6	63	8	1	0	0	0	0	72	16	2	0	0	0	0	0	18	23	0
37	256	34	3	2	7	0	0	302	68	4	0	0	0	0	0	72	80	0
12	47	6	0	0	0	0	0	53	15	1	0	0	0	0	0	16	10	0
7	55	4	1	1	2	0	0	63	11	0	0	0	0	0	0	11	13	1
12	70	5	0	0	1	0	0	76	22	0	0	0	0	0	0	22	21	0
10	55	5	0	1	0	0	0	61	12	1	0	0	0	0	0	13	9	1
41	227	20	1	2	3	0	0	253	60	2	0	0	0	0	0	62	53	2
6	64	4	0	0	2	0	0	70	16	2	0	0	0	0	0	18	11	1
12	59	1	0	0	0	0	1	61	20	0	0	0	0	0	0	20	12	2
9	64	3	0	0	2	0	0	69	15	1	0	0	0	0	0	16	15	0
13	66	0	0	1	1	0	1	69	18	0	0	0	0	0	0	18	19	0
40	253	8	0	1	5	0	2	269	69	3	0	0	0	0	0	72	57	3
8	69	2	0	0	2	0	0	73	16	0	0	0	0	0	0	16	17	1
12	73	1	0	0	0	0	0	74	7	0	0	0	0	0	0	7	12	0
9	67	0	0	1	0	0	0	68	15	0	0	0	0	0	0	15	17	0
6	59	4	0	0	1	0	0	64	22	0	0	0	0	0	0	22	12	0
35	268	7	0	1	3	0	0	279	60	0	0	0	0	0	0	60	58	1
637	3323	283	54	40	57	1	6	3764	733	38	2	0	2	0	0	775	908	54



C => B					C => C										C => D				
OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	
0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	
0	0	0	0	0	4	0	0	0	0	0	0	0	0	19	0	0	0	1	
0	0	0	0	0	7	0	0	0	0	0	0	0	0	12	0	0	0	2	
0	0	0	0	0	6	0	0	0	0	0	0	0	0	15	2	0	0	4	
0	0	0	0	0	18	0	0	0	0	0	0	0	0	53	2	0	0	7	
0	0	0	0	0	11	0	0	0	0	0	0	0	0	23	1	1	1	4	
0	0	0	0	0	14	0	0	0	0	0	0	0	0	18	1	0	0	0	
0	0	1	0	0	34	0	0	0	0	0	0	0	0	19	0	0	0	1	
0	0	0	0	0	30	0	0	0	0	0	0	0	0	15	0	0	0	0	
0	0	1	0	0	89	0	0	0	0	0	0	0	0	75	2	1	1	5	
0	0	0	0	0	25	0	0	0	0	0	0	0	0	27	2	0	0	1	
0	0	0	0	0	29	0	0	0	0	0	0	0	0	24	1	0	0	1	
0	0	0	0	0	22	0	0	0	0	0	0	0	0	14	1	1	0	1	
0	0	0	0	0	18	0	0	0	0	0	0	0	0	20	3	0	0	0	
0	0	0	0	0	94	0	0	0	0	0	0	0	0	85	7	1	0	3	
0	0	0	0	0	16	0	0	0	0	0	0	0	0	13	3	0	0	0	
0	0	0	0	0	17	0	0	0	0	0	0	0	0	16	2	0	0	1	
1	0	0	0	0	19	0	0	0	0	0	0	0	0	8	2	0	0	0	
1	0	0	0	0	20	0	0	0	0	0	0	0	0	18	4	0	0	1	
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2	0	0	0	0	19	0	0	0	0	0	0	0	0	16	1	1	0	0	
0	0	0	0	0	18	0	0	0	0	0	0	0	0	11	2	1	0	1	
0	0	0	0	0	24	0	0	0	0	0	0	0	0	20	4	1	0	0	
0	0	0	0	0	15	0	0	0	0	0	0	0	0	21	1	0	0	0	
2	0	0	0	0	76	0	0	0	0	0	0	0	0	68	8	3	0	1	
0	0	0	0	0	11	0	0	0	0	0	0	0	0	16	2	0	0	0	
0	0	0	0	0	24	0	0	0	0	0	0	0	0	16	0	0	0	1	
0	0	0	0	0	17	0	0	0	0	0	0	0	0	14	2	0	0	0	
0	0	0	0	0	13	0	0	0	0	0	0	0	0	11	1	0	0	1	
0	0	0	0	0	65	0	0	0	0	0	0	0	0	57	5	0	0	2	
1	0	0	0	0	24	0	0	0	0	0	0	0	0	15	1	0	0	0	
0	0	0	0	0	38	0	0	0	0	0	0	0	0	15	1	0	0	0	
0	1	0	0	0	22	0	0	0	0	0	0	0	0	9	3	1	0	0	
1	0	1	0	0	29	0	0	0	0	0	0	0	0	15	1	0	0	1	
2	1	1	0	0	113	0	0	0	0	0	0	0	0	54	6	1	0	1	
0	0	0	0	0	35	0	0	0	0	0	0	0	0	12	0	0	0	0	
1	0	0	0	0	20	0	0	0	0	0	0	0	0	11	0	0	0	1	
0	0	0	0	0	34	0	0	0	0	0	0	0	0	13	2	0	0	1	
1	0	0	0	0	25	0	0	0	0	0	0	0	0	24	2	0	0	1	
2	0	0	0	0	114	0	0	0	0	0	0	0	0	60	4	0	0	3	
0	0	0	0	0	18	0	0	0	0	0	0	0	0	13	2	0	0	0	
0	0	0	0	0	23	0	0	0	0	0	0	0	0	12	0	0	0	1	
0	0	0	0	0	8	0	0	0	0	0	0	0	0	13	1	0	0	0	
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0	0	0	0	0	77	0	0	0	0	0	0	0	0	68	6	0	0	2	
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0	0	0	0	0	13	0	0	0	0	0	0	0	0	18	2	0	0	0	
0	0	0	0	0	23	0	0	0	0	0	0	0	0	16	0	0	0	1	
0	0	0	0	0	80	0	0	0	0	0	0	0	0	71	7	0	0	2	
0	0	0	1	0	11	0	0	0	0	0	0	0	0	18	1	0	0	1	
0	0	0	0	0	14	0	0	0	0	0	0	0	0	25	3	0	0	2	
0	0	0	0	0	21	0	0	0	0	0	0	0	0	20	0	1	0	1	
0	0	0	0	0	10	0	0	0	0	0	0	0	0	18	1	0	0	0	
0	0	0	1	0	56	0	0	0	0	0	0	0	0	81	5	1	0	4	
0	0	0	0	0	12	0	0	0	0	0	0	0	0	17	3	0	0	1	
0	0	0	0	0	14	0	0	0	0	0	0	0	0	23	1	0	0	0	
0	0	0	0	0	15	0	0	0	0	0	0	0	0	19	1	0	0	1	
0	0	0	0	0	19	0	0	0	0	0	0	0	0	24	1	0	0	1	
0	0	0	0	0	60	0	0	0	0	0	0	0	0	83	6	0	0	3	
0	0	0	0	0	18	0	0	0	0	0	0	0	0	16	0	0	0	0	
0	0	0	0	0	12	0	0	0	0	0	0	0	0	21	0	0	0	1	
0	0	0	0	0	17	0	0	0	0	0	0	0	0	18	0	0	0	0	
0	0	0	0	0	12	0	0	0	0	0	0	0	0	17	1	0	0	1	
0	0	0	0	0	59	0	0	0	0	0	0	0	0	72	1	0	0	2	
7	1	2	1	0	973	0	0	0	0	0	0	0	0	882	70	7	1	37	

		D => A										D => B									
M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT			
0	0	7	2	0	0	0	0	0	0	2	30	1	0	1	1	0	0	33			
0	0	20	1	1	0	0	0	0	0	2	24	2	2	2	2	0	0	32			
0	0	14	3	1	1	0	0	0	0	5	27	5	3	0	1	0	0	36			
0	0	21	6	0	0	0	0	0	0	6	70	3	1	0	5	0	0	79			
0	0	62	12	2	1	0	0	0	0	15	151	11	6	3	9	0	0	180			
0	0	30	3	1	0	0	0	0	0	4	56	5	4	0	5	0	0	70			
0	0	19	2	1	0	0	0	0	0	3	48	4	0	0	0	0	1	53			
0	0	20	2	0	0	0	0	0	0	2	42	5	4	3	0	0	0	54			
0	0	15	8	0	0	0	0	0	0	8	58	10	1	1	3	0	0	73			
0	0	84	15	2	0	0	0	0	0	17	204	24	9	4	8	0	1	250			
0	0	30	14	1	0	0	0	0	0	15	72	15	2	2	1	0	0	92			
0	0	26	13	0	0	0	0	0	0	13	44	7	3	0	4	0	0	58			
0	0	17	16	2	0	0	0	0	0	18	56	10	1	0	1	0	1	69			
0	0	23	10	0	1	0	0	0	0	11	54	26	4	0	2	0	0	86			
0	0	96	53	3	1	0	0	0	0	57	226	58	10	2	8	0	1	305			
0	0	16	11	3	1	0	0	0	0	15	57	30	2	0	0	0	0	89			
0	0	19	8	1	0	0	0	0	0	9	49	8	1	0	0	0	0	58			
0	0	10	3	0	0	0	0	0	0	3	41	6	0	0	1	0	1	49			
0	0	23	8	1	0	0	0	0	0	9	62	7	4	0	0	0	1	74			
0	0	68	30	5	1	0	0	0	0	36	209	51	7	0	1	0	2	270			
0	0	18	6	3	0	0	0	0	0	9	56	10	1	1	1	0	0	69			
0	0	15	7	1	0	0	0	0	0	8	53	11	2	1	0	0	0	67			
0	0	25	8	2	1	1	0	0	0	12	46	10	3	1	1	0	1	62			
0	0	22	14	2	0	0	0	0	0	16	68	6	0	2	0	0	0	76			
0	0	80	35	8	1	1	0	0	0	45	223	37	6	5	2	0	1	274			
0	0	18	10	0	0	0	0	0	0	10	66	7	3	0	1	0	1	78			
0	1	18	12	0	0	0	0	0	0	12	66	7	1	2	0	0	1	77			
0	0	16	11	1	0	0	0	0	0	12	66	4	2	2	1	0	0	75			
0	0	13	12	2	0	0	0	0	0	14	53	7	0	0	1	0	0	61			
0	1	65	45	3	0	0	0	0	0	48	251	25	6	4	3	0	2	291			
0	0	16	11	0	0	0	0	0	0	11	58	2	0	0	1	0	2	63			
0	0	16	10	0	0	0	0	0	0	10	51	5	2	2	1	0	0	61			
0	0	13	9	1	0	0	0	0	0	10	59	9	1	2	1	0	0	72			
0	0	17	10	0	0	0	0	0	0	10	62	6	2	1	0	0	0	71			
0	0	62	40	1	0	0	0	0	0	41	230	22	5	5	3	0	2	267			
0	0	12	11	2	0	0	0	0	0	13	62	5	1	0	1	0	0	69			
0	0	12	11	1	0	0	0	0	0	12	65	1	2	1	2	0	0	71			
0	0	16	7	0	0	0	0	0	0	7	61	5	1	1	0	0	0	68			
0	0	27	7	1	0	1	0	1	0	10	52	4	1	2	1	0	0	60			
0	0	67	36	4	0	1	0	1	0	42	240	15	5	4	4	0	0	268			
0	0	15	13	3	0	0	0	0	0	16	73	8	0	1	1	0	0	83			
0	0	13	7	3	1	0	0	0	0	11	61	3	0	1	1	0	0	66			
0	0	14	4	0	1	0	0	0	0	5	55	4	0	0	0	0	1	60			
0	0	34	11	1	0	0	0	0	0	12	58	7	0	0	2	0	0	67			
0	0	76	35	7	2	0	0	0	0	44	247	22	0	2	4	0	1	276			
0	0	22	12	0	0	0	0	0	0	12	57	3	0	1	0	0	1	62			
0	0	21	9	1	1	0	0	0	0	11	52	7	0	0	3	0	0	62			
0	0	20	10	1	1	0	0	0	0	12	61	3	1	0	2	0	0	67			
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0	0	80	39	3	2	0	0	0	0	44	231	19	1	2	7	0	1	261			
0	0	20	12	1	0	0	0	0	0	13	52	2	0	1	0	0	0	55			
0	0	30	11	1	0	0	0	0	0	12	53	1	0	0	1	0	0	55			
0	0	22	15	0	0	0	0	0	0	15	64	1	0	0	0	0	1	66			
0	0	19	13	0	0	0	0	0	0	13	76	2	0	0	0	0	1	79			
0	0	91	51	2	0	0	0	0	0	53	245	6	0	1	1	0	2	255			
0	0	21	18	1	0	0	0	0	0	19	58	3	0	0	0	0	2	63			
0	0	24	24	0	0	0	0	0	0	24	65	4	0	0	1	0	1	71			
0	0	21	19	0	0	0	1	0	0	20	56	0	0	0	0	0	1	57			
0	0	26	15	1	0	0	0	0	0	16	63	0	0	0	0	0	0	63			
0	0	92	76	2	0	0	1	0	0	79	242	7	0	0	1	0	4	254			
0	0	16	16	0	0	0	0	0	0	16	69	0	0	0	1	0	0	70			
0	0	22	14	0	0	0	0	0	0	14	55	4	0	0	1	0	0	60			
0	0	18	20	0	0	0	0	0	0	20	72	1	0	0	1	0	0	74			
0	0	19	22	0	0	0	0	0	0	22	50	0	0	0	0	0	0	50			
0	0	75	72	0	0	0	0	0	0	72	246	5	0	0	3	0	0	254			
0	1	998	539	42	8	2	1	1	0	593	2945	302	55	32	54	0	17	3405			

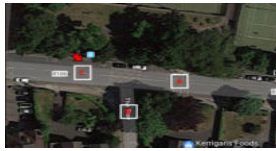
D => C								D => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0
9	2	0	0	0	0	0	11	0	0	0	0	0	0	0	0
8	1	0	0	2	0	0	11	0	0	0	0	0	0	0	0
9	2	0	0	2	0	0	13	0	0	0	0	0	0	0	0
28	6	0	0	4	0	0	38	0	0	0	0	0	0	0	0
17	1	0	0	0	0	0	18	0	0	0	0	0	0	0	0
38	0	0	0	2	0	0	40	0	0	0	0	0	0	0	0
27	2	0	0	0	0	0	29	0	0	0	0	0	0	0	0
19	1	0	0	2	0	0	22	0	0	0	0	0	0	0	0
101	4	0	0	4	0	0	109	0	0	0	0	0	0	0	0
13	0	1	0	0	0	0	14	0	0	0	0	0	0	0	0
11	1	0	0	1	0	0	13	0	0	0	0	0	0	0	0
8	3	0	0	0	0	0	11	0	0	0	0	0	0	0	0
4	1	0	0	2	0	0	7	0	0	0	0	0	0	0	0
36	5	1	0	3	0	0	45	0	0	0	0	0	0	0	0
7	3	0	0	0	0	0	10	0	0	0	0	0	0	0	0
7	1	0	0	1	0	0	9	0	0	0	0	0	0	0	0
11	2	0	0	1	0	0	14	0	0	0	0	0	0	0	0
11	2	1	0	0	0	0	14	0	0	0	0	0	0	0	0
36	8	1	0	2	0	0	47	0	0	0	0	0	0	0	0
8	0	2	0	1	0	0	11	0	0	0	0	0	0	0	0
4	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0
12	2	0	0	0	0	0	14	0	0	0	0	0	0	0	0
12	1	0	0	1	0	0	14	0	0	0	0	0	0	0	0
36	4	2	0	2	0	0	44	0	0	0	0	0	0	0	0
9	0	1	0	0	0	0	10	0	0	0	0	0	0	0	0
12	1	1	0	1	0	0	15	0	0	0	0	0	0	0	0
6	2	0	0	1	1	0	10	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	11	0	0	0	0	0	0	0	0
37	4	2	0	2	1	0	46	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
10	1	0	1	1	0	0	13	0	0	0	0	0	0	0	0
15	2	0	0	2	1	0	20	0	0	0	0	0	0	0	0
12	0	0	0	1	0	0	13	0	0	0	0	0	0	0	0
47	3	0	1	4	1	0	56	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
9	0	0	0	1	0	0	10	0	0	0	0	0	0	0	0
14	0	0	0	1	0	0	15	0	0	0	0	0	0	0	0
11	1	0	0	1	0	0	13	0	0	0	0	0	0	0	0
41	1	0	0	3	0	0	45	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	11	0	0	0	0	0	0	0	0
7	4	0	0	1	0	0	12	1	0	0	0	0	0	0	1
23	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0
24	1	0	0	0	0	0	25	0	0	0	0	0	0	0	0
64	6	0	0	1	0	0	71	1	0	0	0	0	0	0	1
12	1	0	0	1	0	1	15	0	0	0	0	0	0	0	0
8	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
12	0	0	0	0	2	0	14	0	0	0	0	0	0	0	0
13	1	0	0	0	0	0	14	0	0	0	0	0	0	0	0
45	3	0	0	1	2	1	52	0	0	0	0	0	0	0	0
17	1	0	0	1	1	0	20	1	0	0	0	0	0	0	1
12	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0
14	0	0	0	1	0	0	15	0	0	0	0	0	0	0	0
14	0	0	0	1	0	0	15	0	0	0	0	0	0	0	0
57	2	0	0	3	1	0	63	1	0	0	0	0	0	0	1
14	0	0	0	1	0	0	15	0	0	0	0	0	0	0	0
12	0	0	0	2	0	0	14	0	0	0	0	0	0	0	0
11	2	0	0	2	0	0	15	0	0	0	0	0	0	0	0
21	0	0	0	2	0	0	23	0	0	0	0	0	0	0	0
58	2	0	0	7	0	0	67	0	0	0	0	0	0	0	0
18	0	0	0	1	0	0	19	0	0	0	0	0	0	0	0
14	1	0	0	1	0	0	16	0	0	0	0	0	0	0	0
16	0	0	0	1	0	0	17	0	0	0	0	0	0	0	0
20	0	0	0	1	0	0	21	0	0	0	0	0	0	0	0
68	1	0	0	4	0	0	73	0	0	0	0	0	0	0	0
654	49	6	1	40	5	1	756	2	0	0	0	0	0	0	2



Survey Name :	ITS J-372 Malahide
Site:	Site 2
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	<a href="#">53.4510026-6.1511518</a>
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



TIME	A => A								TOT	A => B								TOT	CAR				
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C			CAR	LGV	OGV1	OGV2	PSV	M/C	P/C							
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
07:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	71
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
07:45	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	100
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>308</b>
08:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	104
08:15	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	121
08:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	74
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>359</b>
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
09:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	96
09:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	89
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>331</b>
10:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	60
10:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	89
10:30	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	86
10:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	66
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>301</b>
11:00	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	79
11:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	77
11:30	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	81
11:45	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	85
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>322</b>
12:00	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	78
12:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	82
12:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	82
12:45	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	95
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>337</b>
13:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	85
13:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	108
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
13:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	88
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>344</b>
14:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	86
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82
14:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	82
14:45	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	72
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>322</b>
15:00	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	72
15:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	83
15:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	94
15:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	79
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>328</b>
16:00	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	0	0	0	0	0	88
16:15	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	93
16:30	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	96
16:45	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	82
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>359</b>
17:00	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	87
17:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	92
17:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	101
17:45	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	83
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>363</b>
18:00	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	90
18:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	95
18:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	67
18:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	100
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>352</b>
19:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	88
19:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	99
19:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	77
19:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	84
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>348</b>
<b>13 HR TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>196</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>203</b>	<b>4374</b>



A => C							B => A							B => B				
LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2
2	1	1	2	0	1	55	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	5	0	1	81	1	0	0	0	0	0	0	1	0	0	0	0
1	0	0	3	0	0	93	1	0	0	0	0	0	0	1	0	0	0	0
4	0	0	2	0	0	106	0	0	0	0	0	0	0	0	0	0	0	0
11	1	1	12	0	2	335	2	0	0	0	0	0	0	2	0	0	0	0
2	0	0	3	0	0	109	0	0	1	0	0	0	0	1	0	0	0	0
5	1	0	1	0	0	128	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	3	0	0	81	11	0	0	0	0	0	0	11	0	0	0	0
6	1	0	0	0	0	67	30	0	0	0	0	0	0	30	0	0	0	0
16	3	0	7	0	0	385	41	0	1	0	0	0	0	42	0	0	0	0
6	0	0	0	0	0	63	13	0	0	0	0	0	0	13	0	0	0	0
7	2	2	2	0	2	104	1	0	0	0	0	0	0	1	0	0	0	0
9	1	1	1	0	0	108	2	0	0	0	0	0	0	2	0	0	0	0
8	2	0	1	0	0	100	1	0	0	0	0	0	0	1	0	0	0	0
30	5	3	4	0	2	375	17	0	0	0	0	0	0	17	0	0	0	0
6	2	1	2	0	0	71	4	0	0	0	0	0	0	4	0	0	0	0
5	0	1	1	0	0	96	1	0	0	0	0	0	0	1	0	0	0	0
9	5	2	1	1	0	104	2	1	0	0	0	0	0	3	0	0	0	0
5	2	0	1	0	0	74	3	0	0	0	0	0	0	3	0	0	0	0
25	9	4	5	1	0	345	10	1	0	0	0	0	0	11	0	0	0	0
5	2	1	1	1	0	89	1	0	0	0	0	0	0	1	0	0	0	0
9	5	0	0	0	0	91	3	0	1	0	0	0	0	4	0	0	0	0
7	1	1	1	0	0	91	0	0	0	0	0	0	0	0	0	0	0	0
13	5	1	0	0	1	105	0	1	0	0	0	0	0	1	0	0	0	0
34	13	3	2	1	1	376	4	1	1	0	0	0	0	6	0	0	0	0
9	2	1	1	0	0	91	3	0	0	0	0	0	0	3	0	0	0	0
8	0	1	0	0	0	91	4	0	0	0	0	0	0	4	0	0	0	0
8	2	1	2	0	2	97	1	0	0	0	0	0	0	1	0	0	0	0
11	1	0	0	0	0	107	1	0	0	0	0	0	0	1	0	0	0	0
36	5	3	3	0	2	386	9	0	0	0	0	0	0	9	0	0	0	0
6	0	0	4	0	0	95	1	0	0	0	0	0	0	1	0	0	0	0
16	2	0	1	0	0	127	0	0	0	0	0	0	0	0	0	0	0	0
1	3	1	1	0	0	69	6	0	0	0	0	0	0	6	0	0	0	0
6	1	4	0	0	0	99	1	0	0	0	0	0	0	1	0	0	0	0
29	6	5	6	0	0	390	8	0	0	0	0	0	0	8	0	0	0	0
3	3	1	4	0	0	97	1	0	0	0	0	0	0	1	0	0	0	0
10	2	2	1	0	1	98	3	1	0	0	0	0	0	4	0	0	0	0
7	1	0	1	0	0	91	12	0	0	0	0	0	0	12	0	0	0	0
7	3	2	2	1	0	87	14	0	0	0	0	0	0	14	0	0	0	0
27	9	5	8	1	1	373	30	1	0	0	0	0	0	31	0	0	0	0
14	1	0	1	0	0	88	4	0	0	0	0	0	0	4	0	0	0	0
21	2	1	1	0	0	108	0	0	0	0	0	0	0	0	0	0	0	0
7	1	3	1	0	0	106	3	0	0	0	0	0	0	3	0	0	0	0
15	1	1	0	0	1	97	2	1	0	0	0	0	0	3	0	0	0	0
57	5	5	3	0	1	399	9	1	0	0	0	0	0	10	0	0	0	0
7	0	0	2	0	0	97	3	0	0	0	0	0	0	3	0	0	0	0
2	0	0	0	0	0	95	11	0	0	0	0	0	0	11	0	0	0	0
7	2	0	1	0	0	106	3	0	0	0	0	0	0	3	0	0	0	0
10	1	0	2	0	1	96	3	0	0	0	0	0	0	3	0	0	0	0
26	3	0	5	0	1	394	20	0	0	0	0	0	0	20	0	0	0	0
6	1	0	0	0	0	94	3	0	0	0	0	0	0	3	0	0	0	0
5	0	1	4	0	0	102	3	0	0	0	0	0	0	3	0	0	0	0
4	1	1	0	0	0	107	1	0	0	0	0	0	0	1	0	0	0	0
4	0	0	1	0	0	88	6	0	0	0	0	0	0	6	0	0	0	0
19	2	2	5	0	0	391	13	0	0	0	0	0	0	13	0	0	0	0
2	0	0	3	0	0	95	10	0	0	0	0	0	0	10	0	0	0	0
5	0	0	1	0	0	101	2	0	0	0	0	0	0	2	0	0	0	0
2	0	0	1	0	0	70	4	0	0	0	0	0	0	4	0	0	0	0
1	0	1	2	0	0	104	5	0	0	0	0	0	0	5	0	0	0	0
10	0	1	7	0	0	370	21	0	0	0	0	0	0	21	0	0	0	0
3	0	0	3	0	0	94	3	0	0	0	0	0	0	3	0	0	0	0
0	0	0	0	0	1	100	0	0	0	0	0	0	0	0	0	0	0	0
3	0	1	1	0	0	82	6	0	0	0	0	0	0	6	0	0	0	0
1	0	0	3	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0
7	0	1	7	0	1	364	9	0	0	0	0	0	0	9	0	0	0	0
327	61	33	74	3	11	4883	193	4	2	0	0	0	0	199	0	0	0	0

				B => C								C => A							
PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	
0	0	0	0	1	1	0	0	0	0	0	2	34	1	0	2	1	0	0	
0	0	0	0	1	1	0	0	0	0	0	2	40	8	4	1	3	0	0	
0	0	0	0	4	0	0	0	0	0	0	4	53	6	1	0	3	0	0	
0	0	0	0	4	1	0	0	0	0	0	5	99	6	2	0	6	0	0	
0	0	0	0	10	3	0	0	0	0	0	13	226	21	7	3	13	0	0	
0	0	0	0	5	0	0	0	0	0	0	5	104	5	2	1	4	0	0	
0	0	0	0	6	0	0	0	0	0	0	6	113	2	1	0	1	0	1	
0	0	0	0	30	0	0	0	0	0	0	30	102	8	5	3	1	0	0	
0	0	0	0	40	2	0	0	0	0	0	42	142	8	3	0	3	0	0	
0	0	0	0	81	2	0	0	0	0	0	83	461	23	11	4	9	0	1	
0	0	0	0	39	2	0	0	1	0	0	42	104	9	0	1	1	0	0	
0	0	0	0	22	1	0	0	0	0	0	23	83	7	2	0	4	0	0	
0	0	0	0	12	0	0	0	0	0	0	12	70	13	1	0	2	0	1	
0	0	0	0	6	1	0	0	0	0	0	7	74	16	4	0	1	0	0	
0	0	0	0	79	4	0	0	1	0	0	84	331	45	7	1	8	0	1	
0	0	0	0	6	0	0	0	0	0	0	6	86	10	0	0	2	0	0	
0	0	0	0	4	0	0	0	0	0	0	4	67	2	0	0	0	0	0	
0	0	0	0	8	0	0	0	0	0	0	8	59	7	1	0	1	0	0	
0	0	0	0	7	0	0	0	0	0	0	7	85	7	2	0	0	0	1	
0	0	0	0	25	0	0	0	0	0	0	25	297	26	3	0	3	0	1	
0	0	0	0	6	1	0	0	0	0	0	7	66	8	1	1	2	0	0	
0	0	0	0	3	1	0	0	0	0	0	4	78	8	2	2	0	0	2	
0	0	0	0	3	0	0	0	0	0	0	3	76	15	4	0	0	0	1	
0	0	0	0	9	0	0	0	0	0	0	9	104	8	1	3	1	0	1	
0	0	0	0	21	2	0	0	0	0	0	23	324	39	8	6	3	0	4	
0	0	0	0	5	0	0	0	0	0	0	5	88	7	2	1	2	0	1	
0	0	0	0	5	1	0	0	0	0	0	6	99	11	2	0	0	0	0	
0	0	0	0	1	0	0	0	0	0	0	1	109	3	3	2	1	0	0	
0	0	0	0	4	0	0	0	0	0	0	4	84	9	0	0	0	0	1	
0	0	0	0	15	1	0	0	0	0	0	16	380	30	7	3	3	0	2	
0	0	0	0	11	3	0	0	0	0	0	14	101	11	1	0	2	1	0	
0	0	0	0	14	0	1	0	0	0	0	15	127	3	3	1	1	0	1	
0	0	0	0	8	1	0	0	1	0	0	10	95	11	5	2	1	0	0	
0	0	0	0	15	1	1	1	0	0	0	18	112	11	2	1	1	0	0	
0	0	0	0	48	5	2	1	1	0	0	57	435	36	11	4	5	1	1	
0	0	0	0	6	0	0	0	0	0	0	6	125	8	1	0	2	0	0	
0	0	0	0	12	2	1	0	0	0	0	15	97	6	1	1	3	0	0	
0	0	0	0	12	4	1	0	0	0	0	17	117	11	0	1	0	0	0	
0	0	0	0	20	0	0	0	1	0	0	21	98	6	3	2	1	1	0	
0	0	0	0	50	6	2	0	1	0	0	59	437	31	5	4	6	1	0	
0	0	0	0	5	1	0	0	0	0	0	6	91	13	0	1	1	0	0	
0	0	0	0	7	0	0	0	0	0	0	7	108	1	0	1	2	0	1	
0	0	0	0	9	1	0	0	0	0	0	10	103	3	1	0	1	0	1	
0	0	0	0	12	1	0	0	0	0	0	13	97	9	0	0	2	0	0	
0	0	0	0	33	3	0	0	0	0	0	36	399	26	1	2	6	0	2	
0	0	0	0	9	0	0	0	0	0	0	9	107	7	1	1	0	0	1	
0	0	0	0	12	0	0	0	0	0	0	12	93	7	0	0	3	0	0	
0	0	0	0	6	0	0	0	0	0	0	6	121	5	1	0	3	1	0	
0	0	0	0	5	1	0	0	0	0	0	6	122	4	0	1	2	0	1	
0	0	0	0	32	1	0	0	0	0	0	33	443	23	2	2	8	1	2	
0	0	0	0	5	0	0	0	0	0	0	5	84	4	0	1	1	0	0	
0	0	0	0	4	0	0	0	0	0	0	4	103	2	0	0	2	0	0	
0	0	0	0	10	0	0	0	0	0	0	10	118	6	0	0	0	0	0	
0	0	0	0	7	0	0	0	0	0	0	7	125	2	0	0	0	0	1	
0	0	0	0	26	0	0	0	0	0	0	26	430	14	0	1	3	0	1	
0	0	0	0	8	0	0	0	0	0	0	8	126	4	0	0	1	0	1	
0	0	0	0	4	0	0	0	0	0	0	4	100	6	0	0	2	0	1	
0	0	0	0	6	1	0	0	0	0	0	7	118	1	0	0	1	0	1	
0	0	0	0	11	0	0	0	0	0	0	11	101	2	0	0	0	0	0	
0	0	0	0	29	1	0	0	0	0	0	30	445	13	0	0	4	0	3	
0	0	0	0	5	0	0	0	0	0	0	5	122	3	0	0	1	0	0	
0	0	0	0	5	0	0	0	0	0	0	5	112	3	0	0	1	0	0	
0	0	0	0	4	0	0	0	0	0	0	4	102	3	0	0	1	0	1	
0	0	0	0	9	0	0	0	0	0	0	9	92	0	0	0	1	0	0	
0	0	0	0	23	0	0	0	0	0	0	23	428	9	0	0	4	0	1	
0	0	0	0	472	28	4	1	3	0	0	508	5036	336	62	30	75	3	19	



TOT	C => B							TOT	C => C							TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	
38	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
56	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
63	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2
113	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
270	8	0	0	0	0	0	0	8	2	0	0	0	0	0	0	2
116	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
118	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
119	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
509	13	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
115	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
96	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
87	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
95	6	1	0	0	0	0	0	7	1	0	0	0	0	0	0	1
393	15	1	0	0	0	0	0	16	1	0	0	0	0	0	0	1
98	5	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0
69	8	2	0	0	0	0	0	10	2	0	0	0	0	0	0	2
68	5	1	0	0	0	0	0	6	1	0	0	0	0	0	0	1
95	12	0	0	0	0	0	0	12	1	0	0	0	0	0	0	1
330	30	3	1	0	0	0	0	34	4	0	0	0	0	0	0	4
78	10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
92	7	1	0	0	0	0	0	8	0	1	0	0	0	0	0	1
96	3	0	0	0	0	0	0	3	0	1	0	0	0	0	0	1
118	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
384	27	2	0	0	0	0	0	29	0	2	0	0	0	0	0	2
101	6	0	0	0	0	0	0	6	1	0	0	0	0	0	0	1
112	8	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
118	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
94	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
425	27	2	0	0	0	0	0	29	1	0	0	0	0	0	0	1
116	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
136	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
114	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
127	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
493	5	2	0	0	0	0	0	7	0	0	0	0	0	0	0	0
136	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
108	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
129	2	0	0	0	0	0	0	2	1	1	0	0	0	0	0	2
111	9	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
484	13	1	0	0	0	0	0	14	1	1	0	0	0	0	0	2
106	4	0	0	0	0	0	0	4	1	0	0	0	0	0	0	1
113	3	1	0	0	0	0	0	4	1	0	0	0	0	0	0	1
109	8	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
108	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
436	21	3	0	0	0	0	0	24	2	0	0	0	0	0	0	2
117	9	2	0	0	0	0	0	11	0	0	0	0	0	0	0	0
103	21	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0
131	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
130	11	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0
481	47	4	0	0	0	0	0	51	0	0	0	0	0	0	0	0
90	14	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
107	11	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
124	3	0	0	0	0	0	0	3	1	0	0	0	0	0	0	1
128	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0
449	44	0	0	0	0	0	0	44	1	0	0	0	0	0	0	1
132	11	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0
109	11	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0
121	17	1	0	0	0	0	0	18	0	0	0	0	0	0	0	0
103	11	0	0	0	0	0	0	11	1	0	0	0	0	0	0	1
465	50	3	0	0	0	0	0	53	1	0	0	0	0	0	0	1
126	19	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0
116	13	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
107	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
93	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
442	39	0	0	0	0	0	0	39	1	0	0	0	0	0	0	1
5561	339	21	1	0	0	0	0	361	14	3	0	0	0	0	0	17

Survey Name :	ITS J-372 Malahide
Site:	Site 3
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	53.4508276,-6.1490066
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



TIME	A => A								TOT	A => B								TOT	CAR
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C			CAR	LGV	OGV1	OGV2	PSV	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	35
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
07:45	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	80
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>248</b>
08:00	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9	91
08:15	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	115
08:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	62
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>327</b>
09:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	40
09:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	1	6	71
09:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	91
09:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	83
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>14</b>	<b>285</b>
10:00	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9	61
10:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	92
10:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	67
10:45	0	0	0	0	0	0	0	0	0	8	0	2	1	0	0	0	0	11	60
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>280</b>
11:00	0	0	0	0	0	0	0	0	0	4	2	1	0	0	0	0	0	7	85
11:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	75
11:30	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	81
11:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	79
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>320</b>
12:00	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	4	67
12:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	71
12:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	79
12:45	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	4	74
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>291</b>
13:00	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	78
13:15	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	89
13:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	53
13:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	68
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>288</b>
14:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	89
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76
14:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	59
14:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	70
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>294</b>
15:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	75
15:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	73
15:30	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	10	87
15:45	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	7	80
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>315</b>
16:00	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	4	90
16:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	89
16:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	91
16:45	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	70
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>340</b>
17:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	85
17:15	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	79
17:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	80
17:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	83
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>327</b>
18:00	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	78
18:15	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	78
18:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	59
18:45	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	78
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>293</b>
19:00	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	73
19:15	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	95
19:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	56
19:45	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12	79
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>303</b>
<b>13 HR TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>227</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>240</b>	<b>3911</b>



A => C							B => A							B => B				
LGW	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGW	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGW	OGV1	OGV2
3	1	0	3	0	0	42	4	0	0	0	0	0	0	4	0	0	0	0
1	0	0	4	0	0	65	1	0	0	0	0	0	0	1	0	0	0	0
0	0	0	3	0	0	76	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	2	0	0	83	3	0	0	0	0	0	0	3	0	0	0	0
5	1	0	12	0	0	266	8	0	0	0	0	0	0	8	0	0	0	0
2	0	0	3	0	0	96	6	1	0	0	0	0	0	7	0	0	0	0
6	1	0	1	0	0	123	6	0	0	0	0	0	0	6	0	0	0	0
4	2	0	3	0	0	71	1	0	0	0	0	0	0	1	0	0	0	0
6	0	0	1	0	0	66	7	0	0	0	0	0	0	7	0	0	0	0
18	3	0	8	0	0	356	20	1	0	0	0	0	0	21	0	0	0	0
5	0	0	0	0	0	45	15	0	0	0	0	0	0	15	0	0	0	0
9	1	3	2	0	0	86	9	0	0	0	0	0	0	9	0	0	0	0
5	1	0	2	0	0	99	8	0	0	0	0	0	0	8	0	0	0	0
10	2	0	0	0	0	95	10	1	1	0	0	0	0	12	0	0	0	0
29	4	3	4	0	0	325	42	1	1	0	0	0	0	44	0	0	0	0
5	2	1	2	0	0	71	1	0	0	0	1	0	0	2	0	0	0	0
4	1	1	1	0	0	99	6	0	0	0	0	0	0	6	0	0	0	0
9	2	3	1	0	0	82	8	2	0	0	0	0	0	10	0	0	0	0
6	1	0	1	0	0	68	8	2	1	0	0	0	0	11	0	0	0	0
24	6	5	5	0	0	320	23	4	1	0	1	0	0	29	0	0	0	0
5	1	2	1	1	0	95	8	0	0	0	0	0	0	8	0	0	0	0
9	3	1	1	0	0	89	6	0	0	0	0	0	0	6	0	0	0	0
5	2	1	1	1	0	91	6	1	0	0	0	0	0	7	0	0	0	0
14	4	0	1	0	2	100	7	3	0	0	0	0	0	10	0	0	0	0
33	10	4	4	2	2	375	27	4	0	0	0	0	0	31	0	0	0	0
8	2	1	1	0	0	79	9	0	0	0	0	0	0	9	0	0	0	0
6	0	2	1	0	0	80	6	1	0	0	0	0	0	7	0	0	0	0
8	3	0	1	0	1	92	10	2	0	0	0	0	0	12	0	0	0	0
12	0	1	2	0	0	89	5	0	0	0	0	0	0	5	0	0	0	0
34	5	4	5	0	1	340	30	3	0	0	0	0	0	33	0	0	0	0
16	1	1	2	1	0	101	5	0	0	0	0	0	0	5	0	0	0	0
11	1	0	1	0	0	102	6	0	0	0	0	0	0	6	0	0	0	0
3	2	1	2	0	0	61	11	0	0	0	0	0	0	11	0	0	0	0
6	1	4	0	0	0	79	18	0	0	0	0	0	0	18	0	0	0	0
38	5	6	5	1	0	343	40	0	0	0	0	0	0	40	0	0	0	0
5	1	1	5	0	0	101	21	0	1	0	0	0	0	22	0	0	0	0
8	2	1	1	0	0	88	1	0	1	0	0	0	0	2	0	0	0	0
7	1	0	0	0	1	68	20	0	1	0	0	0	0	21	0	0	0	0
8	2	2	1	1	1	85	42	0	0	0	0	0	0	42	0	0	0	0
28	6	4	7	1	2	342	84	0	3	0	0	0	0	87	0	0	0	0
4	2	0	3	0	0	84	12	0	1	0	0	0	0	13	0	0	0	0
19	1	3	0	0	0	96	7	0	0	0	0	0	0	7	0	0	0	0
9	2	1	0	0	0	99	11	1	0	0	0	0	0	12	0	0	0	0
11	3	1	0	0	0	95	7	1	0	0	0	0	0	8	0	0	0	0
43	8	5	3	0	0	374	37	2	1	0	0	0	0	40	0	0	0	0
4	0	0	2	0	0	96	23	0	0	0	0	0	0	23	0	0	0	0
8	2	0	3	0	0	102	19	1	0	0	0	0	0	20	0	0	0	0
9	2	0	1	0	0	103	14	0	0	0	0	0	0	14	0	0	0	0
6	0	0	1	0	0	77	11	0	0	0	0	0	0	11	0	0	0	0
27	4	0	7	0	0	378	67	1	0	0	0	0	0	68	0	0	0	0
7	0	0	0	0	0	92	20	0	0	0	0	0	0	20	0	0	0	0
5	1	1	4	0	0	90	14	0	0	0	0	0	0	14	0	0	0	0
4	0	0	1	0	0	85	19	0	0	0	0	0	0	19	0	0	0	0
3	0	0	2	0	0	88	12	0	0	0	0	0	0	12	0	0	0	0
19	1	1	7	0	0	355	65	0	0	0	0	0	0	65	0	0	0	0
5	0	0	3	0	0	86	16	0	0	0	0	0	0	16	0	0	0	0
3	0	0	0	0	0	81	12	0	0	0	0	0	0	12	0	0	0	0
3	0	0	1	0	0	63	11	0	0	0	0	0	0	11	0	0	0	0
2	0	0	2	0	0	82	10	0	0	0	0	0	0	10	0	0	0	0
13	0	0	6	0	0	312	49	0	0	0	0	0	0	49	0	0	0	0
3	0	0	3	0	0	79	12	0	0	0	0	0	0	12	0	0	0	0
1	0	0	0	0	0	96	7	0	0	0	0	0	0	7	0	0	0	0
1	0	1	1	0	0	59	12	0	0	0	0	0	0	12	0	0	0	0
2	0	0	3	0	0	84	16	0	0	0	0	0	0	16	0	0	0	0
7	0	1	7	0	0	318	47	0	0	0	0	0	0	47	0	0	0	0
318	53	33	80	4	5	4404	539	16	6	0	1	0	0	562	0	0	0	0



				B => C								C => A							
PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	
0	0	0	0	10	0	0	0	0	0	0	10	27	1	0	1	2	0	0	
0	0	0	0	7	0	0	0	0	0	0	7	35	4	2	1	2	0	0	
0	0	0	0	13	0	0	0	0	0	0	13	45	5	1	0	3	0	0	
0	0	0	0	10	0	0	0	0	0	0	10	76	5	2	0	6	0	0	
0	0	0	0	40	0	0	0	0	0	0	40	183	15	5	2	13	0	0	
0	0	0	0	13	0	0	0	0	0	0	13	78	4	2	1	3	0	0	
0	0	0	0	13	0	0	1	0	0	0	14	91	4	0	0	1	0	1	
0	0	0	0	20	0	0	0	0	0	0	20	70	7	0	0	1	0	0	
0	0	0	0	20	1	0	0	0	0	0	21	110	7	0	0	1	0	0	
0	0	0	0	66	1	0	1	0	0	0	68	349	22	2	1	6	0	1	
0	0	0	0	18	2	0	0	0	0	0	20	88	5	0	0	1	0	1	
0	0	0	0	17	1	0	0	0	0	2	20	60	5	0	0	4	0	0	
0	0	0	0	4	1	0	0	0	0	0	5	63	10	0	0	2	0	1	
0	0	0	0	5	0	0	0	0	0	0	5	56	17	0	1	1	0	0	
0	0	0	0	44	4	0	0	0	0	2	50	267	37	0	1	8	0	2	
0	0	0	0	6	0	0	0	0	0	0	6	74	6	0	0	2	0	0	
0	0	0	0	12	1	0	0	0	0	0	13	61	1	0	0	0	0	0	
0	0	0	0	12	0	0	0	0	0	0	12	46	5	0	0	1	0	0	
0	0	0	0	10	0	1	0	0	0	0	11	131	16	0	1	2	0	1	
0	0	0	0	40	1	1	0	0	0	0	42	312	28	0	1	5	0	1	
0	0	0	0	8	0	0	0	0	0	0	8	58	9	0	1	2	0	0	
0	0	0	0	10	1	0	0	0	0	0	11	67	6	0	2	0	0	2	
0	0	0	0	2	0	0	0	0	0	0	2	53	12	0	0	0	0	1	
0	0	0	0	16	1	0	0	0	0	0	17	70	9	0	2	1	0	0	
0	0	0	0	36	2	0	0	0	0	0	38	248	36	0	5	3	0	3	
0	0	0	0	15	0	0	0	0	0	0	15	69	6	0	1	1	0	1	
0	0	0	0	14	2	0	0	0	0	0	16	94	9	0	0	1	0	0	
0	0	0	0	2	1	0	0	0	0	0	3	98	1	0	2	1	0	0	
0	0	0	0	13	1	0	0	0	0	0	14	76	7	0	0	0	0	1	
0	0	0	0	44	4	0	0	0	0	0	48	337	23	0	3	3	0	2	
0	0	0	0	11	0	0	0	0	0	0	11	78	8	0	0	2	1	0	
0	0	0	0	4	12	0	0	0	0	0	16	93	2	0	1	0	0	0	
0	0	0	0	17	0	0	1	0	0	0	18	78	11	0	1	1	0	0	
0	0	0	0	21	0	0	0	0	0	0	21	98	10	0	1	1	0	0	
0	0	0	0	53	12	0	1	0	0	0	66	347	31	0	3	4	1	0	
0	0	0	0	12	1	0	0	0	0	0	13	90	5	0	0	2	0	0	
0	0	0	0	11	3	0	0	0	0	0	14	70	5	0	1	2	0	0	
0	0	0	0	16	2	0	0	0	0	0	18	102	8	0	1	0	0	0	
0	0	0	0	9	0	1	0	0	0	0	10	83	6	0	2	1	0	0	
0	0	0	0	48	6	1	0	0	0	0	55	345	24	0	4	5	0	0	
0	0	0	0	10	0	0	0	0	0	0	10	84	11	0	1	1	0	0	
0	0	0	0	18	2	0	0	0	0	0	20	92	2	0	1	2	0	0	
0	0	0	0	14	0	0	0	0	0	0	14	84	4	0	0	1	0	1	
0	0	0	0	14	0	0	0	0	0	0	14	80	10	0	0	2	0	0	
0	0	0	0	56	2	0	0	0	0	0	58	340	27	0	2	6	0	1	
0	0	0	0	12	0	0	0	0	0	0	12	93	7	0	1	0	0	0	
0	0	0	0	13	0	0	0	0	0	0	13	90	4	0	0	3	0	0	
0	0	0	0	13	1	0	0	0	0	0	14	101	6	0	0	3	0	1	
0	0	0	0	9	4	0	0	0	0	0	13	98	2	0	1	2	0	1	
0	0	0	0	47	5	0	0	0	0	0	52	382	19	0	2	8	0	2	
0	0	0	0	9	0	0	0	0	0	0	9	76	4	0	0	1	0	0	
0	0	0	0	10	0	0	0	0	0	0	10	79	0	0	0	2	0	0	
0	0	0	0	10	0	0	0	0	0	0	10	89	3	0	0	0	0	0	
0	0	0	0	11	1	0	0	0	0	0	12	101	2	0	0	0	0	0	
0	0	0	0	40	1	0	0	0	0	0	41	345	9	0	0	3	0	0	
0	0	0	0	19	0	0	0	0	0	0	19	92	3	0	0	1	0	0	
0	0	0	0	12	0	0	0	0	0	0	12	80	4	0	0	2	0	1	
0	0	0	0	9	0	0	0	0	0	0	9	99	2	0	0	1	0	0	
0	0	0	0	21	0	0	0	0	0	0	21	80	1	0	0	0	0	0	
0	0	0	0	61	0	0	0	0	0	0	61	351	10	0	0	4	0	1	
0	0	0	0	9	0	0	0	0	0	0	9	79	2	0	0	1	0	0	
0	0	0	0	10	0	0	0	0	0	0	10	84	2	0	0	1	0	0	
0	0	0	0	15	0	0	0	0	0	0	15	68	2	0	0	0	0	0	
0	0	0	0	12	0	0	0	0	0	0	12	40	0	0	0	1	0	0	
0	0	0	0	46	0	0	0	0	0	0	46	271	6	0	0	3	0	0	
0	0	0	0	621	38	2	2	0	0	2	665	4077	287	7	24	71	1	13	

TOT	C => B							TOT	C => C							TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	
31	5	0	0	0	0	0	0	5	0	0	0	1	0	0	0	1
44	6	2	1	0	0	0	0	9	0	0	0	0	0	0	0	0
54	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
89	17	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0
218	36	2	1	0	0	0	0	39	0	0	0	1	0	0	0	1
88	19	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0
97	21	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0
78	38	1	0	0	0	0	0	39	0	0	0	0	0	0	0	0
118	50	1	0	0	0	0	0	51	0	0	0	0	0	0	0	0
381	128	2	0	0	0	0	0	130	0	0	0	0	0	0	0	0
95	24	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0
69	15	1	0	0	0	0	0	16	0	0	0	0	0	0	0	0
76	10	2	0	0	0	0	0	12	0	0	0	0	0	0	0	0
75	11	0	0	0	0	0	0	11	1	0	0	0	0	0	0	1
315	60	3	0	0	0	0	0	63	1	0	0	0	0	0	0	1
82	9	0	0	0	0	0	0	9	1	0	0	0	0	0	0	1
62	8	0	0	0	0	0	0	8	1	0	0	0	0	0	0	1
52	14	1	0	0	0	0	0	15	0	0	0	0	0	0	0	0
151	17	0	0	0	0	0	0	17	2	0	0	0	0	0	0	2
347	48	1	0	0	0	0	0	49	4	0	0	0	0	0	0	4
70	11	0	0	0	0	0	0	11	1	0	0	0	0	0	0	1
77	10	0	1	0	0	0	0	11	1	0	0	0	0	0	0	1
66	9	3	1	0	0	0	0	13	2	0	0	0	0	0	0	2
82	11	0	0	0	0	0	0	11	1	0	0	0	0	0	0	1
295	41	3	2	0	0	0	0	46	5	0	0	0	0	0	0	5
78	20	1	0	0	0	0	0	21	0	0	0	0	0	0	0	0
104	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0
102	18	2	0	0	0	0	0	20	0	0	0	0	0	0	0	0
84	17	3	0	0	0	0	0	20	0	0	0	0	0	0	0	0
368	71	6	0	0	0	0	0	77	0	0	0	0	0	0	0	0
89	25	2	0	0	0	0	0	27	1	0	0	0	0	0	0	1
96	28	0	1	1	0	1	0	31	0	0	0	0	0	0	0	0
91	22	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0
110	20	1	1	0	0	0	0	22	0	0	0	0	0	0	0	0
386	95	3	2	1	0	1	0	102	1	0	0	0	0	0	0	1
97	33	1	0	0	0	0	0	34	1	0	0	0	0	0	0	1
78	20	2	0	0	1	0	0	23	2	0	0	0	0	0	0	2
111	28	1	0	0	0	0	0	29	0	0	0	0	0	0	0	0
92	13	0	1	0	0	0	0	14	0	0	0	0	0	0	0	0
378	94	4	1	0	1	0	0	100	3	0	0	0	0	0	0	3
97	15	1	0	0	0	0	0	16	0	0	0	0	0	0	0	0
97	13	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
90	14	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
92	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0
376	58	1	0	0	0	0	0	59	0	0	0	0	0	0	0	0
101	20	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
97	18	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0
111	13	1	0	0	0	0	0	14	0	0	0	0	0	0	0	0
104	17	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0
413	68	1	0	0	0	0	0	69	0	0	0	0	0	0	0	0
81	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
81	8	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
92	14	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0
103	15	0	0	0	0	0	0	15	1	0	0	0	0	0	0	1
357	42	1	0	0	0	0	0	43	1	0	0	0	0	0	0	1
96	19	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0
87	7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
102	13	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
81	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0
366	55	1	0	0	0	0	0	56	0	0	0	0	0	0	0	0
82	18	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0
87	20	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
70	27	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0
41	19	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0
280	84	0	0	0	0	0	0	84	0	0	0	0	0	0	0	0
4480	880	28	6	1	1	1	0	917	15	0	0	1	0	0	0	16

Survey Name :	ITS J-372 Malahide
Site:	Site 3
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	<a href="#">53.4489025,-6.1531956</a>
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



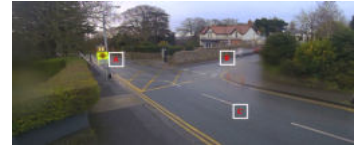
TIME	A => A								TOT	A => B								TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT			
07:00	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	8	1	
07:15	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20	29	0	
07:30	1	0	0	0	0	0	0	1	1	26	0	0	0	2	0	0	28	25	2	
07:45	0	0	0	0	0	0	0	0	0	29	2	0	0	1	0	0	32	41	1	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>83</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>88</b>	<b>103</b>	<b>4</b>	
08:00	0	0	0	0	0	0	0	0	0	50	2	1	0	0	0	0	53	42	0	
08:15	0	0	0	0	0	0	0	0	0	106	4	0	0	2	0	0	112	75	2	
08:30	0	0	0	0	0	0	0	0	0	108	1	2	0	0	0	0	111	72	4	
08:45	0	0	0	0	0	0	0	0	0	63	1	0	0	2	0	0	66	88	3	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>327</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>342</b>	<b>277</b>	<b>9</b>	
09:00	0	0	0	0	0	0	0	0	0	65	1	1	0	0	0	0	67	86	3	
09:15	0	0	0	0	0	0	0	0	0	47	1	0	0	1	0	0	49	76	2	
09:30	0	0	0	0	0	0	0	0	0	20	2	0	0	0	0	1	23	54	5	
09:45	0	0	0	0	0	0	0	0	0	21	5	1	0	2	0	0	29	46	5	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>153</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>168</b>	<b>262</b>	<b>15</b>	
10:00	0	0	0	0	0	0	0	0	0	30	6	0	0	0	0	0	36	51	8	
10:15	0	0	0	0	0	0	0	0	0	32	3	0	0	1	0	0	36	48	1	
10:30	1	0	0	0	0	0	0	1	1	28	4	1	0	1	0	0	34	48	2	
10:45	2	0	0	0	0	0	0	2	2	32	1	1	0	0	0	0	34	50	7	
<b>H/TOT</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>122</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>197</b>	<b>18</b>	
11:00	0	0	0	0	0	0	0	0	0	27	1	4	0	1	0	0	33	52	1	
11:15	0	0	0	0	0	0	0	0	0	31	2	1	0	0	0	0	34	44	4	
11:30	0	0	0	0	0	0	0	0	0	34	5	0	0	0	0	0	39	56	7	
11:45	0	0	0	0	0	0	0	0	0	38	2	0	0	1	0	0	41	42	3	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>130</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>147</b>	<b>194</b>	<b>15</b>	
12:00	0	0	0	0	0	0	0	0	0	29	1	1	0	0	0	0	31	52	4	
12:15	0	0	0	0	0	0	0	0	0	45	2	1	0	1	0	0	49	57	4	
12:30	0	0	0	0	0	0	0	0	0	32	2	0	0	1	1	0	36	43	4	
12:45	0	0	0	0	0	0	0	0	0	34	2	0	0	0	0	0	36	50	3	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>152</b>	<b>202</b>	<b>15</b>	
13:00	0	0	0	0	0	0	0	0	0	44	5	0	0	0	0	0	49	62	8	
13:15	0	0	0	0	0	0	0	0	0	41	6	2	1	1	0	0	51	50	1	
13:30	1	0	0	0	0	0	0	1	1	29	3	1	0	2	0	0	35	47	3	
13:45	1	0	0	0	0	0	0	1	1	49	5	1	0	1	0	0	56	60	4	
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>163</b>	<b>19</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>191</b>	<b>219</b>	<b>16</b>	
14:00	0	0	0	0	0	0	0	0	0	28	4	0	0	0	0	0	32	57	2	
14:15	0	0	0	0	0	0	0	0	0	43	3	1	0	1	0	0	48	48	6	
14:30	0	0	0	0	0	0	0	0	0	47	1	0	0	1	0	0	49	69	7	
14:45	0	0	0	0	0	0	0	0	0	53	4	0	0	1	0	0	58	75	7	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>171</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>187</b>	<b>249</b>	<b>22</b>	
15:00	1	0	0	0	0	0	0	1	1	42	1	0	0	0	0	0	43	40	6	
15:15	0	0	0	0	0	0	0	0	0	39	6	0	0	1	0	0	46	58	5	
15:30	0	0	0	0	0	0	0	0	0	58	2	0	0	0	0	0	60	52	2	
15:45	0	0	0	0	0	0	0	0	0	68	1	1	0	0	0	0	70	64	5	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>207</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>214</b>	<b>18</b>	
16:00	0	0	0	0	0	0	0	0	0	41	0	0	0	1	0	0	42	88	2	
16:15	0	0	0	0	0	0	0	0	0	33	3	0	0	0	0	0	36	59	5	
16:30	0	0	0	0	0	0	0	0	0	34	1	0	0	2	0	0	37	66	3	
16:45	0	0	0	0	0	0	0	0	0	38	1	0	0	0	0	0	39	54	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>146</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>154</b>	<b>267</b>	<b>11</b>	
17:00	1	0	0	0	0	0	0	1	1	52	5	0	0	1	0	0	58	59	1	
17:15	0	0	0	0	0	0	0	0	0	31	2	0	0	0	0	0	33	54	2	
17:30	0	0	0	0	0	0	0	0	0	46	1	0	0	1	0	0	48	67	1	
17:45	0	0	0	0	0	0	0	0	0	43	1	0	0	1	0	0	45	49	1	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>172</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>184</b>	<b>229</b>	<b>5</b>	
18:00	0	0	0	0	0	0	0	0	0	41	0	0	0	1	0	0	42	60	5	
18:15	0	0	0	0	0	0	0	0	0	35	1	0	0	2	0	0	38	64	0	
18:30	0	0	0	0	0	0	0	0	0	46	2	0	0	2	0	0	50	57	2	
18:45	0	0	0	0	0	0	0	0	0	46	0	0	0	3	0	0	49	66	2	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>247</b>	<b>9</b>	
19:00	0	0	0	0	0	0	0	0	0	52	0	0	0	2	0	0	54	58	0	
19:15	0	0	0	0	0	0	0	0	0	44	0	0	0	1	0	0	45	47	3	
19:30	0	0	0	0	0	0	0	0	0	36	1	0	0	1	0	0	38	55	0	
19:45	1	0	0	0	0	0	0	1	1	42	0	0	0	1	0	0	43	43	0	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>174</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>203</b>	<b>3</b>	
<b>13 HR TOT</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>2156</b>	<b>109</b>	<b>20</b>	<b>1</b>	<b>43</b>	<b>1</b>	<b>1</b>	<b>2331</b>	<b>2863</b>	<b>160</b>	





B => A					B => B									
OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
0	0	0	0	0	9	0	0	0	0	0	0	0	0	
0	0	2	0	0	31	0	0	0	0	0	0	0	0	
0	0	3	0	1	31	0	0	0	0	0	0	0	0	
0	0	2	0	0	44	0	0	0	0	0	0	0	0	
0	0	7	0	1	115	0	0	0	0	0	0	0	0	
1	0	4	0	0	47	0	0	0	0	0	0	0	0	
0	0	1	0	0	78	0	0	0	0	0	0	0	0	
0	0	1	0	0	77	0	0	0	0	0	0	0	0	
0	0	1	0	0	92	0	0	0	0	0	0	0	0	
1	0	7	0	0	294	0	0	0	0	0	0	0	0	
0	0	0	0	0	89	0	0	0	0	0	0	0	0	
0	0	1	0	0	79	0	0	0	0	0	0	0	0	
1	0	1	0	0	61	0	0	0	0	0	0	0	0	
0	0	0	0	0	51	0	0	0	0	0	0	0	0	
1	0	2	0	0	280	0	0	0	0	0	0	0	0	
0	0	0	0	0	59	0	0	0	0	0	0	0	0	
1	0	1	0	0	51	0	0	0	0	0	0	0	0	
0	0	0	0	0	50	0	0	0	0	0	0	0	0	
0	0	1	0	0	58	0	0	0	0	0	0	0	0	
1	0	2	0	0	218	0	0	0	0	0	0	0	0	
4	0	0	0	0	57	0	0	0	0	0	0	0	0	
2	0	1	0	0	51	0	0	0	0	0	0	0	0	
1	0	0	0	0	64	1	0	0	0	0	0	0	1	
0	0	1	0	0	46	0	0	0	0	0	0	0	0	
7	0	2	0	0	218	1	0	0	0	0	0	0	1	
1	0	0	0	1	58	0	0	0	0	0	0	0	0	
0	0	1	1	0	63	0	0	0	0	0	0	0	0	
0	0	0	0	0	47	0	0	0	0	0	0	0	0	
1	0	1	0	0	55	0	0	0	0	0	0	0	0	
2	0	2	1	1	223	0	0	0	0	0	0	0	0	
2	0	0	1	0	73	0	0	0	0	0	0	0	0	
1	0	1	0	0	53	0	0	0	0	0	0	0	0	
0	1	0	0	0	51	0	0	0	0	0	0	0	0	
1	0	3	0	0	68	0	1	0	0	0	0	0	1	
4	1	4	1	0	245	0	1	0	0	0	0	0	1	
0	0	0	0	0	59	0	0	0	0	0	0	0	0	
1	0	1	0	0	56	0	0	0	0	0	0	0	0	
0	0	1	0	0	77	0	0	0	0	0	0	0	0	
1	0	1	0	0	84	1	0	0	0	0	0	0	1	
2	0	3	0	0	276	1	0	0	0	0	0	0	1	
0	0	0	0	0	46	0	0	0	0	0	0	0	0	
0	0	1	0	1	65	0	0	0	0	0	0	0	0	
0	0	0	0	0	54	0	0	0	0	0	0	0	0	
0	0	1	0	0	70	1	0	0	0	0	0	0	1	
0	0	2	0	1	235	1	0	0	0	0	0	0	1	
0	0	0	0	2	92	0	0	0	0	0	0	0	0	
0	0	1	0	0	65	0	0	0	0	0	0	0	0	
0	0	1	0	0	70	0	0	0	0	0	0	0	0	
0	0	1	0	1	57	0	0	0	0	0	0	0	0	
0	0	3	0	3	284	0	0	0	0	0	0	0	0	
0	0	0	0	0	60	0	0	0	0	0	0	0	0	
1	0	1	0	0	58	0	0	0	0	0	0	0	0	
0	0	1	0	0	69	0	0	0	0	0	0	0	0	
1	0	0	0	0	51	0	0	0	0	0	0	0	0	
2	0	2	0	0	238	0	0	0	0	0	0	0	0	
0	0	1	0	3	69	0	0	0	0	0	0	0	0	
0	0	1	0	0	65	0	0	0	0	0	0	0	0	
0	0	0	0	0	59	0	0	0	0	0	0	0	0	
0	0	1	0	0	69	0	0	0	0	0	0	0	0	
0	0	3	0	3	262	0	0	0	0	0	0	0	0	
0	0	1	0	0	59	0	0	0	0	0	0	0	0	
0	0	1	0	0	51	0	0	0	0	0	0	0	0	
0	0	0	0	0	55	0	0	0	0	0	0	0	0	
1	0	1	0	0	45	0	0	0	0	0	0	0	0	
1	0	3	0	0	210	0	0	0	0	0	0	0	0	
21	1	42	2	9	3098	3	1	0	0	0	0	0	4	

Survey Name :	ITS J-372 Malahide
Site:	Site 3
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	53.4473207,-6.1528574
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



TIME	A => A								TOT	A => B								TOT	CAR				
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	CAR		LGV	OGV1	OGV2	PSV	M/C	P/C								
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
07:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	25
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>86</b>
08:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	39
08:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	102
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>314</b>
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
09:15	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	46
09:30	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	21
09:45	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3	10
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>154</b>
10:00	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	20
10:15	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	19
10:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	24
10:45	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	6	28
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>91</b>
11:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	24
11:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	29
11:30	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	31
11:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	32
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>116</b>
12:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	31
12:15	0	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	5	32
12:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	36
12:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	29
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>128</b>
13:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	41
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>159</b>
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167</b>
15:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	38
15:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	39
15:30	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5	39
15:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	75
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>191</b>
16:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	28
16:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	28
16:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	31
16:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	31
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>118</b>
17:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	60
17:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	32
17:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	38
17:45	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	42
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>172</b>
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
18:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	31
18:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	34
18:45	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	42
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>149</b>
19:00	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	44
19:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	42
19:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	31
19:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	36
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>153</b>
<b>13 HR TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>112</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>122</b>	<b>1998</b>



A => C							B => A							B => B				
LGv	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGv	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGv	OGV1	OGV2
0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	18	3	0	0	0	0	0	0	3	0	0	0	0
0	0	0	2	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	2	0	0	37	1	1	0	0	0	0	0	2	0	0	0	0
3	0	0	4	0	0	93	4	1	0	0	0	0	0	5	0	0	0	0
4	0	0	0	0	0	43	4	0	0	0	0	0	0	4	0	0	0	0
4	0	0	2	0	1	109	1	1	0	0	0	0	0	2	0	0	0	0
2	1	0	0	0	0	109	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	2	0	0	72	0	0	0	0	0	0	0	0	0	0	0	0
12	2	0	4	0	1	333	5	1	0	0	0	0	0	6	0	0	0	0
3	1	0	0	0	0	81	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	1	0	0	48	7	0	0	0	0	0	0	7	0	0	0	0
1	0	0	0	0	0	22	12	0	0	0	0	0	0	12	0	0	0	0
1	0	0	2	0	0	13	4	1	0	0	0	0	0	5	0	0	0	0
6	1	0	3	0	0	164	23	1	0	0	0	0	0	24	0	0	0	0
6	0	0	0	0	0	26	2	0	0	0	0	0	0	2	0	0	0	0
1	0	0	1	0	0	21	3	0	0	0	0	0	0	3	0	0	0	0
4	1	0	0	0	0	29	7	0	0	0	0	0	0	7	0	0	0	0
0	1	0	1	0	0	30	3	1	0	0	0	0	0	4	0	0	0	0
11	2	0	2	0	0	106	15	1	0	0	0	0	0	16	0	0	0	0
1	3	0	0	0	0	28	3	0	0	0	0	0	0	3	0	0	0	0
1	1	0	1	0	0	32	5	0	0	0	0	0	0	5	0	0	0	0
5	0	0	0	0	0	36	5	0	0	0	0	0	0	5	0	0	0	0
2	0	0	1	0	0	35	5	1	0	0	0	0	0	6	0	0	0	0
9	4	0	2	0	0	131	18	1	0	0	0	0	0	19	0	0	0	0
0	1	0	0	0	0	32	4	0	0	0	0	0	0	4	0	0	0	0
1	0	0	0	0	0	33	5	0	0	0	0	0	0	5	0	0	0	0
1	0	0	0	1	0	38	7	1	0	0	0	0	0	8	0	0	0	0
2	0	0	0	0	0	31	3	0	0	0	0	0	0	3	0	0	0	0
4	1	0	0	1	0	134	19	1	0	0	0	0	0	20	0	0	0	0
4	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	0	0	0
7	1	0	1	0	0	53	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	9	1	0	47	0	0	0	0	0	0	0	0	0	0	0	0
6	1	0	3	0	0	51	0	0	0	0	0	0	0	0	0	0	0	0
20	3	0	13	1	0	196	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0
3	1	0	1	0	0	47	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	1	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	0	0	63	10	0	0	0	0	0	0	10	0	0	0	0
11	1	0	3	0	0	182	10	0	0	0	0	0	0	10	0	0	0	0
2	0	0	0	0	0	40	4	0	0	0	0	0	0	4	0	0	0	0
4	1	0	0	0	0	44	2	0	0	0	0	0	0	2	0	0	0	0
1	0	0	1	0	0	41	6	1	0	0	0	0	0	7	0	0	0	0
2	0	0	0	0	0	77	8	0	0	0	0	0	0	8	0	0	0	0
9	1	0	1	0	0	202	20	1	0	0	0	0	0	21	0	0	0	0
0	0	0	1	0	0	29	9	0	0	0	0	0	0	9	0	0	0	0
5	0	0	0	0	0	33	7	3	0	0	0	0	0	10	0	0	0	0
0	0	0	2	0	0	33	9	0	0	0	0	0	0	9	0	0	0	0
3	0	0	0	0	0	34	3	0	0	0	0	0	0	3	0	0	0	0
8	0	0	3	0	0	129	28	3	0	0	0	0	0	31	0	0	0	0
5	0	0	1	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	35	7	1	0	0	0	0	0	8	0	0	0	0
2	0	0	1	0	0	41	3	0	0	0	0	0	0	3	0	0	0	0
1	0	0	1	0	0	44	2	0	0	0	0	0	0	2	0	0	0	0
11	0	0	3	0	0	186	12	1	0	0	0	0	0	13	0	0	0	0
1	0	0	1	0	0	44	2	0	0	0	0	0	0	2	0	0	0	0
0	0	0	2	0	0	33	7	0	0	0	0	0	0	7	0	0	0	0
3	0	0	2	0	0	39	6	0	0	0	0	0	0	6	0	0	0	0
2	0	0	3	0	0	47	4	0	0	0	0	0	0	4	0	0	0	0
6	0	0	8	0	0	163	19	0	0	0	0	0	0	19	0	0	0	0
0	0	0	2	0	0	46	11	0	0	0	0	0	0	11	0	0	0	0
0	0	0	0	0	0	42	7	2	0	0	0	0	0	9	0	0	0	0
1	0	0	2	0	0	34	5	0	0	0	0	0	0	5	0	0	0	0
0	0	0	1	0	0	37	1	0	0	0	0	0	0	1	0	0	0	0
1	0	0	5	0	0	159	24	2	0	0	0	0	0	26	0	0	0	0
111	15	0	51	2	1	2178	197	13	0	0	0	0	0	210	0	0	0	0



				B => C								C => A							
PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	1	1	0	0	0	0	0	2	89	1	0	0	1	0	0	90
0	0	0	0	9	1	0	0	0	0	0	10	26	0	0	0	2	0	0	26
0	0	0	0	5	0	0	0	0	0	0	5	25	2	0	0	3	0	0	27
0	0	0	0	11	0	0	0	0	0	0	11	33	2	1	0	2	0	2	36
0	0	0	0	26	2	0	0	0	0	0	28	173	5	1	0	8	0	2	181
0	0	0	0	25	3	0	0	0	0	0	28	42	1	2	0	3	0	0	45
0	0	0	0	27	1	0	0	0	0	0	28	74	2	0	0	0	0	0	76
0	0	0	0	1	0	0	0	0	0	0	1	87	3	0	0	2	0	0	90
0	0	0	0	0	0	0	0	0	0	0	0	96	6	0	0	1	0	0	102
0	0	0	0	53	4	0	0	0	0	0	57	299	12	2	0	6	0	0	311
0	0	0	0	0	0	0	0	0	0	0	0	83	4	0	0	0	0	0	87
0	0	0	0	25	3	0	0	0	0	0	28	52	3	0	0	1	0	0	55
0	0	0	0	38	1	0	0	0	0	0	39	42	4	1	0	1	0	0	47
0	0	0	0	21	0	0	0	0	0	0	21	41	4	0	0	0	0	0	45
0	0	0	0	84	4	0	0	0	0	0	88	218	15	1	0	2	0	0	233
0	0	0	0	19	0	0	0	0	0	0	19	38	4	0	0	0	0	0	42
0	0	0	0	18	1	0	0	0	0	0	19	40	0	1	0	1	0	0	41
0	0	0	0	19	3	0	0	0	0	0	22	35	3	0	0	0	0	0	38
0	0	0	0	22	1	0	1	0	0	0	24	47	6	0	0	1	0	0	53
0	0	0	0	78	5	0	1	0	0	0	84	160	13	1	0	2	0	0	173
0	0	0	0	29	1	0	0	0	0	0	30	43	1	3	0	0	0	0	44
0	0	0	0	23	6	2	0	0	0	0	31	38	3	1	0	1	0	1	42
0	0	0	0	13	2	1	0	0	0	0	16	51	9	1	0	0	0	0	61
0	0	0	0	27	1	1	0	0	0	0	29	46	2	0	0	1	0	0	49
0	0	0	0	92	10	4	0	0	0	0	106	178	15	5	0	2	0	1	193
0	0	0	0	24	2	0	0	0	0	0	26	41	2	0	0	0	0	1	43
0	0	0	0	20	0	0	1	0	0	0	21	52	5	0	0	1	0	0	57
0	0	0	0	24	5	0	0	0	0	0	29	35	3	0	0	0	0	0	38
0	0	0	0	19	2	0	0	0	0	0	21	44	3	1	0	1	0	0	47
0	0	0	0	87	9	0	1	0	0	0	97	172	13	1	0	2	0	1	185
0	0	0	0	2	0	0	0	0	0	0	2	62	7	2	0	0	0	0	69
0	0	0	0	0	0	0	0	0	0	0	0	57	1	0	0	1	0	0	58
0	0	0	0	0	0	0	0	0	0	0	0	48	4	0	0	1	0	0	52
0	0	0	0	0	0	0	0	0	0	0	0	51	5	0	0	2	0	0	56
0	0	0	0	2	0	0	0	0	0	0	2	218	17	2	0	4	0	0	235
0	0	0	0	0	0	0	0	0	0	0	0	58	3	0	0	0	0	0	61
0	0	0	0	0	0	0	0	0	0	0	0	50	4	2	0	0	0	0	54
0	0	0	0	0	0	0	0	0	0	0	0	68	8	0	0	1	0	0	76
0	0	0	0	11	1	0	0	0	0	0	12	55	5	1	0	1	0	0	60
0	0	0	0	11	1	0	0	0	0	0	12	231	20	3	0	2	0	0	254
0	0	0	0	4	0	0	0	0	0	0	4	39	5	1	0	0	0	0	44
0	0	0	0	17	0	0	0	0	0	0	17	48	5	0	0	1	0	1	53
0	0	0	0	24	3	0	0	0	0	0	27	44	2	0	0	0	0	0	46
0	0	0	0	36	1	0	0	0	0	0	37	58	3	0	0	1	0	0	61
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0	0	0	0	32	4	0	0	0	0	0	36	82	2	1	0	0	0	2	84
0	0	0	0	30	3	0	0	0	0	0	33	56	1	0	0	1	0	0	57
0	0	0	0	34	2	0	0	0	0	0	36	48	4	0	0	1	0	0	52
0	0	0	0	26	1	0	0	0	0	0	27	45	4	0	0	1	0	0	49
0	0	0	0	122	10	0	0	0	0	0	132	231	11	1	0	3	0	2	242
0	0	0	0	29	1	0	0	0	0	0	30	52	2	0	0	0	0	0	54
0	0	0	0	18	1	1	0	0	0	0	20	48	6	0	0	1	0	0	54
0	0	0	0	23	0	1	0	0	0	0	24	65	2	0	0	1	0	0	67
0	0	0	0	33	0	0	0	0	0	0	33	51	3	1	0	0	0	0	54
0	0	0	0	103	2	2	0	0	0	0	107	216	13	1	0	2	0	0	231
0	0	0	0	32	0	0	0	0	0	0	32	53	4	0	0	1	0	1	57
0	0	0	0	29	0	0	0	0	0	0	29	55	2	0	0	1	0	1	57
0	0	0	0	24	0	0	0	0	0	0	24	54	2	0	0	0	0	0	56
0	0	0	0	29	0	0	0	0	0	0	29	61	3	0	0	1	0	0	64
0	0	0	0	114	0	0	0	0	0	0	114	223	11	0	0	3	0	2	234
0	0	0	0	43	0	0	0	0	0	0	43	52	0	0	0	1	0	0	53
0	0	0	0	41	3	0	0	0	0	0	44	45	1	0	0	1	0	0	48
0	0	0	0	28	2	0	0	0	0	0	30	46	0	0	0	0	0	0	48
0	0	0	0	12	0	0	0	0	0	0	12	36	0	0	0	1	0	0	37
0	0	0	0	124	5	0	0	0	0	0	129	179	1	0	0	3	0	0	182
0	0	0	0	977	56	6	2	0	0	0	1041	2687	161	19	0	41	0	9	2867

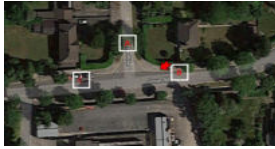


Survey Name :	ITS J-372 Malahide
Site:	Site 3
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	53.4474898,-6.1503887
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



TIME	A => A								TOT	A => B								TOT	CAR			
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	CAR		LGV	OGV1	OGV2	PSV	M/C	P/C							
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	
08:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	9
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>18</b>
09:00	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
09:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	8
09:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	8
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>22</b>
10:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	6
10:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	12
10:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4
10:45	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	18
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>40</b>
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
11:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	10
11:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4
11:45	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	16
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>37</b>
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
12:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>31</b>
13:00	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	10
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>10</b>
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	6
15:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>13</b>
16:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	8
16:15	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	12
16:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	11
16:45	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	17
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>48</b>
17:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	21
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
17:30	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	8
17:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	21
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>61</b>
18:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	16
18:15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	13
18:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19
18:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	23
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>71</b>
19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
19:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	7
19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>53</b>
<b>13 HR TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>	<b>415</b>





A => C							B => A							B => B					
LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	
0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	6	0	0	1	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	11	1	1	1	0	0	0	0	3	0	0	0	0	0
0	0	0	0	0	0	9	1	0	0	0	0	0	0	1	0	0	0	0	0
1	0	0	0	0	0	10	5	0	0	0	0	0	0	5	0	0	0	0	0
0	0	0	0	0	0	0	44	0	0	0	0	0	0	44	0	0	0	0	0
0	0	0	0	0	0	0	99	1	0	0	0	0	0	100	0	0	0	0	0
1	0	0	0	0	0	19	149	1	0	0	0	0	0	150	0	0	0	0	0
0	0	0	0	0	0	0	46	2	0	0	1	0	0	49	1	0	0	0	0
0	0	0	0	0	0	6	2	1	0	0	0	0	0	3	0	0	0	0	0
0	0	0	0	0	0	8	4	0	0	0	0	0	0	4	0	0	0	0	0
0	0	0	0	0	0	8	0	1	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	22	52	4	0	0	1	0	0	57	1	0	0	0	0
0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	12	2	1	0	0	0	0	0	3	0	0	0	0	0
1	0	0	0	0	0	5	2	0	0	0	0	0	0	2	0	0	0	0	0
1	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	42	4	1	0	0	0	0	0	5	0	0	0	0	0
0	0	0	0	0	0	7	1	0	1	0	0	0	0	2	0	0	0	0	0
2	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	4	1	0	0	0	0	0	0	1	1	0	0	0	0
0	0	0	0	0	0	16	2	0	0	0	0	0	0	2	0	0	0	0	0
2	0	0	0	0	0	39	4	0	1	0	0	0	0	5	1	0	0	0	0
0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	11	1	0	0	0	0	0	0	1	0	0	0	0	0
1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	8	2	0	0	0	0	0	0	2	0	0	0	0	0
2	0	0	0	0	0	33	3	0	0	0	0	0	0	3	0	0	0	0	0
0	0	0	0	0	0	0	11	2	0	0	0	0	0	13	0	0	0	0	0
0	0	0	0	0	0	0	14	0	1	0	0	0	0	15	0	0	0	0	0
0	0	0	0	0	0	0	14	0	0	0	1	0	0	15	0	0	0	0	0
0	0	0	0	0	0	0	13	1	1	0	0	0	0	15	0	0	0	0	0
0	0	0	0	0	0	0	52	3	2	0	1	0	0	58	0	0	0	0	0
0	0	0	0	0	0	0	7	0	0	0	0	0	0	7	0	0	0	0	0
0	0	0	0	0	0	0	12	2	1	0	0	0	0	15	0	0	0	0	0
0	0	0	0	0	0	0	27	1	0	0	0	0	0	28	0	0	0	0	0
0	0	0	0	0	0	10	14	0	0	0	1	0	0	15	0	0	0	0	0
0	0	0	0	0	0	10	60	3	1	0	1	0	0	65	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	2	1	1	0	0	0	0	0	2	0	0	0	0	0
2	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	5	2	0	0	0	0	0	0	2	0	0	0	0	0
3	0	0	0	0	0	16	4	1	0	0	0	0	0	5	0	0	0	0	0
2	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	12	2	0	0	0	0	0	0	2	0	0	0	0	0
0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	53	2	0	0	0	0	0	0	2	0	0	0	0	0
0	0	0	0	0	0	21	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	11	2	0	0	0	0	0	0	2	1	0	0	0	0
0	0	0	0	0	0	8	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	21	2	0	0	0	0	0	0	2	0	0	0	0	0
0	0	0	0	0	0	61	6	0	0	0	0	0	0	6	1	0	0	0	0
0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	13	1	1	0	0	0	0	0	2	0	0	0	0	0
0	0	0	0	0	0	19	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	23	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	71	3	1	0	0	0	0	0	4	0	0	0	0	0
0	0	0	0	0	0	20	1	0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	7	2	0	0	0	0	0	0	2	0	0	0	0	0
0	0	0	0	0	0	14	0	1	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	0	0	53	3	1	0	0	0	0	0	4	0	0	0	0	0
15	0	0	0	0	0	430	343	16	5	0	3	0	0	367	3	0	0	0	0

				B => C								C => A								
PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	9	1	0	0	0	0	0	10	2	0	0	0	0	0	0	0	12
0	0	0	0	3	1	0	0	0	0	0	4	3	0	0	0	0	0	0	7	
0	0	0	0	10	0	0	0	0	0	0	10	1	0	0	0	0	0	0	11	
0	0	0	0	22	2	0	0	0	0	0	24	6	0	0	0	0	0	0	30	
0	0	0	0	19	0	1	0	0	0	0	20	5	0	1	0	0	0	0	26	
0	0	0	0	16	0	0	0	0	0	0	16	7	0	0	0	0	0	0	23	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	35	0	1	0	0	0	0	36	12	0	1	0	0	0	0	45	
0	0	0	1	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	
0	0	0	0	25	3	0	0	0	0	0	28	1	0	0	0	0	0	0	34	
0	0	0	0	40	2	1	0	0	0	0	43	5	0	0	0	0	0	0	53	
0	0	0	0	17	1	0	0	0	0	0	18	4	0	0	0	0	0	0	22	
0	0	0	1	85	6	1	0	0	0	0	92	10	0	0	0	0	0	0	118	
0	0	0	0	14	0	0	0	0	0	0	14	10	0	0	0	0	0	0	24	
0	0	0	0	8	1	0	0	0	0	0	9	4	0	0	0	0	0	0	13	
0	0	0	0	18	2	0	0	0	0	0	20	6	0	0	0	0	0	0	26	
0	0	0	0	13	1	0	1	0	0	0	15	8	1	0	0	0	0	0	22	
0	0	0	0	53	4	0	1	0	0	0	58	28	1	0	0	0	0	0	72	
0	0	0	0	9	2	0	0	0	0	0	11	10	0	0	0	0	0	0	21	
0	0	0	0	20	3	0	0	0	0	0	23	4	0	0	0	0	0	0	27	
0	0	0	1	11	2	0	0	0	0	0	13	2	0	1	0	0	0	0	16	
0	0	0	0	14	1	0	0	0	0	0	15	3	0	0	0	0	0	0	18	
0	0	0	1	54	8	0	0	0	0	0	62	19	0	1	0	0	0	0	81	
0	0	0	0	16	2	0	0	0	0	0	18	9	1	0	0	0	0	0	27	
0	0	0	0	14	0	0	0	0	0	0	14	5	0	0	0	0	0	0	19	
0	0	0	0	26	4	0	0	0	0	1	31	5	0	0	0	0	0	0	37	
0	0	0	0	14	2	0	0	0	0	0	16	1	0	0	0	0	0	0	18	
0	0	0	0	70	8	0	0	0	0	1	79	20	1	0	0	0	0	0	101	
0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	28	2	0	0	0	0	0	30	7	0	0	0	0	0	0	37	
0	0	0	0	28	2	0	0	0	0	0	30	7	0	0	0	0	0	0	37	
0	0	0	0	18	2	0	0	0	0	0	20	4	0	0	0	0	0	0	24	
0	0	0	0	24	1	0	0	0	0	0	25	5	0	0	0	0	0	0	30	
0	0	0	0	19	1	0	0	0	0	0	20	9	2	0	0	0	0	0	29	
0	0	0	0	35	2	0	0	0	0	0	37	9	1	0	0	0	0	0	46	
0	0	0	0	96	6	0	0	0	0	0	102	27	3	0	0	0	0	0	132	
0	0	0	0	28	3	0	0	0	0	0	31	15	0	0	0	0	0	0	44	
0	0	0	0	17	2	0	0	0	0	0	19	14	0	0	0	0	0	0	33	
0	0	0	0	22	4	0	0	0	0	0	26	7	0	0	0	0	0	0	34	
0	0	0	0	12	0	0	0	0	0	0	12	8	2	0	0	0	0	0	20	
0	0	0	0	79	9	0	0	0	0	0	88	44	2	0	0	0	0	0	134	
0	0	0	0	8	0	0	0	0	0	0	8	8	0	0	0	0	0	0	16	
0	0	0	1	12	0	0	0	0	0	0	12	11	0	0	0	0	0	0	23	
0	0	0	0	12	0	0	0	0	0	0	12	8	0	0	0	0	0	0	20	
0	0	0	0	15	0	0	0	0	0	0	15	12	0	0	0	0	0	0	27	
0	0	0	1	47	0	0	0	0	0	0	47	39	0	0	0	0	0	0	86	
0	0	0	0	22	1	0	0	0	0	1	24	18	0	0	0	0	0	0	41	
0	0	0	0	18	0	0	0	0	0	0	18	6	0	0	0	0	0	0	24	
0	0	0	0	11	0	0	0	0	0	0	11	7	0	0	0	0	0	0	18	
0	0	0	0	9	0	0	0	0	0	0	9	7	0	0	0	0	0	0	16	
0	0	0	0	60	1	0	0	0	0	1	62	38	0	0	0	0	0	0	101	
0	0	0	0	21	0	0	0	0	0	0	21	8	0	0	0	0	0	0	29	
0	0	0	0	43	3	0	0	0	0	0	46	4	0	0	0	0	0	0	53	
0	0	0	0	16	0	0	0	0	0	0	16	7	0	0	0	0	0	0	23	
0	0	0	0	7	0	0	0	0	0	0	7	3	0	0	0	0	0	0	10	
0	0	0	0	87	3	0	0	0	0	0	90	22	0	0	0	0	0	0	112	
0	0	0	3	717	49	2	1	0	1	1	771	272	8	2	0	0	0	0	1065	

C => B									C => C								
TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C		TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	3	0	0	0	0	0	0		3	0	0	0	0	0	0	0	0
2	6	1	0	0	0	0	0		7	0	0	0	0	0	0	0	0
3	6	0	0	0	0	0	0		6	0	0	0	0	0	0	0	0
1	4	4	0	0	0	0	0		8	0	0	0	0	0	0	0	0
6	19	5	0	0	0	0	0		24	0	0	0	0	0	0	0	0
6	11	0	0	0	0	0	0		11	0	0	0	0	0	0	0	0
7	14	0	0	0	0	0	0		14	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
13	25	0	0	0	0	0	0		25	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
1	9	0	1	0	0	0	0		10	1	0	0	0	0	0	0	1
5	8	0	1	0	0	0	0		9	0	0	0	0	0	0	0	0
4	9	1	1	0	0	0	0		11	0	0	0	0	0	0	0	0
10	26	1	3	0	0	0	0		30	1	0	0	0	0	0	0	1
10	7	3	0	0	0	0	0		10	0	0	0	0	0	0	0	0
4	6	0	0	0	0	0	0		6	1	0	0	0	0	0	0	1
6	10	2	0	0	0	0	0		12	0	0	0	0	0	0	0	0
9	8	2	1	0	0	0	0		11	0	0	0	0	0	0	0	0
29	31	7	1	0	0	0	0		39	1	0	0	0	0	0	0	1
10	11	1	0	1	0	0	0		13	0	0	0	0	0	0	0	0
4	10	1	0	0	0	0	0		11	0	0	0	0	0	0	0	0
3	9	1	0	0	0	0	0		10	1	1	0	0	0	0	0	2
3	12	2	0	0	0	0	0		14	0	0	0	0	0	0	0	0
20	42	5	0	1	0	0	0		48	1	1	0	0	0	0	0	2
10	10	1	1	0	0	0	0		12	1	0	0	0	0	0	0	1
5	12	3	1	0	0	0	0		16	0	0	0	0	0	0	0	0
5	6	2	0	0	0	0	0		8	0	0	0	0	0	0	0	0
1	6	0	0	0	0	0	0		6	0	0	0	0	0	0	0	0
21	34	6	2	0	0	0	0		42	1	0	0	0	0	0	0	1
1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
7	6	0	1	0	0	0	0		7	0	0	0	0	0	0	0	0
7	6	0	1	0	0	0	0		7	0	0	0	0	0	0	0	0
4	11	1	0	0	0	0	0		12	0	0	0	0	0	0	0	0
5	13	0	0	0	0	1	1		15	0	0	0	0	0	0	0	0
11	9	0	0	0	0	0	0		9	0	0	0	0	0	0	0	0
10	8	2	0	0	0	0	0		10	0	0	0	0	0	0	0	0
30	41	3	0	0	0	1	1		46	0	0	0	0	0	0	0	0
15	19	0	0	0	0	0	0		19	0	0	0	0	0	0	0	0
14	16	2	1	0	0	0	0		19	0	0	0	0	0	0	0	0
7	16	3	0	0	0	0	1		20	0	0	0	0	0	0	0	0
10	11	1	0	0	0	0	0		12	0	0	0	0	0	0	0	0
46	62	6	1	0	0	0	1		70	0	0	0	0	0	0	0	0
8	22	1	0	0	0	0	0		23	1	0	0	0	0	0	0	1
11	10	0	0	0	0	0	0		10	0	0	0	0	0	0	0	0
8	16	2	0	0	0	0	0		18	1	0	0	0	0	0	0	1
12	15	0	0	0	0	0	0		15	0	0	0	0	0	0	0	0
39	63	3	0	0	0	0	0		66	2	0	0	0	0	0	0	2
18	24	3	0	0	0	0	0		27	0	0	0	0	0	0	0	0
6	10	0	0	0	0	0	0		10	0	0	0	0	0	0	0	0
7	15	0	0	0	0	0	0		15	0	0	0	0	0	0	0	0
7	12	0	0	0	0	0	0		12	1	0	0	0	0	0	0	1
38	61	3	0	0	0	0	0		64	1	0	0	0	0	0	0	1
8	11	0	0	0	0	0	0		11	1	0	0	0	0	0	0	1
4	9	0	0	0	0	0	0		9	0	0	0	0	0	0	0	0
7	7	0	0	0	0	0	0		7	0	0	0	0	0	0	0	0
3	9	0	0	0	0	0	0		9	0	0	0	0	0	0	0	0
22	36	0	0	0	0	0	0		36	1	0	0	0	0	0	0	1
282	446	39	8	1	0	1	2		497	8	1	0	0	0	0	0	9



Survey Name :	ITS J-372 Malahide
Site:	Site 3
Date:	12.12.2019
Time:	07:00 - 20:00
Location:	<a href="#">53.4510366,-6.1537031</a>
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds

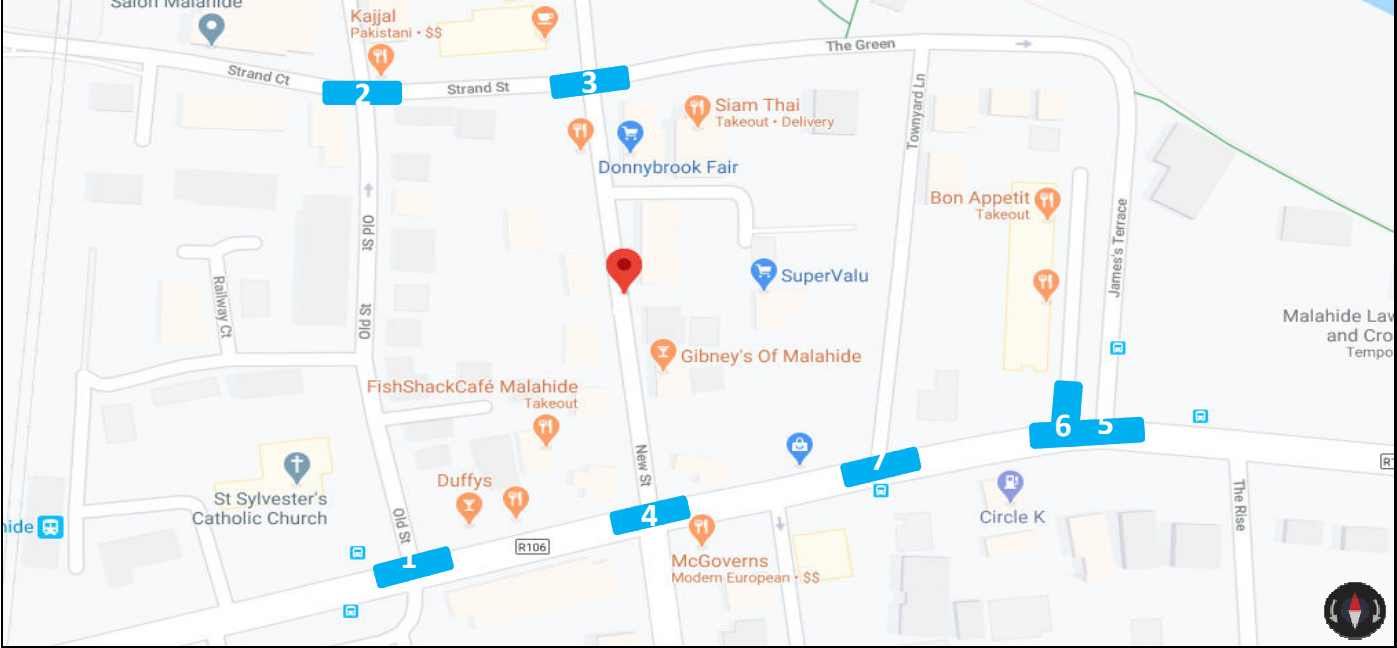


TIME	A => A								TOT	A => B								TOT	CAR
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C			CAR	LGV	OGV1	OGV2	PSV	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	0	17	2	1	0	0	0	0	20	5	
07:15	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16	6	
07:30	0	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	24	10	
07:45	0	0	0	0	0	0	0	0	0	28	1	0	0	0	0	0	29	14	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>85</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>35</b>	
08:00	0	0	0	0	0	0	0	0	0	37	3	0	0	0	0	1	41	23	
08:15	0	0	0	0	0	0	0	0	0	52	2	1	0	0	0	0	55	23	
08:30	0	0	0	0	0	0	0	0	0	54	0	0	0	0	0	0	54	23	
08:45	0	0	0	0	0	0	0	0	0	54	2	0	0	0	0	0	56	23	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>197</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>206</b>	<b>92</b>	
09:00	0	0	0	0	0	0	0	0	0	49	0	0	0	0	0	0	49	33	
09:15	0	0	0	0	0	0	0	0	0	45	3	0	0	0	0	0	48	33	
09:30	0	0	0	0	0	0	0	0	0	36	4	1	0	0	0	0	41	35	
09:45	0	0	0	0	0	0	0	0	0	33	6	1	0	0	0	0	40	30	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>178</b>	<b>131</b>	
10:00	0	0	0	0	0	0	0	0	0	41	8	1	0	0	0	0	50	30	
10:15	0	0	0	0	0	0	0	0	0	38	8	0	0	0	0	0	46	24	
10:30	0	0	0	0	0	0	0	0	0	27	4	1	0	0	0	0	32	26	
10:45	0	0	0	0	0	0	0	0	0	35	8	0	0	0	0	0	43	27	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>141</b>	<b>28</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>171</b>	<b>107</b>	
11:00	0	0	0	0	0	0	0	0	0	24	7	2	0	0	0	0	33	23	
11:15	0	0	0	0	0	0	0	0	0	26	6	1	0	0	0	0	33	34	
11:30	0	0	0	0	0	0	0	0	0	34	7	0	0	0	0	0	41	34	
11:45	0	0	0	0	0	0	0	0	0	32	9	0	1	0	0	0	42	34	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116</b>	<b>29</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>125</b>	
12:00	0	0	0	0	0	0	0	0	0	45	9	1	0	0	0	0	55	31	
12:15	0	0	0	0	0	0	0	0	0	31	1	2	0	0	0	0	34	44	
12:30	0	0	0	0	0	0	0	0	0	24	7	0	0	0	0	0	31	42	
12:45	0	0	0	0	0	0	0	0	0	38	6	0	0	0	0	0	44	39	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>138</b>	<b>23</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>164</b>	<b>156</b>	
13:00	0	0	0	0	0	0	0	0	0	37	11	0	0	0	0	0	48	33	
13:15	0	0	0	0	0	0	0	0	0	32	7	0	0	0	0	0	39	32	
13:30	0	0	0	0	0	0	0	0	0	31	2	0	0	0	0	0	33	25	
13:45	0	0	0	0	0	0	0	0	0	36	3	1	0	0	0	0	40	32	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>136</b>	<b>23</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>160</b>	<b>122</b>	
14:00	0	0	0	0	0	0	0	0	0	25	5	0	0	0	0	0	30	31	
14:15	0	0	0	0	0	0	0	0	0	36	3	1	0	0	0	0	40	26	
14:30	0	0	0	0	0	0	0	0	0	45	5	1	0	0	0	0	51	26	
14:45	0	0	0	0	0	0	0	0	0	36	6	0	0	0	0	0	42	29	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>19</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>163</b>	<b>112</b>	
15:00	0	0	0	0	0	0	0	0	0	28	4	1	1	0	0	0	34	34	
15:15	0	0	0	0	0	0	0	0	0	46	3	1	0	0	0	0	50	27	
15:30	0	0	0	0	0	0	0	0	0	47	5	0	0	0	0	0	52	27	
15:45	0	0	0	0	0	0	0	0	0	36	5	2	0	0	0	0	43	33	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>157</b>	<b>17</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>179</b>	<b>121</b>	
16:00	0	0	0	0	0	0	0	0	0	42	3	0	0	0	0	0	45	39	
16:15	0	0	0	0	0	0	0	0	0	38	4	0	0	0	0	0	42	38	
16:30	0	0	0	0	0	0	0	0	0	25	1	0	0	0	0	0	26	37	
16:45	0	0	0	0	0	0	0	0	0	40	4	1	0	0	0	0	45	33	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>145</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>158</b>	<b>147</b>	
17:00	0	0	0	0	0	0	0	0	0	49	1	1	0	0	0	0	51	36	
17:15	0	0	0	0	0	0	0	0	0	40	1	1	0	0	0	0	42	34	
17:30	0	0	0	0	0	0	0	0	0	45	2	1	0	0	0	0	48	45	
17:45	0	0	0	0	0	0	0	0	0	56	2	0	0	0	0	0	58	36	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>190</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>199</b>	<b>151</b>	
18:00	0	0	0	0	0	0	0	0	0	45	1	0	0	0	0	0	46	45	
18:15	0	0	0	0	0	0	0	0	0	52	0	0	0	0	0	0	52	61	
18:30	0	0	0	0	0	0	0	0	0	59	1	0	0	0	0	0	60	43	
18:45	0	0	0	0	0	0	0	0	0	37	2	0	0	0	0	0	39	58	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>193</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>197</b>	<b>207</b>	
19:00	0	0	0	0	0	0	0	0	0	56	0	0	0	0	0	0	56	51	
19:15	1	0	0	0	0	0	0	0	1	53	1	0	0	0	0	0	54	38	
19:30	0	0	0	0	0	0	0	0	0	60	1	0	0	0	0	0	61	53	
19:45	0	0	0	0	0	0	0	0	0	47	2	0	0	0	0	0	49	54	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>216</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>220</b>	<b>196</b>	
<b>13 HR TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2019</b>	<b>188</b>	<b>23</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2233</b>	<b>1702</b>	



B => A							B => B							
LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
1	0	0	0	0	0	6	0	0	0	0	0	0	0	0
1	0	0	2	0	0	9	0	0	0	0	0	0	0	0
3	3	0	1	0	0	17	0	0	0	0	0	0	0	0
1	1	0	0	0	0	16	0	0	0	0	0	0	0	0
6	4	0	3	0	0	48	0	0	0	0	0	0	0	0
1	0	0	1	0	0	25	0	0	0	0	0	0	0	0
1	0	0	1	0	0	25	0	0	0	0	0	0	0	0
0	0	0	1	0	0	24	0	0	0	0	0	0	0	0
1	0	0	0	0	0	24	0	0	0	0	0	0	0	0
3	0	0	3	0	0	98	0	0	0	0	0	0	0	0
2	0	0	0	0	0	35	0	0	0	0	0	0	0	0
1	1	0	0	0	0	35	0	0	0	0	0	0	0	0
3	0	0	1	0	0	39	0	0	0	0	0	0	0	0
3	1	0	0	0	0	34	0	0	0	0	0	0	0	0
9	2	0	1	0	0	143	0	0	0	0	0	0	0	0
3	0	0	1	0	0	34	0	0	0	0	0	0	0	0
3	1	0	0	0	0	28	0	0	0	0	0	0	0	0
1	0	0	0	0	0	27	0	0	0	0	0	0	0	0
3	0	0	0	0	0	30	0	0	0	0	0	0	0	0
10	1	0	1	0	0	119	0	0	0	0	0	0	0	0
4	1	0	1	0	0	29	0	0	0	0	0	0	0	0
2	0	0	0	0	1	37	0	0	0	0	0	0	0	0
3	2	1	0	0	0	40	0	0	0	0	0	0	0	0
4	1	0	0	0	0	39	0	0	0	0	0	0	0	0
13	4	1	1	0	1	145	0	0	0	0	0	0	0	0
2	2	0	1	0	1	37	0	0	0	0	0	0	0	0
0	0	0	0	0	0	44	0	0	0	0	0	0	0	0
1	1	0	0	0	1	45	0	0	0	0	0	0	0	0
2	1	0	0	0	0	42	0	0	0	0	0	0	0	0
5	4	0	1	0	2	168	0	0	0	0	0	0	0	0
5	0	0	1	0	0	39	0	0	0	0	0	0	0	0
0	1	0	0	0	0	33	0	0	0	0	0	0	0	0
1	0	0	0	0	0	26	0	0	0	0	0	0	0	0
2	0	0	0	0	0	34	0	0	0	0	0	0	0	0
8	1	0	1	0	0	132	0	0	0	0	0	0	0	0
2	0	0	1	0	0	34	0	0	0	0	0	0	0	0
3	1	0	1	0	0	31	0	0	0	0	0	0	0	0
2	0	0	0	0	0	28	0	0	0	0	0	0	0	0
3	0	1	0	1	0	34	0	0	0	0	0	0	0	0
10	1	1	2	1	0	127	0	0	0	0	0	0	0	0
4	0	0	0	0	0	38	0	0	0	0	0	0	0	0
5	0	0	1	1	1	35	0	0	0	0	0	0	0	0
2	2	0	0	0	0	31	0	0	0	0	0	0	0	0
1	0	0	0	0	0	34	0	0	0	0	0	0	0	0
12	2	0	1	1	1	138	0	0	0	0	0	0	0	0
0	0	0	1	0	0	40	0	0	0	0	0	0	0	0
2	1	0	0	0	0	41	0	0	0	0	0	0	0	0
2	2	0	0	0	0	41	0	0	0	0	0	0	0	0
4	0	0	1	0	0	38	0	0	0	0	0	0	0	0
8	3	0	2	0	0	160	0	0	0	0	0	0	0	0
4	0	0	0	0	0	40	0	0	0	0	0	0	0	0
1	0	0	1	1	0	37	0	0	0	0	0	0	0	0
0	0	0	0	0	0	45	0	0	0	0	0	0	0	0
1	0	0	0	0	0	37	0	0	0	0	0	0	0	0
6	0	0	1	1	0	159	0	0	0	0	0	0	0	0
2	0	0	1	0	1	49	0	0	0	0	0	0	0	0
1	0	0	2	0	0	64	0	0	0	0	0	0	0	0
2	0	0	1	0	0	46	1	0	0	0	0	0	0	1
3	0	0	0	0	0	61	0	0	0	0	0	0	0	0
8	0	0	4	0	1	220	1	0	0	0	0	0	0	1
0	0	0	0	0	0	51	0	0	0	0	0	0	0	0
0	0	0	0	0	0	38	0	0	0	0	0	0	0	0
0	0	0	0	0	0	53	0	0	0	0	0	0	0	0
0	0	0	0	0	0	54	0	0	0	0	0	0	0	0
0	0	0	0	0	0	196	0	0	0	0	0	0	0	0
98	22	2	21	3	5	1853	1	0	0	0	0	0	0	1

# Sites Overview





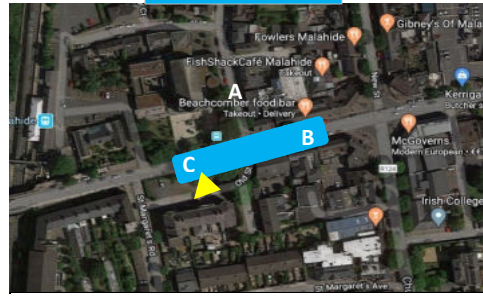
Survey Name :	ITS J-410 Malahide
Site:	1
Date:	15.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

Site 1, Card A5



Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	4 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

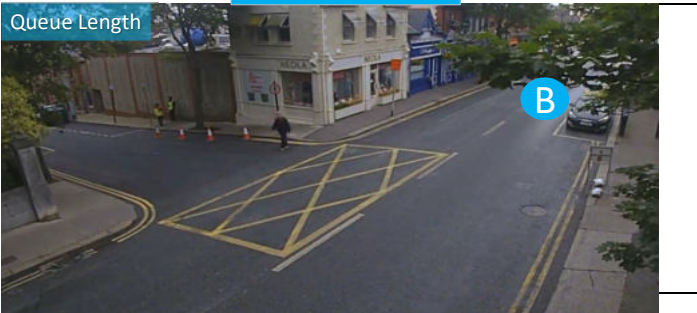
Mapping Image



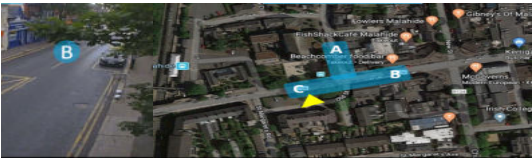
Site 1, Card Nov19



Site 1, Card A5







A => C							B => A								
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	1	1	0	0	3	0	0	5
0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	5
0	0	0	0	0	0	0	0	11	2	0	0	1	0	1	15
0	0	0	0	0	0	0	0	18	3	0	0	4	0	2	27
0	0	0	0	0	0	1	1	10	0	0	0	0	0	1	11
0	0	0	0	0	0	0	0	13	2	1	0	0	0	0	16
0	0	0	0	0	0	0	0	12	1	0	0	1	0	0	14
0	0	0	0	0	0	0	0	13	0	1	0	0	0	0	14
0	0	0	0	0	0	1	1	48	3	2	0	1	0	1	55
0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7
0	0	0	0	0	0	0	0	11	0	0	0	1	0	1	13
0	0	0	0	0	0	0	0	11	0	0	0	0	0	1	12
0	0	0	0	0	0	0	0	8	3	0	0	1	0	0	12
0	0	0	0	0	0	0	0	36	4	0	0	2	0	2	44
0	0	0	0	0	0	0	0	17	2	0	0	0	0	0	19
0	0	0	0	0	0	0	0	11	0	1	0	0	0	0	12
0	0	0	0	0	0	0	0	12	1	1	0	0	0	0	14
0	0	0	0	0	0	0	0	15	2	2	0	1	0	0	20
0	0	0	0	0	0	0	0	55	5	4	0	1	0	0	65
0	0	0	0	0	0	0	0	11	2	0	0	0	0	0	13
0	0	0	0	0	0	0	0	13	1	2	0	0	0	0	16
0	0	0	0	0	0	1	1	21	1	0	0	0	0	0	22
0	0	1	0	0	0	0	1	10	0	0	0	1	0	0	11
0	0	1	0	0	0	1	2	55	4	2	0	1	0	0	62
0	0	0	0	0	0	0	0	10	3	0	0	0	0	0	13
0	0	0	0	0	0	1	1	13	2	0	0	0	0	0	15
0	0	0	0	0	0	1	1	16	0	0	0	0	0	0	16
0	0	0	0	0	0	0	0	18	1	0	0	0	0	0	19
0	0	0	0	0	0	2	2	57	6	0	0	0	0	0	63
0	0	0	0	0	0	0	0	9	2	0	0	1	0	1	13
0	0	0	0	0	0	0	0	17	4	0	0	0	0	1	22
0	0	0	0	0	0	0	0	25	1	0	0	0	0	1	27
0	0	0	0	0	0	0	0	24	1	0	0	0	0	0	25
0	0	0	0	0	0	0	0	75	8	0	0	1	0	3	87
0	0	0	0	0	0	1	1	9	3	0	0	1	0	0	13
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16
0	0	0	0	0	0	2	2	14	0	1	0	0	0	0	15
0	0	0	0	0	0	3	3	48	3	1	0	1	0	0	53
0	0	0	0	0	0	0	0	11	4	0	0	1	0	0	16
0	0	0	0	0	0	0	0	16	3	0	0	0	0	1	20
0	0	0	0	0	0	1	1	13	1	0	0	1	0	0	15
0	0	0	0	0	0	0	0	15	1	0	0	0	0	0	16
0	0	0	0	0	0	1	1	55	9	0	0	2	0	1	67
0	0	0	0	0	0	0	0	15	1	0	0	2	0	0	18
0	0	0	0	0	0	0	0	7	3	0	0	0	0	0	10
0	0	0	0	0	0	0	0	17	1	0	0	1	0	0	19
0	1	0	0	0	0	0	1	18	2	0	0	0	1	0	21
0	1	0	0	0	0	0	1	57	7	0	0	3	1	0	68
0	0	0	0	0	0	1	1	18	3	0	0	0	0	0	21
0	0	0	0	0	0	0	0	24	1	0	0	0	0	3	28
0	0	0	0	0	0	1	1	18	3	0	0	1	0	0	22
0	0	0	0	0	0	1	1	21	1	0	0	0	0	0	22
0	0	0	0	0	0	3	3	81	8	0	0	1	0	3	93
0	0	0	0	0	0	0	0	14	1	0	0	1	0	0	16
0	0	0	0	0	0	0	0	12	2	0	0	0	0	0	14
0	0	0	0	0	0	0	0	23	1	0	0	0	0	0	24
0	0	0	0	0	0	0	0	26	1	0	0	0	0	0	27
0	0	0	0	0	0	0	0	75	5	0	0	1	0	0	81
0	1	1	0	0	0	11	13	660	65	9	0	18	1	12	765



B => B								B => C							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	36	2	0	0	2	0	1	41
0	0	0	0	0	0	0	0	37	6	1	0	2	0	1	47
0	0	0	0	0	0	0	0	46	4	1	1	2	0	4	58
0	0	0	0	0	0	0	0	40	6	1	0	1	1	3	52
0	0	0	0	0	0	0	0	159	18	3	1	7	1	9	198
0	0	0	0	0	0	0	0	60	4	0	0	3	0	9	76
0	0	0	0	0	0	0	0	59	7	2	0	1	0	5	74
0	0	0	0	0	0	0	0	81	8	3	1	1	0	1	95
1	0	0	0	0	0	0	1	71	2	0	2	1	0	2	78
1	0	0	0	0	0	0	1	271	21	5	3	6	0	17	323
0	0	0	0	0	0	0	0	69	13	3	0	2	0	1	88
0	0	0	0	0	0	0	0	57	7	3	2	2	0	0	71
0	0	0	0	0	0	0	0	64	10	3	0	0	0	0	77
0	0	0	0	0	0	0	0	81	12	0	1	2	0	2	98
0	0	0	0	0	0	0	0	271	42	9	3	6	0	3	334
0	0	0	0	0	0	0	0	71	10	5	0	1	0	0	87
0	0	0	0	0	0	0	0	73	8	3	0	1	0	2	87
0	0	0	0	0	0	0	0	89	13	2	1	1	1	3	110
0	0	0	0	0	0	0	0	98	10	0	0	1	1	2	112
0	0	0	0	0	0	0	0	331	41	10	1	4	2	7	396
0	0	0	0	0	0	0	0	82	13	1	4	1	0	1	102
0	0	0	0	0	0	0	0	79	12	4	1	1	0	1	98
0	0	0	0	0	0	0	0	91	16	0	0	1	1	2	111
0	0	0	0	0	0	0	0	92	9	5	0	1	0	6	113
0	0	0	0	0	0	0	0	344	50	10	5	4	1	10	424
0	0	0	0	0	0	0	0	101	3	3	1	1	0	5	114
0	0	0	0	0	0	0	0	90	9	0	1	1	0	4	105
0	0	0	0	0	0	0	0	77	17	1	1	1	5	2	104
0	0	0	0	0	0	0	0	85	10	3	1	1	0	3	103
0	0	0	0	0	0	0	0	353	39	7	4	4	5	14	426
0	0	0	0	0	0	0	0	95	7	2	1	1	0	3	109
0	0	0	0	0	0	0	0	90	8	0	0	1	0	7	106
0	0	0	0	0	0	0	0	95	6	6	0	1	0	2	110
0	0	0	0	0	0	0	0	76	13	1	0	1	0	7	98
0	0	0	0	0	0	0	0	356	34	9	1	4	0	19	423
0	0	0	0	0	0	0	0	96	14	0	0	1	1	3	115
0	0	0	0	0	0	0	0	83	8	0	1	1	0	2	95
0	0	0	0	0	0	0	0	93	16	2	1	1	0	1	114
0	0	0	0	0	0	0	0	93	8	3	2	1	0	6	113
0	0	0	0	0	0	0	0	365	46	5	4	4	1	12	437
0	0	0	0	0	0	0	0	88	6	2	2	2	1	5	106
0	0	0	0	0	0	0	0	87	12	3	0	1	2	5	110
0	0	0	0	0	0	0	0	89	18	3	1	1	0	1	113
0	0	0	0	0	0	0	0	106	15	0	1	1	1	3	127
0	0	0	0	0	0	0	0	370	51	8	4	5	4	14	456
0	0	0	0	0	0	0	0	90	16	1	0	1	0	2	110
0	0	0	0	0	0	0	0	90	7	0	1	1	0	5	104
0	0	0	0	0	0	0	0	101	11	2	0	2	0	3	119
0	0	0	0	0	0	0	0	91	16	0	0	1	0	6	114
0	0	0	0	0	0	0	0	372	50	3	1	5	0	16	447
0	0	0	0	0	0	0	0	105	15	0	0	1	0	7	128
0	0	0	0	0	0	0	0	76	5	0	0	1	0	14	96
0	0	0	0	0	0	0	0	100	10	0	0	2	0	5	117
0	0	0	0	0	0	0	0	85	6	1	0	1	0	8	101
0	0	0	0	0	0	0	0	366	36	1	0	5	0	34	442
0	0	0	0	0	0	0	0	87	7	0	0	1	0	5	100
0	0	0	0	0	0	0	0	91	4	0	0	2	1	7	105
0	0	0	0	0	0	0	0	100	4	0	0	2	0	10	116
0	0	0	0	0	0	0	0	86	4	1	0	1	0	4	96
0	0	0	0	0	0	0	0	364	19	1	0	6	1	26	417
1	0	0	0	0	0	0	1	3922	447	71	27	60	15	181	4723

C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
5	2	2	0	0	0	0	9	16	11	1	0	3	0	1	32
6	4	1	0	0	0	0	11	15	15	0	1	1	0	2	34
4	2	0	0	0	0	0	6	38	12	0	0	2	0	4	56
7	3	0	0	0	0	1	11	45	16	2	0	0	0	4	67
22	11	3	0	0	0	1	37	114	54	3	1	6	0	11	189
3	2	1	0	0	0	0	6	35	10	6	0	2	0	2	55
14	2	0	0	0	0	0	16	34	9	1	1	1	0	4	50
13	1	1	0	0	0	0	15	45	6	2	2	2	0	0	57
14	5	0	0	0	0	0	19	59	12	1	0	0	0	4	76
44	10	2	0	0	0	0	56	173	37	10	3	5	0	10	238
12	3	0	0	0	0	0	15	33	14	6	1	1	0	1	56
6	4	1	0	0	0	0	11	53	7	1	0	1	0	1	63
10	1	1	1	0	0	0	13	59	18	3	0	3	0	0	83
17	3	0	0	0	0	0	20	76	9	3	1	1	0	1	91
45	11	2	1	0	0	0	59	221	48	13	2	6	0	3	293
6	4	0	0	0	0	0	10	55	9	3	0	2	1	2	72
13	1	1	1	0	0	1	17	58	11	2	0	0	0	0	71
12	0	0	0	0	0	0	12	57	10	0	0	2	0	1	70
13	2	0	0	0	0	0	15	79	4	2	2	0	0	1	88
44	7	1	1	0	0	1	54	249	34	7	2	4	1	4	301
8	1	0	0	0	0	0	9	70	7	2	1	2	1	2	85
12	0	0	0	0	0	0	12	73	7	5	0	0	0	1	86
14	0	0	0	0	0	1	15	81	8	1	1	2	1	5	99
18	1	0	0	0	0	1	20	84	5	2	0	0	0	0	91
52	2	0	0	0	0	2	56	308	27	10	2	4	2	8	361
8	0	0	0	0	0	0	8	93	11	1	1	2	0	1	109
15	1	0	0	0	1	0	17	76	8	3	1	0	0	2	90
15	1	0	0	0	0	0	16	92	7	0	0	2	0	2	103
18	2	1	0	0	0	0	21	92	12	1	1	0	0	4	110
56	4	1	0	0	1	0	62	353	38	5	3	4	0	9	412
19	2	0	0	0	0	0	21	89	6	0	1	1	0	0	97
19	1	0	0	0	0	0	20	82	7	1	0	1	1	6	98
11	0	0	0	0	0	2	13	84	5	1	1	1	0	6	98
19	1	0	0	0	0	1	21	77	9	1	0	1	0	1	89
68	4	0	0	0	0	3	75	332	27	3	2	4	1	13	382
19	1	0	1	0	0	0	21	76	6	1	2	1	0	7	93
18	3	0	0	0	0	0	21	109	9	1	1	1	0	3	124
16	0	0	0	0	0	2	18	78	9	1	0	1	0	2	91
17	3	0	1	0	0	4	25	86	9	0	1	1	1	3	101
70	7	0	2	0	0	6	85	349	33	3	4	4	1	15	409
16	1	0	0	0	0	0	17	67	10	0	1	2	0	4	84
13	1	0	1	0	0	2	17	69	7	0	0	0	0	5	81
15	1	0	0	0	0	4	20	72	3	0	1	1	0	6	83
19	1	0	1	0	0	0	21	88	3	1	2	1	2	3	100
63	4	0	2	0	0	6	75	296	23	1	4	4	2	18	348
11	0	0	0	0	0	0	11	104	8	0	0	1	1	5	119
15	3	0	0	0	0	1	19	99	5	0	0	1	1	3	109
13	1	0	0	0	0	1	15	71	3	1	0	2	1	9	87
21	0	0	0	0	0	0	21	86	3	0	0	1	0	5	95
60	4	0	0	0	0	2	66	360	19	1	0	5	3	22	410
19	1	0	0	0	0	0	20	89	10	0	1	2	1	7	110
23	2	0	0	0	0	5	30	73	4	0	1	1	0	3	82
12	1	0	0	0	0	0	13	79	6	1	1	2	0	3	92
22	3	0	0	0	0	0	25	97	3	0	1	2	0	3	106
76	7	0	0	0	0	5	88	338	23	1	4	7	1	16	390
21	2	0	0	0	0	4	27	93	8	0	0	2	0	4	107
23	0	0	0	0	1	0	24	99	7	1	0	1	0	3	111
12	1	0	0	0	0	0	13	94	0	0	0	1	0	4	99
20	0	0	0	0	0	1	21	84	2	0	0	2	0	9	97
76	3	0	0	0	1	5	85	370	17	1	0	6	0	20	414
676	74	9	6	0	2	31	798	3463	380	58	27	59	11	149	4147





Survey Name :	ITS J-410 Malahide
Site:	2
Date:	03.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

Site 2, Card M24



Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	4 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

Mapping Image



Site 2, Card S38



Site 2, Card M24











B => C								B => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	3
0	0	0	0	0	0	0	0	5	2	0	0	0	0	2	9
0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6
0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10
0	0	0	0	0	0	0	0	20	4	0	0	0	0	4	28
0	0	0	0	0	0	1	1	9	1	0	0	0	0	1	11
0	0	0	0	0	0	1	1	12	5	0	0	0	0	0	17
0	0	0	0	0	0	0	0	10	4	0	0	0	0	0	14
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	2	2	40	10	0	0	0	0	1	51
0	0	0	0	0	0	0	0	11	1	0	0	0	0	1	13
0	0	0	0	0	0	0	0	14	3	0	0	0	0	2	19
0	0	0	0	0	0	0	0	10	3	1	0	0	0	2	16
0	0	0	0	0	0	0	0	12	2	0	0	0	0	0	14
0	0	0	0	0	0	0	0	47	9	1	0	0	0	5	62
0	0	0	0	0	0	0	0	15	7	0	0	0	0	0	22
0	0	0	0	0	0	0	0	17	0	0	0	0	0	2	19
0	0	0	0	0	0	0	0	25	3	0	0	0	0	0	28
0	0	0	0	0	0	0	0	31	2	0	0	0	0	1	34
0	0	0	0	0	0	0	0	88	12	0	0	0	0	3	103
0	0	0	0	0	0	0	0	28	1	0	0	0	0	2	31
0	0	0	0	0	0	0	0	24	0	0	0	0	0	1	25
0	0	0	0	0	0	1	1	26	3	0	0	0	0	1	30
0	0	0	0	0	0	0	0	18	5	0	0	0	0	2	25
0	0	0	0	0	0	1	1	96	9	0	0	0	0	6	111
0	0	0	0	0	0	0	0	22	1	0	0	0	0	1	24
0	0	0	0	0	0	0	0	33	5	0	0	0	0	2	40
0	0	0	0	0	0	0	0	33	4	0	0	0	0	1	38
0	0	0	0	0	0	0	0	32	4	0	0	0	0	2	38
0	0	0	0	0	0	0	0	120	14	0	0	0	0	6	140
0	0	0	0	0	0	0	0	33	6	0	0	0	0	1	40
0	0	0	0	0	0	0	0	27	2	0	0	0	0	3	32
0	0	0	0	0	0	4	4	26	2	0	0	0	0	1	29
0	0	0	0	0	0	2	2	23	1	0	0	0	0	1	25
0	0	0	0	0	0	6	6	109	11	0	0	0	0	6	126
0	0	0	0	0	0	0	0	32	3	0	0	0	0	0	35
0	0	0	0	0	0	0	0	19	2	0	0	0	0	1	22
0	0	0	0	0	0	0	0	21	2	0	0	0	0	0	23
0	0	0	0	0	0	2	2	20	2	0	0	0	0	1	23
0	0	0	0	0	0	2	2	92	9	0	0	0	0	2	103
0	0	0	0	0	0	0	0	28	1	0	0	0	0	0	29
0	0	0	0	0	0	0	0	32	5	1	0	0	0	1	39
0	0	0	0	0	0	0	0	26	2	0	0	0	0	4	32
0	0	0	0	0	0	0	0	33	2	0	0	0	0	0	35
0	0	0	0	0	0	0	0	119	10	1	0	0	0	5	135
0	0	0	0	0	0	0	0	30	5	0	0	0	0	2	37
0	0	0	0	0	0	2	2	34	3	0	0	0	0	1	38
0	0	0	0	0	0	0	0	36	3	0	0	0	0	1	40
0	0	0	0	0	0	0	0	38	3	0	0	0	0	4	45
0	0	0	0	0	0	2	2	138	14	0	0	0	0	8	160
0	0	0	0	0	0	1	1	45	1	0	0	0	1	4	51
0	0	0	0	0	0	5	5	23	4	0	0	0	0	4	31
0	0	0	0	0	0	1	1	33	2	0	0	0	0	6	41
0	0	0	0	0	0	0	0	21	1	1	0	0	0	5	28
0	0	0	0	0	0	7	7	122	8	1	0	0	1	19	151
0	0	0	0	0	0	4	4	26	1	0	0	0	0	2	29
0	0	0	0	0	0	0	0	21	0	0	0	0	0	2	23
0	0	0	0	0	0	1	1	29	3	0	0	0	0	2	34
0	0	0	0	0	0	1	1	22	1	0	0	0	0	9	32
0	0	0	0	0	0	6	6	98	5	0	0	0	0	15	118
0	0	0	0	0	0	26	26	1089	115	3	0	0	1	80	1288

C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	4	1	2	0	0	0	0	7
0	0	0	0	0	0	0	0	4	4	1	0	3	0	0	12
0	0	0	0	0	0	0	0	10	2	0	0	0	0	0	12
0	0	0	0	0	0	0	0	14	4	0	0	1	0	1	20
0	0	0	0	0	0	0	0	32	11	3	0	4	0	1	51
0	0	0	0	0	0	0	0	10	1	1	0	0	0	0	12
0	0	0	0	0	0	0	0	13	2	0	0	0	0	0	15
0	0	0	0	0	0	0	0	19	1	0	0	0	0	1	21
0	0	0	0	0	0	0	0	13	5	1	0	0	0	0	19
0	0	0	0	0	0	0	0	55	9	2	0	0	0	1	67
0	0	0	0	0	0	0	0	14	0	1	0	0	0	0	15
0	0	0	0	0	0	0	0	10	3	1	0	1	0	0	15
0	0	0	0	0	0	0	0	14	1	2	0	0	0	0	17
0	0	0	0	0	0	0	0	15	3	1	0	1	0	0	20
0	0	0	0	0	0	0	0	53	7	5	0	2	0	0	67
0	0	0	0	0	0	0	0	23	4	0	0	0	0	0	27
0	0	0	0	0	0	0	0	15	1	0	0	0	0	0	16
0	0	0	0	0	0	0	0	16	1	2	0	0	0	0	19
1	1	0	0	0	0	0	2	24	2	2	0	1	0	0	29
1	1	0	0	0	0	0	2	78	8	4	0	1	0	0	91
0	0	0	0	0	0	0	0	11	3	0	0	0	0	0	14
0	0	0	0	0	0	0	0	18	2	1	0	0	0	0	21
0	0	0	0	0	0	0	0	25	1	0	0	0	0	0	26
0	0	0	0	0	0	0	0	22	1	0	0	1	0	1	25
0	0	0	0	0	0	0	0	76	7	1	0	1	0	1	86
0	0	0	0	0	0	0	0	18	2	0	0	0	0	0	20
0	0	0	0	0	0	0	0	22	2	0	0	0	1	0	25
0	0	0	0	0	0	0	0	20	1	0	0	0	0	0	21
0	0	0	0	0	0	0	0	29	4	1	0	0	0	0	34
0	0	0	0	0	0	0	0	89	9	1	0	0	1	0	100
1	0	0	0	0	0	0	1	29	5	0	0	1	0	1	36
0	0	0	0	0	0	0	0	22	4	0	0	0	0	0	26
0	0	0	0	0	0	0	0	24	3	0	0	0	0	0	27
1	0	0	0	0	0	0	1	29	1	1	0	0	0	0	31
2	0	0	0	0	0	0	2	104	13	1	0	1	0	1	120
0	1	0	0	0	0	0	1	20	2	0	1	1	0	0	24
0	0	0	0	0	0	0	0	23	3	0	0	0	0	0	26
0	0	0	0	0	0	0	0	22	0	0	0	0	0	2	24
0	0	0	0	0	0	0	0	23	2	0	1	0	0	1	27
0	1	0	0	0	0	0	1	88	7	0	2	1	0	3	101
1	1	0	0	0	0	0	2	19	3	0	0	1	0	0	23
0	0	0	0	0	0	0	0	16	1	1	1	0	0	3	22
0	0	0	0	0	0	0	0	17	3	0	0	1	0	2	23
0	0	0	0	0	0	0	0	26	1	0	0	0	0	0	27
1	1	0	0	0	0	0	2	78	8	1	1	2	0	5	95
0	0	0	0	0	0	0	0	20	1	0	0	2	0	0	23
0	0	0	0	0	0	0	0	20	3	1	0	0	0	1	25
0	0	0	0	0	0	0	0	18	0	0	0	1	0	1	20
2	0	0	0	0	0	0	2	23	5	0	0	0	0	0	28
2	0	0	0	0	0	0	2	81	9	1	0	3	0	2	96
1	0	0	0	0	0	0	1	25	2	0	0	0	0	0	27
0	0	0	0	0	0	0	0	27	2	0	0	0	0	4	33
1	1	0	0	0	0	0	2	20	0	0	0	1	0	0	21
0	0	0	0	0	0	0	0	26	3	1	0	0	0	0	30
2	1	0	0	0	0	0	3	98	7	1	0	1	0	4	111
1	0	0	0	0	0	0	1	21	1	0	0	1	0	4	27
1	0	0	0	0	0	0	1	29	4	0	0	0	1	0	34
0	0	0	0	0	0	0	0	22	1	0	0	0	0	0	23
0	0	0	0	0	0	0	0	38	3	0	0	0	0	1	42
2	0	0	0	0	0	0	2	110	9	0	0	1	1	5	126
10	4	0	0	0	0	0	14	942	104	20	3	17	2	23	1111



C => C								C => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4
0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	4
0	0	0	0	0	0	0	0	4	1	0	0	0	0	1	6
0	0	0	0	0	0	0	0	11	3	0	0	0	0	3	17
0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
0	0	0	0	0	0	0	0	9	2	1	0	0	0	0	12
0	0	0	0	0	0	0	0	6	2	1	0	0	0	0	9
0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
0	0	0	0	0	0	0	0	26	4	2	0	0	0	0	32
0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	10
0	0	0	0	0	0	0	0	5	0	0	0	0	0	1	6
0	0	0	0	0	0	0	0	9	0	0	0	0	0	2	11
0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	10
0	0	0	0	0	0	0	0	30	4	0	0	0	0	3	37
0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6
0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	5
0	0	0	0	0	0	0	0	11	1	1	0	0	0	0	13
0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
0	0	0	0	0	0	0	0	27	3	1	1	0	0	0	32
0	0	0	0	0	0	0	0	11	0	0	0	0	0	1	12
0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	39	0	0	0	0	0	1	40
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	9	2	0	0	0	0	0	11
0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
0	0	0	0	0	0	0	0	34	2	0	0	0	0	0	36
0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11
0	0	0	0	0	0	0	0	9	0	0	0	0	0	1	10
0	0	0	0	0	0	0	0	16	0	0	0	0	0	3	19
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	44	1	0	0	0	0	4	49
0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	12
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	12	0	1	0	0	0	0	13
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	41	1	1	0	0	0	0	43
0	0	0	0	0	0	0	0	7	1	0	0	0	0	1	9
0	0	0	0	0	0	0	0	14	1	0	0	0	0	0	15
0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11
0	0	0	0	0	0	0	0	11	1	1	0	0	0	0	13
0	0	0	0	0	0	0	0	43	3	1	0	0	0	1	48
0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10
0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
0	0	0	0	0	0	0	0	15	2	0	0	0	0	0	17
0	0	0	0	0	0	0	0	13	0	0	0	0	1	0	14
0	0	0	0	0	0	0	0	42	3	0	0	0	1	0	46
0	0	0	0	0	0	0	0	10	2	0	0	0	0	0	12
0	0	0	0	0	0	0	0	17	1	0	0	0	0	1	19
0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
0	0	0	0	0	0	0	0	13	1	0	0	0	0	0	14
0	0	0	0	0	0	0	0	61	4	0	0	0	0	1	66
0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13
0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	11
0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	12
0	0	0	0	0	0	0	0	50	1	0	0	0	0	0	51
0	0	0	0	0	0	0	0	448	29	5	1	0	1	13	497

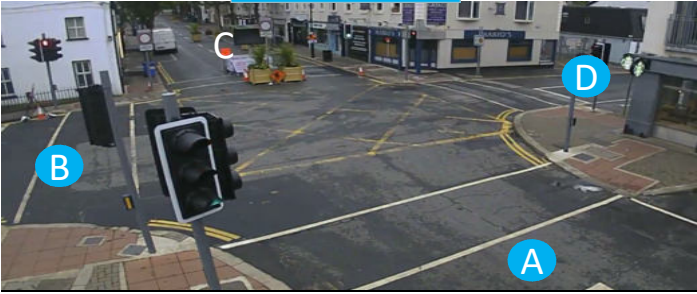
D => A								D => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	6	1	0	0	0	0	2	9
0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6
0	0	0	0	0	0	0	0	7	3	0	0	0	0	2	12
0	0	0	0	0	0	0	0	18	5	0	0	0	0	2	25
0	0	0	0	0	0	0	0	35	11	0	0	0	0	6	52
0	0	0	0	0	0	0	0	12	2	0	0	0	0	2	16
0	0	0	0	0	0	0	0	15	2	0	0	0	0	2	19
0	0	0	0	0	0	0	0	21	3	1	0	0	0	1	26
0	0	0	0	0	0	0	0	30	2	0	0	0	0	3	35
0	0	0	0	0	0	0	0	78	9	1	0	0	0	8	96
0	0	0	0	0	0	0	0	25	1	0	0	0	0	1	27
0	0	0	0	0	0	0	0	25	4	1	0	0	0	0	30
0	0	0	0	0	0	0	0	23	2	1	0	0	0	0	26
0	1	0	0	0	0	0	1	27	4	0	0	0	0	2	33
0	1	0	0	0	0	0	1	100	11	2	0	0	0	3	116
0	0	0	0	0	0	0	0	24	7	0	0	0	0	0	31
0	0	0	0	0	0	0	0	33	4	0	0	0	0	1	38
1	0	0	0	0	0	0	1	25	0	0	1	0	0	1	27
1	0	0	0	0	0	0	1	31	3	0	0	0	0	1	35
2	0	0	0	0	0	0	2	113	14	0	1	0	0	3	131
0	0	0	0	0	0	0	0	20	1	0	0	0	0	3	24
0	0	0	0	0	0	0	0	32	2	0	0	0	0	1	35
0	0	0	0	0	0	0	0	23	5	0	0	0	0	3	31
0	0	0	0	0	0	0	0	27	0	0	0	0	0	2	29
0	0	0	0	0	0	0	0	102	8	0	0	0	0	9	119
0	0	0	0	0	0	1	1	18	1	0	0	0	0	0	19
0	0	0	0	0	0	0	0	24	4	0	0	0	0	5	33
0	0	0	0	0	0	0	0	41	4	0	0	0	0	3	48
0	0	0	0	0	0	0	0	42	6	0	0	0	0	3	51
0	0	0	0	0	0	1	1	125	15	0	0	0	0	11	151
0	0	0	0	0	0	0	0	34	3	0	0	0	0	6	43
0	0	0	0	0	0	0	0	28	3	0	0	0	0	1	32
0	0	0	0	0	0	0	0	40	2	0	0	0	0	6	48
0	0	0	0	0	0	0	0	46	2	0	0	0	0	4	52
0	0	0	0	0	0	0	0	148	10	0	0	0	0	17	175
0	0	0	0	0	0	0	0	46	3	0	0	0	0	1	50
1	0	0	0	0	0	0	1	38	5	0	0	0	0	0	43
0	0	0	0	0	0	0	0	41	4	0	0	0	0	3	48
0	0	0	0	0	0	0	0	36	3	0	0	0	0	2	41
1	0	0	0	0	0	0	1	161	15	0	0	0	0	6	182
0	0	0	0	0	0	0	0	34	1	0	0	0	0	1	36
1	0	0	0	0	0	0	1	32	2	1	0	0	0	3	38
0	0	0	0	0	0	0	0	37	2	0	0	0	0	1	40
0	0	0	0	0	0	0	0	34	6	0	0	0	0	2	42
1	0	0	0	0	0	0	1	137	11	1	0	0	0	7	156
0	0	0	0	0	0	0	0	38	3	0	0	0	0	2	43
1	0	0	0	0	0	0	1	33	6	0	0	0	0	5	44
0	0	0	0	0	0	0	0	36	2	0	0	0	1	4	43
0	0	0	0	0	0	0	0	44	2	0	0	0	0	5	51
1	0	0	0	0	0	0	1	151	13	0	0	0	1	16	181
0	0	0	0	0	0	0	0	35	1	0	0	0	0	4	40
0	0	0	0	0	0	0	0	56	4	0	0	0	0	3	63
0	0	0	0	0	0	0	0	48	2	0	0	0	0	2	52
0	0	0	0	0	0	0	0	53	3	0	0	0	0	4	60
0	0	0	0	0	0	0	0	192	10	0	0	0	0	13	215
0	0	0	0	0	0	0	0	49	1	0	0	0	0	2	52
0	0	0	0	0	0	0	0	50	1	0	0	0	0	5	56
0	0	0	0	0	0	0	0	50	1	0	0	0	0	9	60
0	0	0	0	0	0	0	0	34	0	1	0	0	0	13	48
0	0	0	0	0	0	0	0	183	3	1	0	0	0	29	216
5	1	0	0	0	0	1	7	1525	130	5	1	0	1	128	1790





Survey Name :	ITS J-410 Malahide
Site:	3
Date:	15.07.20
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

Site 3, Card A10

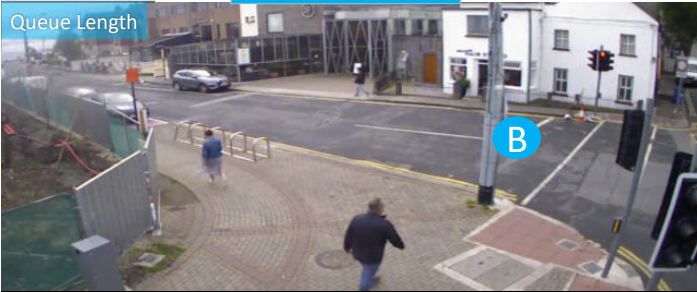


Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	4 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

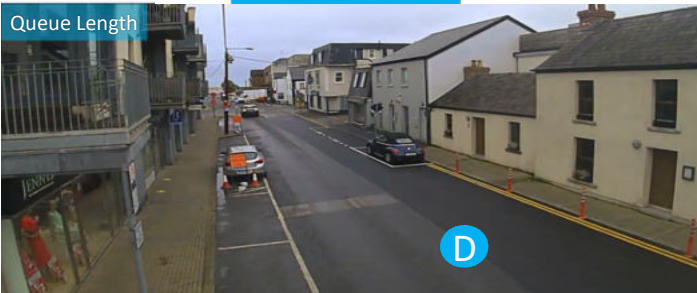
Mapping Image



Site 3, Card T16



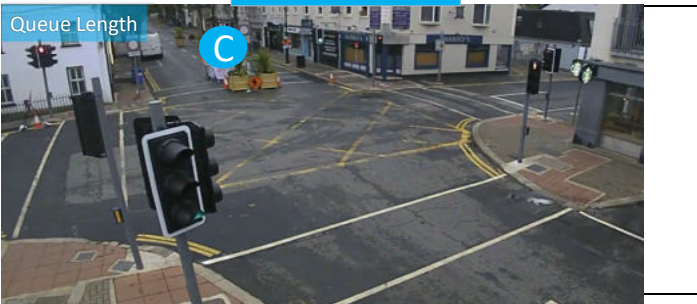
Site 3, Card A7



Site 3, Card T7



Site 3, Card A10



Survey Name :	ITS J-410 Malahide
Site:	3
Date:	15.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C



TIME	A => A								TOT	A => B								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	CAR		LGV	OGV1	OGV2	PSV	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	
07:15	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	5	
07:30	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	10	
07:45	0	0	0	0	0	0	0	0	9	1	0	0	0	1	0	0	11	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>32</b>	
08:00	0	0	0	0	0	0	0	0	14	1	1	0	0	1	0	0	17	
08:15	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	
08:30	0	0	0	0	0	0	0	0	17	1	0	0	0	0	0	0	18	
08:45	0	0	0	0	0	0	0	0	15	1	0	0	0	0	0	0	16	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>59</b>	
09:00	0	0	0	0	0	0	0	0	8	4	1	0	0	0	0	0	13	
09:15	0	0	0	0	0	0	0	0	10	2	2	0	0	0	0	0	14	
09:30	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	14	
09:45	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	13	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>54</b>	
10:00	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	11	
10:15	0	0	0	0	0	0	0	0	13	2	0	0	0	0	1	0	16	
10:30	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	0	10	
10:45	0	0	0	0	0	0	0	0	14	1	0	0	0	0	0	0	15	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>52</b>	
11:00	0	0	0	0	0	0	0	0	13	1	0	0	0	0	0	0	14	
11:15	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	9	
11:30	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10	
11:45	0	0	0	0	0	0	0	0	12	3	0	0	0	0	0	0	15	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48</b>	
12:00	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	15	
12:15	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	
12:30	0	1	0	0	0	0	0	1	8	1	0	0	0	0	0	0	9	
12:45	0	0	0	0	0	0	0	0	17	1	0	0	0	0	2	0	20	
<b>H/TOT</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>46</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>50</b>	
13:00	0	0	0	0	0	0	0	0	16	1	0	0	0	0	0	0	17	
13:15	0	0	0	0	0	0	0	0	14	3	0	0	0	0	0	0	17	
13:30	0	0	0	0	0	0	0	0	14	1	0	0	0	0	4	0	19	
13:45	0	0	0	0	0	0	0	0	14	2	0	0	0	0	4	0	20	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>73</b>	
14:00	0	0	0	0	0	0	0	0	19	2	0	0	0	0	0	0	21	
14:15	0	0	0	0	0	0	0	0	13	2	0	0	0	0	2	0	17	
14:30	0	0	0	0	0	0	0	0	20	2	0	0	0	0	0	0	22	
14:45	0	0	0	0	0	0	1	1	12	0	0	0	0	0	1	0	13	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>64</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>73</b>	
15:00	0	0	0	0	0	0	0	0	11	2	1	0	0	0	0	0	14	
15:15	0	0	0	0	0	0	0	0	16	1	0	0	0	0	1	0	18	
15:30	0	0	0	0	0	0	0	0	9	1	1	0	0	0	2	0	13	
15:45	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	9	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>54</b>	
16:00	0	0	0	0	0	0	0	0	18	3	0	0	0	0	0	0	21	
16:15	0	0	0	0	0	0	0	0	18	1	0	0	0	0	2	0	21	
16:30	1	0	0	0	0	0	0	1	19	2	0	0	0	0	0	0	21	
16:45	0	0	0	0	0	0	0	0	16	1	0	0	0	1	9	0	27	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>71</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>90</b>	
17:00	0	0	0	0	0	0	0	0	20	2	0	0	0	0	0	0	22	
17:15	0	0	0	0	0	0	0	0	10	0	0	0	0	1	5	0	16	
17:30	0	0	0	0	0	0	0	0	20	1	0	0	0	0	0	0	21	
17:45	0	0	0	0	0	0	0	0	15	1	0	0	0	0	2	0	18	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>77</b>	
18:00	0	0	0	0	0	0	0	0	12	2	0	0	0	0	0	0	14	
18:15	0	0	0	0	0	0	0	0	20	1	0	0	0	0	0	0	21	
18:30	0	0	0	0	0	0	0	0	20	1	0	0	0	0	2	0	23	
18:45	0	0	0	0	0	0	0	0	26	2	0	0	0	0	1	0	29	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>87</b>	
<b>12 TOT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>639</b>	<b>62</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>38</b>	<b>749</b>	



A => C							A => D								
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4
0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11
0	0	0	0	0	0	1	1	5	0	0	0	0	0	2	7
1	0	0	0	0	0	0	1	10	2	0	0	0	0	0	12
0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	7
0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
1	0	0	0	0	0	1	2	26	4	0	0	0	0	2	32
0	1	0	0	0	0	1	2	4	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6
0	0	0	0	0	0	0	0	4	2	1	0	0	0	0	7
0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4
0	1	0	0	0	0	1	2	16	4	1	0	0	0	0	21
0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	4
0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	5	3	0	0	0	0	0	8
0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
0	0	0	0	0	0	0	0	27	4	0	0	0	0	0	31
0	0	0	0	0	0	1	1	12	0	0	0	0	0	0	12
0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
0	0	0	0	0	0	0	0	10	1	0	0	0	0	1	12
0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9
0	0	0	0	0	0	1	1	37	2	0	0	0	0	1	40
0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
0	0	0	0	0	0	0	0	13	1	0	0	0	0	0	14
0	0	0	0	0	0	0	0	9	5	1	0	0	0	0	15
0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9
0	0	0	0	0	0	0	0	39	7	1	0	0	0	0	47
0	0	0	0	0	0	0	0	11	3	0	0	0	0	0	14
0	0	0	0	0	0	0	0	11	1	0	0	0	0	1	13
0	0	0	0	0	0	0	0	7	1	0	0	0	0	4	12
0	0	0	0	0	0	3	3	8	2	0	0	0	0	0	10
0	0	0	0	0	0	3	3	37	7	0	0	0	0	5	49
0	0	0	0	0	0	0	0	11	1	0	0	0	0	0	12
0	0	0	0	0	0	0	0	5	0	0	0	0	0	1	6
0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6
0	0	0	0	0	0	2	2	6	0	0	0	0	0	2	8
0	0	0	0	0	0	2	2	27	2	0	0	0	0	3	32
0	0	0	0	0	0	1	1	9	0	0	0	0	0	1	10
0	0	0	0	0	0	1	1	15	2	0	0	0	0	0	17
0	0	0	0	0	0	0	0	8	2	0	0	0	0	0	10
0	0	0	0	0	0	1	1	12	0	0	0	0	0	0	12
0	0	0	0	0	0	3	3	44	4	0	0	0	0	1	49
0	0	0	0	0	0	0	0	11	1	0	0	0	0	1	13
0	0	0	0	0	0	0	0	11	3	0	0	0	0	0	14
0	0	0	0	0	0	1	1	13	2	0	0	0	0	2	17
0	0	0	0	0	0	1	1	16	1	0	0	0	0	1	18
0	0	0	0	0	0	2	2	51	7	0	0	0	0	4	62
0	0	0	0	0	0	2	2	16	0	0	0	0	0	3	19
0	0	0	0	0	0	0	0	6	1	0	0	0	0	2	9
0	0	0	0	0	0	1	1	14	0	0	0	0	0	4	18
0	0	0	0	0	0	0	0	10	1	0	0	0	0	3	14
0	0	0	0	0	0	3	3	46	2	0	0	0	0	12	60
0	0	0	0	0	0	0	0	8	0	0	0	0	0	3	11
0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
0	0	0	0	0	0	1	1	6	2	0	0	0	0	3	11
0	0	0	0	0	0	2	2	14	0	0	0	0	0	5	19
0	0	0	0	0	0	3	3	36	2	0	0	0	0	11	49
1	1	0	0	0	0	19	21	396	46	2	0	0	0	39	483



B => A								B => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	1	0	7	0	0	0	0	0	0	0	0
5	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0
13	0	1	0	0	1	0	15	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
6	1	0	0	0	1	0	8	0	0	0	0	0	0	0	0
5	2	0	0	0	0	0	7	0	0	0	0	0	0	0	0
3	3	0	0	0	0	0	6	0	0	0	0	0	0	0	0
18	6	0	0	0	1	0	25	0	0	0	0	0	0	0	0
9	1	2	0	0	0	0	12	0	0	0	0	0	0	0	0
3	0	0	0	0	1	0	4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0
19	3	2	0	0	1	0	25	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
4	3	0	0	0	0	1	8	1	0	0	0	0	0	0	1
4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
20	6	0	0	0	0	1	27	1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	11	0	0	0	0	0	0	0	0
3	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
24	2	0	0	0	0	0	26	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	5	1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
9	2	0	0	0	0	0	11	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0
28	3	0	0	0	0	0	31	2	0	0	0	0	0	0	2
10	1	0	0	0	1	0	12	0	0	0	0	0	0	0	0
17	1	0	0	0	0	0	18	1	0	0	0	0	0	0	1
14	3	0	0	0	0	0	17	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0
52	5	0	0	0	1	0	58	1	0	0	0	0	0	0	1
9	0	0	0	0	0	2	11	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
11	1	0	0	0	0	0	12	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0
32	2	0	0	0	0	2	36	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0
8	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
11	2	0	0	0	0	0	13	0	0	0	0	0	0	0	0
2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0
26	5	0	0	0	0	0	31	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0
12	0	0	0	0	0	2	14	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
10	0	0	0	0	0	2	12	0	1	0	0	0	0	0	1
38	0	0	0	0	0	4	42	0	1	0	0	0	0	0	1
10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
6	0	0	0	0	0	4	10	0	0	0	0	0	0	0	0
9	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0
11	0	0	0	0	0	2	13	0	0	0	0	0	0	0	0
36	1	0	0	0	0	6	43	0	0	0	0	0	0	0	0
10	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0
9	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0
13	0	0	0	0	0	4	17	0	0	0	0	0	0	0	0
13	0	0	0	0	0	3	16	0	0	0	0	0	0	0	0
45	1	0	0	0	0	8	54	0	0	0	0	0	0	0	0
351	34	3	0	0	4	21	413	4	1	0	0	0	0	0	5

B => C								B => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	2
0	0	1	0	0	0	0	1	2	2	0	0	0	0	0	4
0	0	0	0	0	0	0	0	2	1	0	0	0	0	2	5
0	1	0	0	0	0	0	1	5	1	0	0	0	0	0	6
0	1	2	0	0	0	0	3	9	4	0	0	0	0	4	17
0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5
1	0	0	0	0	0	0	1	5	3	0	0	0	0	0	8
0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7
0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	5
1	0	0	0	0	0	0	1	17	8	0	0	0	0	0	25
0	1	0	0	0	0	1	2	6	1	0	0	0	0	1	8
0	1	1	0	0	0	0	2	12	3	0	0	0	0	1	16
0	0	1	0	0	0	0	1	7	0	0	0	0	0	2	9
1	0	0	0	0	0	0	1	9	1	0	0	0	0	0	10
1	2	2	0	0	0	1	6	34	5	0	0	0	0	4	43
0	1	0	0	0	0	0	1	11	5	0	0	0	0	0	16
0	1	0	0	0	0	0	1	10	0	0	0	0	0	2	12
0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
0	0	0	0	0	0	0	0	15	2	0	0	0	0	1	18
0	2	0	0	0	0	0	2	57	7	0	0	0	0	3	67
0	0	0	0	0	0	0	0	14	1	0	0	0	0	2	17
0	0	0	0	0	0	0	0	16	0	0	0	0	0	1	17
0	0	0	0	0	0	0	0	19	2	0	0	0	0	0	21
1	0	0	0	0	0	0	1	8	3	0	0	0	0	0	11
1	0	0	0	0	0	0	1	57	6	0	0	0	0	3	66
0	0	0	0	0	0	0	0	14	1	0	0	0	0	3	18
0	0	0	0	0	0	0	0	20	3	0	0	0	0	2	25
0	0	0	0	0	0	0	0	24	4	0	0	0	0	0	28
0	0	0	0	0	0	0	0	23	1	0	0	0	0	2	26
0	0	0	0	0	0	0	0	81	9	0	0	0	0	7	97
0	0	0	0	0	0	0	0	19	4	0	0	0	0	1	24
1	0	0	0	0	0	0	1	15	2	0	0	0	0	1	18
0	0	0	0	0	0	2	2	20	1	0	0	0	0	1	22
0	0	0	0	0	0	0	0	14	0	0	0	0	0	2	16
1	0	0	0	0	0	2	3	68	7	0	0	0	0	5	80
1	0	0	0	0	0	0	1	21	2	0	0	0	0	0	23
1	0	0	0	0	0	0	1	14	3	0	0	0	0	1	18
1	0	0	0	0	0	0	1	16	1	0	0	0	0	0	17
0	1	0	0	0	0	0	1	12	1	0	0	0	0	1	14
3	1	0	0	0	0	0	4	63	7	0	0	0	0	2	72
0	0	0	0	0	0	0	0	18	2	0	0	0	0	0	20
0	0	0	0	0	0	2	2	18	5	1	0	0	0	2	26
0	0	0	0	0	0	0	0	22	0	0	0	0	0	2	24
0	0	0	0	0	0	2	2	23	2	0	0	0	0	0	25
0	0	0	0	0	0	4	4	81	9	1	0	0	0	4	95
0	0	0	0	0	0	0	0	18	3	0	0	0	0	1	22
0	0	0	0	0	0	0	0	19	0	0	0	0	0	1	20
0	0	0	0	0	0	0	0	21	1	0	0	0	0	2	24
1	0	0	0	0	0	0	1	20	2	0	0	0	0	1	23
1	0	0	0	0	0	0	1	78	6	0	0	0	0	5	89
0	0	0	0	0	0	0	0	29	1	0	0	0	1	2	33
0	0	0	0	0	0	0	0	14	3	0	0	0	0	1	18
0	0	0	0	0	0	0	0	13	1	0	0	0	0	5	19
0	0	0	0	0	0	0	0	11	0	1	0	0	0	2	14
0	0	0	0	0	0	0	0	67	5	1	0	0	1	10	84
0	0	0	0	0	0	0	0	15	1	0	0	0	0	2	18
1	0	0	0	0	0	0	1	10	0	0	0	0	0	2	12
0	0	0	0	0	0	0	0	21	2	0	0	0	0	0	23
0	0	0	0	0	0	0	0	7	1	0	0	0	1	2	11
1	0	0	0	0	0	0	1	53	4	0	0	0	1	6	64
9	6	4	0	0	0	7	26	665	77	2	0	0	2	53	799

C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	3
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	3	1	1	0	0	0	1	6
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1	1	1	0	1	0	0	0	2
0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	5
0	1	0	0	0	0	1	2	1	4	2	0	0	0	0	7
0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	2	3	0	0	0	0	1	6
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	3
0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	3	3	1	0	0	0	0	0	2	3
0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0
0	0	0	0	0	0	8	8	0	0	0	0	0	0	4	4
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	5	5	1	0	0	0	0	0	0	1
0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	8	8	1	0	0	0	0	0	1	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	7	7	1	0	0	0	0	0	3	4
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	8	8	2	0	0	0	0	0	3	5
0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	1
0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0
0	0	0	0	0	0	6	6	1	0	0	0	0	0	2	3
0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
0	1	0	0	0	0	1	2	1	0	0	0	0	0	3	4
0	2	0	0	0	0	36	38	13	10	3	0	0	0	18	44





D => A								D => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
5	1	0	0	0	0	0	6	6	1	1	0	0	0	2	10
3	3	1	0	0	0	0	7	5	2	0	0	3	0	0	10
3	3	0	0	0	0	0	6	10	3	0	0	0	0	2	15
17	5	0	0	0	0	1	23	15	3	0	0	1	0	2	21
28	12	1	0	0	0	1	42	36	9	1	0	4	0	6	56
10	1	0	0	0	0	0	11	11	3	0	0	0	0	2	16
13	2	0	0	0	0	0	15	16	2	1	0	0	0	2	21
12	1	0	0	0	0	1	14	26	1	1	0	1	0	0	29
12	3	0	0	0	0	0	15	30	7	1	0	0	0	4	42
47	7	0	0	0	0	1	55	83	13	3	0	1	0	8	108
8	1	0	0	0	0	0	9	22	1	0	0	0	0	1	24
12	2	1	0	0	0	0	15	21	5	1	0	1	0	0	28
14	0	0	0	0	0	0	14	20	1	1	0	0	0	0	22
8	2	0	0	0	0	0	10	31	5	1	0	1	0	2	40
42	5	1	0	0	0	0	48	94	12	3	0	2	0	3	114
17	2	0	0	0	0	0	19	29	8	0	0	0	0	0	37
11	1	0	0	0	0	1	13	33	4	1	0	0	0	1	39
10	1	0	0	0	0	0	11	32	1	2	1	0	0	2	38
14	0	0	0	0	0	0	14	41	4	2	0	1	0	1	49
52	4	0	0	0	0	1	57	135	17	5	1	1	0	4	163
13	0	0	0	0	0	0	13	26	2	0	0	0	0	1	29
9	1	0	0	0	0	0	10	34	4	1	0	0	0	2	41
11	1	0	0	0	0	0	12	38	4	0	0	0	0	3	45
23	1	0	0	0	0	1	25	28	2	0	0	1	0	1	32
56	3	0	0	0	0	1	60	126	12	1	0	1	0	7	147
9	2	0	0	0	0	0	11	32	1	0	0	0	0	0	33
11	4	0	0	0	0	0	15	33	2	0	0	0	1	3	39
13	1	0	0	0	0	0	14	44	4	0	0	0	0	0	48
18	1	0	0	0	0	1	20	50	7	1	0	0	0	1	59
51	8	0	0	0	0	1	60	159	14	1	0	0	1	4	179
21	6	0	0	0	0	2	29	36	3	0	0	1	0	1	41
17	3	0	0	0	0	1	21	42	4	0	0	0	0	0	46
13	1	0	0	0	0	0	14	43	4	0	0	0	0	6	53
28	1	0	0	0	0	0	29	38	3	0	0	0	0	4	45
79	11	0	0	0	0	3	93	159	14	0	0	1	0	11	185
18	1	0	0	0	0	0	19	51	5	0	1	1	0	0	58
14	1	0	0	0	0	0	15	49	5	0	0	0	0	0	54
23	1	0	0	0	0	3	27	34	3	0	0	0	0	0	37
19	0	0	0	0	0	1	20	50	5	0	1	0	0	3	59
74	3	0	0	0	0	4	81	184	18	0	2	1	0	3	208
10	0	0	0	0	0	0	10	42	3	0	0	1	0	1	47
11	1	1	0	0	0	2	15	35	4	0	0	0	0	1	40
11	2	0	0	0	0	0	13	40	4	0	1	1	0	3	49
21	1	0	0	0	0	0	22	43	5	0	0	0	0	5	53
53	4	1	0	0	0	2	60	160	16	0	1	2	0	10	189
19	0	0	0	0	0	0	19	38	5	0	0	2	0	0	45
13	3	0	0	0	0	1	17	38	5	0	0	0	0	2	45
9	1	0	0	0	0	0	10	49	3	0	0	1	1	4	58
22	2	0	0	0	0	0	24	45	3	0	0	0	0	4	52
63	6	0	0	0	0	1	70	170	16	0	0	3	1	10	200
19	0	0	0	0	0	1	20	35	3	0	0	0	0	3	41
23	2	0	0	0	0	0	25	49	4	0	0	0	0	1	54
17	1	0	0	0	0	5	23	53	1	0	0	1	0	4	59
15	3	0	0	0	0	3	21	59	5	0	0	0	0	1	65
74	6	0	0	0	0	9	89	196	13	0	0	1	0	9	219
27	2	0	0	0	0	4	33	40	0	0	0	1	0	1	42
25	3	0	0	0	1	0	29	62	1	0	0	0	0	5	68
13	1	0	0	0	0	5	19	49	2	0	0	0	0	2	53
27	0	0	0	0	0	0	27	51	2	0	0	0	0	8	61
92	6	0	0	0	1	9	108	202	5	0	0	1	0	16	224
711	75	3	0	0	1	33	823	1704	159	14	4	18	2	91	1992





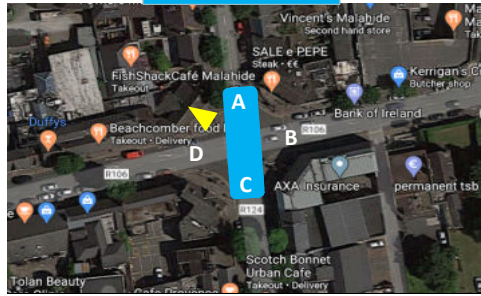
Survey Name :	ITS J-410 Malahide
Site:	4
Date:	15.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

Site 4, Card T13



Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	4 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

Mapping Image



Site 4, Card T13



Site 4, Card S08



Site 4, Card A8



Site 4, Card A5



Survey Name : ITS J-410 Malahide  
 Site: 4  
 Date: 15.07.2020  
 Time: 07:00-19:00  
 Location: 53.451441, -6.153758  
 Classification: Car, LGV, OGV1, OGV2, PSV, P/C, M/C



TIME	A => A								A => B							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
07:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
08:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>15</b>



A => C								A => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
0	0	1	0	0	0	0	1	0	3	0	0	0	0	0	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1	0	2	0	0	0	0	1	3
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	0	1	1	0	0	0	0	2
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
1	2	1	0	0	0	12	16	0	6	1	0	0	0	5	12





B => C								B => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
4	1	1	0	0	0	0	6	33	2	0	0	1	0	1	37
0	0	0	0	0	0	0	0	31	4	1	0	3	0	1	40
5	0	0	0	0	0	0	5	41	5	1	1	1	0	4	53
5	0	0	0	0	0	0	5	40	4	1	0	1	1	2	49
14	1	1	0	0	0	0	16	145	15	3	1	6	1	8	179
13	2	0	0	0	0	0	15	55	2	0	0	1	0	9	67
8	0	0	0	0	0	0	8	59	7	3	0	0	0	5	74
12	0	1	0	0	0	0	13	77	8	3	1	2	0	1	92
20	1	0	0	0	0	1	22	60	2	0	1	0	0	2	65
53	3	1	0	0	0	1	58	251	19	6	2	3	0	17	298
10	1	0	0	0	0	0	11	61	11	3	0	1	0	0	76
9	0	0	0	0	0	0	9	57	7	3	2	2	0	0	71
6	0	1	0	0	0	2	9	57	7	3	0	0	0	0	67
14	4	1	0	0	0	1	20	61	10	0	1	2	0	2	76
39	5	2	0	0	0	3	49	236	35	9	3	5	0	2	290
13	3	0	0	0	0	0	16	71	9	5	0	1	0	0	86
13	0	0	0	0	0	0	13	64	6	3	0	0	0	1	74
17	2	0	0	0	0	0	19	81	10	2	1	1	1	0	96
12	1	1	0	0	0	0	14	88	9	1	0	1	1	2	102
55	6	1	0	0	0	0	62	304	34	11	1	3	2	3	358
14	1	0	0	0	0	0	15	82	12	2	2	1	0	1	100
15	0	0	0	0	0	1	16	70	10	4	0	0	0	0	84
17	1	0	0	0	0	0	18	76	12	0	0	1	1	1	91
14	3	0	0	0	0	0	17	84	4	4	0	1	1	4	98
60	5	0	0	0	0	1	66	312	38	10	2	3	2	6	373
18	2	0	0	0	1	0	21	95	5	2	0	1	0	5	108
15	2	0	0	0	0	0	17	89	8	1	1	0	0	3	102
8	0	0	0	0	0	0	8	67	13	1	1	1	4	2	89
19	2	0	0	0	0	1	22	76	8	3	1	0	0	2	90
60	6	0	0	0	1	1	68	327	34	7	3	2	4	12	389
18	2	0	0	0	0	0	20	78	8	2	1	2	0	2	93
13	2	0	0	0	0	0	15	78	8	1	0	0	0	6	93
10	2	0	0	0	0	0	12	98	6	4	1	1	0	2	112
16	1	0	0	0	0	1	18	77	13	0	1	0	0	5	96
57	7	0	0	0	0	1	65	331	35	7	3	3	0	15	394
22	0	0	0	1	0	2	25	83	11	0	0	2	1	3	100
21	5	0	0	0	0	0	26	71	7	0	1	0	0	1	80
15	2	0	0	0	0	1	18	81	14	2	1	1	0	1	100
13	1	0	0	0	0	0	14	83	6	4	2	0	0	3	98
71	8	0	0	1	0	3	83	318	38	6	4	3	1	8	378
13	2	0	0	0	0	0	15	81	7	2	2	3	1	5	101
16	4	0	0	0	0	2	22	79	12	3	0	0	2	3	99
13	1	0	0	0	0	0	14	88	12	3	1	2	0	0	106
18	1	0	0	0	0	0	19	98	12	0	1	0	1	1	113
60	8	0	0	0	0	2	70	346	43	8	4	5	4	9	419
13	0	0	0	0	0	0	13	83	12	1	0	3	0	2	101
6	1	0	0	0	0	0	7	81	8	1	0	0	0	4	94
12	1	0	0	0	0	0	13	89	9	1	0	2	0	3	104
8	1	0	0	0	0	0	9	93	12	0	0	0	1	3	109
39	3	0	0	0	0	0	42	346	41	3	0	5	1	12	408
12	0	0	0	1	0	1	14	90	14	0	0	1	0	3	108
19	3	0	0	0	1	2	25	67	6	0	0	0	0	6	79
12	0	0	0	0	0	0	12	92	9	0	0	2	0	2	105
15	1	0	0	0	0	0	16	85	6	1	0	0	0	7	99
58	4	0	0	1	1	3	67	334	35	1	0	3	0	18	391
19	1	0	0	0	0	0	20	80	8	0	0	2	0	1	91
12	1	0	0	0	0	0	13	73	5	0	0	1	1	7	87
18	1	0	0	0	1	0	20	92	6	1	0	1	0	6	106
16	1	0	0	0	1	1	19	89	3	1	0	2	0	1	96
65	4	0	0	0	2	1	72	334	22	2	0	6	1	15	380
631	60	5	0	2	4	16	718	3584	389	73	23	47	16	125	4257

C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
1	0	0	0	0	0	0	1	4	1	0	0	0	0	0	5
0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11
1	0	0	0	0	0	0	1	17	3	1	0	0	0	0	21
0	0	0	0	0	0	0	0	9	0	1	0	0	0	0	10
0	0	0	0	0	0	0	0	11	0	0	0	0	1	1	13
0	0	0	0	0	0	0	0	10	1	0	0	0	0	0	11
0	0	0	0	0	0	0	0	18	1	0	0	0	0	0	19
0	0	0	0	0	0	0	0	48	2	1	0	0	1	1	53
0	0	0	0	0	0	0	0	9	0	0	0	0	0	1	10
0	0	0	0	0	0	0	0	9	2	1	0	0	1	0	13
0	0	0	0	0	0	0	0	8	2	1	0	0	0	0	11
0	0	0	0	0	0	0	0	14	2	0	0	0	0	0	16
0	0	0	0	0	0	0	0	40	6	2	0	0	1	1	50
1	0	0	0	0	0	0	1	16	2	0	0	0	0	0	18
0	0	0	0	0	0	1	1	20	1	0	0	0	0	0	21
0	0	0	0	0	0	0	0	19	1	0	0	0	0	0	20
0	0	0	0	0	0	0	0	19	1	1	0	0	0	0	21
1	0	0	0	0	0	1	2	74	5	1	0	0	0	0	80
0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10
0	0	0	0	0	0	0	0	9	2	0	0	0	0	0	11
0	0	0	0	0	0	0	0	15	0	0	0	0	1	1	17
0	0	0	0	0	0	0	0	14	1	0	0	0	0	0	15
0	0	0	0	0	0	0	0	47	4	0	0	0	1	1	53
0	0	0	0	0	0	0	0	25	1	0	0	0	0	0	26
0	0	0	0	0	0	0	0	21	3	0	0	0	0	0	24
0	0	0	0	0	0	1	1	14	2	0	0	0	0	0	16
0	0	0	0	0	0	0	0	22	2	0	0	0	0	0	24
0	0	0	0	0	0	1	1	82	8	0	0	0	0	0	90
0	0	0	0	0	0	0	0	16	3	0	0	0	0	0	19
0	0	0	0	0	0	1	1	21	2	0	0	0	0	2	25
0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	18
0	0	0	0	0	0	1	1	76	5	0	0	0	0	2	83
0	0	0	0	0	0	0	0	23	2	0	0	0	0	0	25
0	0	0	0	0	0	0	0	26	1	0	0	0	0	0	27
0	0	0	0	0	0	0	0	20	2	0	0	0	0	0	22
0	0	0	0	0	0	0	0	25	2	0	0	0	0	1	28
0	0	0	0	0	0	0	0	94	7	0	0	0	0	1	102
0	0	0	0	0	0	0	0	13	2	0	0	0	0	1	16
0	0	0	0	0	0	0	0	21	2	1	0	0	0	0	24
0	0	0	0	0	0	0	0	21	2	0	0	0	0	0	23
0	0	0	0	0	0	0	0	18	1	0	0	0	0	1	20
0	0	0	0	0	0	0	0	73	7	1	0	0	0	2	83
0	0	0	0	0	0	0	0	21	1	0	0	0	0	0	22
0	0	0	0	0	0	0	0	27	3	0	0	0	0	0	30
0	0	0	0	0	0	1	1	25	0	0	0	0	0	0	25
0	0	0	0	0	0	0	0	13	0	0	0	0	0	2	15
0	0	0	0	0	0	1	1	86	4	0	0	0	0	2	92
0	0	0	0	0	0	0	0	16	2	0	0	0	0	1	19
0	0	0	0	0	0	1	1	19	1	0	0	0	0	0	20
0	0	0	0	0	0	0	0	17	2	0	0	0	0	0	19
0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13
0	0	0	0	0	0	1	1	65	5	0	0	0	0	1	71
0	0	0	0	0	0	0	0	21	1	0	0	0	0	0	22
0	0	0	0	0	0	0	0	26	2	0	0	0	0	0	28
0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	18
0	0	0	0	0	0	0	0	21	0	0	0	0	0	1	22
0	0	0	0	0	0	0	0	86	3	0	0	0	0	1	90
2	0	0	0	0	0	5	7	788	59	6	0	0	3	12	868

C => C								C => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5
0	0	0	0	0	0	0	0	6	4	0	0	2	0	0	12
0	0	0	0	0	0	0	0	7	0	0	0	1	1	0	9
0	0	0	0	0	0	0	0	12	0	0	0	1	0	2	15
0	0	0	0	0	0	0	0	29	4	0	0	5	1	2	41
0	0	0	0	0	0	0	0	17	2	0	0	2	0	0	21
0	0	0	0	0	0	0	0	13	2	0	0	1	0	0	16
0	0	0	0	0	0	0	0	14	2	0	0	0	0	0	16
0	0	0	0	0	0	0	0	23	0	1	0	1	0	0	25
0	0	0	0	0	0	0	0	67	6	1	0	4	0	0	78
0	0	0	0	0	0	0	0	12	2	0	0	1	0	0	15
0	0	0	0	0	0	0	0	16	0	0	0	1	0	1	18
0	0	0	0	0	0	0	0	17	3	0	0	0	0	1	21
0	0	0	0	0	0	0	0	27	6	0	0	1	0	1	35
0	0	0	0	0	0	0	0	72	11	0	0	3	0	3	89
0	0	0	0	0	0	0	0	18	1	0	0	0	0	0	19
0	0	0	0	0	0	0	0	18	1	1	0	1	0	2	23
0	0	0	0	0	0	0	0	21	3	0	0	0	0	0	24
0	0	0	0	0	0	0	0	22	4	1	0	1	0	0	28
0	0	0	0	0	0	0	0	79	9	2	0	2	0	2	94
0	0	0	0	0	0	0	0	17	2	1	0	0	0	0	20
1	0	0	0	0	0	0	1	20	4	2	1	1	0	0	28
0	0	0	0	0	0	0	0	31	5	0	0	0	0	0	36
0	0	0	0	0	0	0	0	16	6	1	0	1	0	0	24
1	0	0	0	0	0	0	1	84	17	4	1	2	0	0	108
0	0	0	0	0	0	0	0	16	1	0	1	0	0	0	18
0	0	0	0	0	0	0	0	15	2	0	0	1	0	0	18
0	0	0	0	0	0	0	0	27	4	0	0	0	0	0	31
0	0	0	0	0	0	0	0	27	1	0	0	1	0	0	29
0	0	0	0	0	0	0	0	85	8	0	1	2	0	0	96
0	0	0	0	0	0	0	0	28	3	0	0	0	0	0	31
0	0	0	0	0	0	0	0	28	3	0	0	1	0	0	32
0	0	0	0	0	0	0	0	22	1	0	0	0	0	1	24
0	0	0	0	0	0	0	0	28	1	0	0	1	0	0	30
0	0	0	0	0	0	0	0	106	8	0	0	2	0	1	117
0	0	0	0	0	0	0	0	23	4	0	0	0	0	0	27
0	0	0	0	0	0	0	0	20	2	0	0	1	0	1	24
0	0	0	0	0	0	0	0	27	3	0	0	0	0	0	30
0	0	0	0	0	0	0	0	20	3	0	0	1	0	0	24
0	0	0	0	0	0	0	0	90	12	0	0	2	0	1	105
0	0	0	0	0	0	0	0	19	3	0	0	0	0	0	22
0	0	0	0	0	0	0	0	19	4	1	0	1	0	0	25
0	0	0	0	0	0	0	0	24	4	0	0	0	0	0	28
0	0	0	0	0	0	0	0	17	2	0	0	1	0	0	20
0	0	0	0	0	0	0	0	79	13	1	0	2	0	0	95
0	0	0	0	0	0	0	0	27	1	0	0	0	0	0	28
0	0	0	0	0	0	0	0	16	0	0	0	1	0	0	17
0	0	0	0	0	0	0	0	31	3	1	0	1	0	0	36
0	0	0	0	0	0	0	0	18	6	0	0	1	0	0	25
0	0	0	0	0	0	0	0	92	10	1	0	3	0	0	106
0	0	0	0	0	0	0	0	30	2	0	0	0	0	0	32
0	0	0	0	0	0	0	0	36	0	0	0	1	0	2	39
0	0	0	0	0	0	0	0	27	4	0	0	1	0	0	32
0	0	0	0	0	0	0	0	24	0	0	0	1	0	0	25
0	0	0	0	0	0	0	0	117	6	0	0	3	0	2	128
0	0	0	0	0	0	0	0	22	1	0	0	0	0	3	26
0	0	0	0	0	0	0	0	27	3	0	0	1	0	0	31
0	0	0	0	0	0	0	0	30	2	0	0	1	0	0	33
0	0	0	0	0	0	0	0	21	3	0	0	0	0	0	24
0	0	0	0	0	0	0	0	100	9	0	0	2	0	3	114
1	0	0	0	0	0	0	1	1000	113	9	2	32	1	14	1171

D => A							D => B								
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	1	0	0	0	0	1	12	8	0	0	3	0	1	24
0	0	0	0	0	0	0	0	14	9	1	1	0	0	2	27
0	0	0	0	0	0	1	1	43	7	0	0	1	0	0	51
1	0	0	0	0	0	0	1	41	12	2	0	0	0	2	57
1	0	1	0	0	0	1	3	110	36	3	1	4	0	5	159
0	0	0	0	0	0	1	1	29	9	5	0	1	0	2	46
0	0	0	0	0	0	0	0	27	8	1	1	0	0	3	40
0	1	0	0	0	0	0	1	41	5	1	1	1	0	0	49
0	0	0	0	0	0	0	0	52	10	2	0	0	0	4	68
0	1	0	0	0	0	1	2	149	32	9	2	2	0	9	203
0	0	0	0	0	0	0	0	30	10	5	1	1	0	0	47
0	0	0	0	0	0	0	0	51	8	1	0	0	0	0	60
0	4	0	0	0	0	0	4	48	14	3	0	1	0	1	67
0	0	0	0	0	0	0	0	61	7	2	1	0	0	0	71
0	4	0	0	0	0	0	4	190	39	11	2	2	0	1	245
0	1	0	0	0	0	0	1	53	4	4	0	2	1	1	65
0	0	0	0	0	0	0	0	50	10	0	0	0	0	0	60
0	0	0	0	0	0	0	0	49	8	0	0	0	0	1	58
0	0	0	0	0	0	0	0	66	6	3	1	0	0	1	77
0	1	0	0	0	0	0	1	218	28	7	1	2	1	3	260
0	0	0	0	0	0	0	0	56	6	2	1	1	1	1	68
0	0	0	0	0	0	1	1	71	8	4	0	0	0	0	83
0	0	0	0	0	0	2	2	72	6	1	0	1	0	3	83
0	0	0	0	0	0	0	0	75	4	1	0	0	0	0	80
0	0	0	0	0	0	3	3	274	24	8	1	2	1	4	314
0	0	0	0	0	0	0	0	84	9	1	1	1	0	0	96
0	0	0	0	0	0	0	0	64	8	4	1	0	0	4	81
0	0	0	0	0	0	0	0	72	6	0	0	1	0	2	81
0	0	0	0	0	0	2	2	79	9	1	1	0	0	1	91
0	0	0	0	0	0	2	2	299	32	6	3	2	0	7	349
0	0	0	0	0	0	0	0	66	6	0	1	1	0	2	76
0	0	0	0	0	0	1	1	76	5	0	0	0	0	2	83
0	0	0	0	0	0	0	0	74	5	0	2	1	1	1	84
0	0	0	0	0	0	0	0	73	6	1	0	0	0	1	81
0	0	0	0	0	0	1	1	289	22	1	3	2	1	6	324
0	1	0	0	0	0	0	1	63	7	0	1	0	0	6	77
0	1	0	0	0	0	0	1	91	5	0	1	1	0	1	99
0	0	0	0	0	0	1	1	66	11	1	0	1	0	1	80
0	0	0	0	0	0	0	0	73	7	0	1	0	1	3	85
0	2	0	0	0	0	1	3	293	30	1	3	2	1	11	341
0	0	0	0	0	0	0	0	60	9	0	1	1	0	2	73
0	0	0	0	0	0	0	0	62	5	0	0	0	0	1	68
0	0	0	0	0	0	0	0	63	5	0	1	1	0	4	74
0	0	0	0	0	0	0	0	76	4	0	1	0	2	1	84
0	0	0	0	0	0	0	0	261	23	0	3	2	2	8	299
0	0	0	0	0	0	2	2	82	8	0	0	1	1	3	95
0	0	0	0	0	0	1	1	87	7	0	0	0	1	3	98
0	0	0	0	0	0	5	5	63	1	1	0	1	1	2	69
0	0	0	0	0	0	1	1	75	2	0	0	0	0	4	81
0	0	0	0	0	0	9	9	307	18	1	0	2	3	12	343
0	0	0	0	0	0	0	0	81	8	0	0	1	1	5	96
0	0	0	0	0	0	1	1	64	3	0	1	0	0	3	71
0	0	1	0	0	0	0	1	71	6	0	1	0	0	3	81
1	0	0	0	0	0	0	1	81	3	0	1	1	0	3	89
1	0	1	0	0	0	1	3	297	20	0	3	2	1	14	337
0	1	0	0	0	0	0	1	78	5	0	1	1	0	2	87
0	0	0	0	0	0	0	0	72	7	0	0	0	0	1	80
1	0	0	0	0	0	0	1	82	3	0	0	1	0	3	89
0	0	0	0	0	0	0	0	84	2	0	0	0	0	7	93
1	1	0	0	0	0	0	2	316	17	0	1	2	0	13	349
3	9	2	0	0	0	19	33	3003	321	47	23	26	10	93	3523



D => C								D => D							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0
3	3	0	0	1	0	0	7	1	0	0	0	0	0	0	1
8	2	0	0	1	1	0	12	0	0	0	0	0	0	0	0
4	4	0	0	0	0	1	9	0	0	0	0	0	0	0	0
19	11	0	0	2	1	1	34	1	0	0	0	0	0	0	1
6	0	1	0	1	0	0	8	0	0	0	0	0	0	0	0
7	0	0	0	1	0	0	8	0	0	0	0	0	0	0	0
3	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0
5	2	0	0	0	0	0	7	0	0	0	0	0	0	0	0
21	2	1	0	2	0	1	27	0	0	0	0	0	0	0	0
3	2	0	0	0	0	0	5	0	0	0	0	0	0	0	0
5	2	0	0	1	0	0	8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	2	11	0	0	0	0	0	0	0	0
9	2	1	0	0	0	0	12	1	0	0	0	0	0	0	1
26	6	1	0	1	0	2	36	1	0	0	0	0	0	0	1
8	3	1	0	1	0	0	13	0	0	0	0	0	0	0	0
4	0	1	0	0	0	0	5	0	0	0	0	0	0	0	0
7	0	0	0	0	0	1	8	0	0	0	0	0	0	0	0
13	1	0	1	0	0	0	15	0	0	0	0	0	0	0	0
32	4	2	1	1	0	1	41	0	0	0	0	0	0	0	0
12	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0
3	0	1	0	1	0	0	5	0	0	0	0	0	0	0	0
8	2	0	1	1	0	0	12	0	0	0	0	0	0	0	0
6	3	0	0	0	0	0	9	0	0	1	0	0	0	0	1
29	6	1	1	2	0	0	39	0	0	1	0	0	0	0	1
9	2	0	0	1	0	0	12	0	0	0	0	0	0	0	0
10	2	0	0	0	0	0	12	0	0	0	0	0	0	0	0
10	2	0	0	0	0	0	12	0	0	0	0	0	0	0	0
18	3	0	0	0	0	0	21	0	0	0	0	0	0	0	0
47	9	0	0	1	0	0	57	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0
8	2	1	0	1	0	0	12	0	0	0	0	0	0	0	0
12	0	0	0	0	0	1	13	0	0	0	0	0	0	0	0
6	2	0	0	1	0	0	9	1	0	0	0	0	0	0	1
44	4	1	0	2	0	1	52	1	0	0	0	0	0	0	1
10	0	0	1	0	0	0	11	0	1	0	0	0	0	0	1
16	0	1	0	1	0	0	18	0	0	0	0	0	0	0	0
12	2	0	0	0	0	0	14	1	0	0	0	0	0	0	1
9	1	0	0	1	0	0	11	0	0	0	0	0	0	0	0
47	3	1	1	2	0	0	54	1	1	0	0	0	0	0	2
9	2	0	0	1	0	2	14	0	0	0	0	0	0	0	0
7	3	0	0	0	0	0	10	0	0	0	0	0	0	0	0
5	0	0	0	0	0	2	7	0	0	0	0	0	0	0	0
16	0	0	1	1	0	1	19	0	1	0	0	0	0	0	1
37	5	0	1	2	0	5	50	0	1	0	0	0	0	0	1
12	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0
11	1	0	0	1	0	0	13	0	0	0	0	0	0	0	0
12	1	0	0	1	0	0	14	0	0	0	0	0	0	0	0
9	0	0	0	1	0	0	10	0	0	0	0	0	0	0	0
44	3	0	0	3	0	0	50	0	0	0	0	0	0	0	0
8	0	1	0	0	0	3	12	0	0	0	0	0	0	0	0
5	0	0	0	0	0	2	7	0	0	0	0	0	0	0	0
8	1	0	0	2	0	0	11	0	0	0	0	0	0	0	0
17	0	0	0	1	0	0	18	1	0	0	0	0	0	0	1
38	1	1	0	3	0	5	48	1	0	0	0	0	0	0	1
16	0	1	0	1	0	1	19	0	0	0	0	0	0	0	0
24	1	0	0	1	0	1	27	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
4	0	0	0	2	0	1	7	0	0	0	0	0	0	0	0
49	1	1	0	4	0	3	58	0	0	0	0	0	0	0	0
433	55	9	4	25	1	19	546	5	2	1	0	0	0	0	8

Survey Name :	ITS J-410 Malahide
Site:	5
Date:	03.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

Site 5, Card T1



Mapping Image

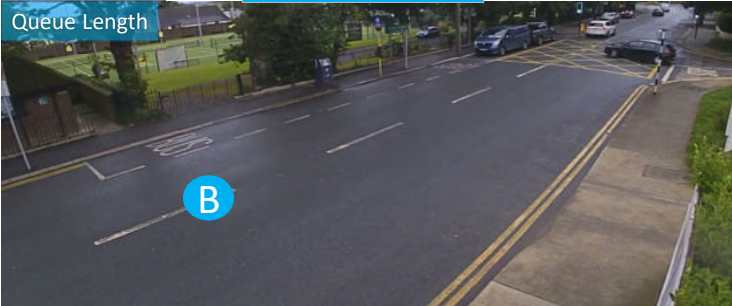


Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	3 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

Site 5, Card S14



Site 5, Card A14



Site 5, Card T1



Survey Name :	ITS J-410 Malahide
Site:	Site 5
Date:	15-07-2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C



TIME	A => A								TOT	A => B								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	CAR		LGV	OGV1	OGV2	PSV	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	4	1	0	0	0	0	2	7		
07:15	0	0	0	0	0	0	0	0	4	3	0	0	0	0	0	7		
07:30	0	0	0	0	0	0	0	0	7	4	1	0	2	0	3	17		
07:45	0	0	0	0	0	0	0	0	18	3	0	0	1	0	1	23		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>54</b>		
08:00	0	0	0	0	0	0	0	0	12	4	1	0	0	1	2	20		
08:15	0	0	0	0	0	0	0	0	14	1	0	0	1	0	2	18		
08:30	0	0	0	0	0	0	0	0	25	3	0	0	0	0	0	28		
08:45	0	0	0	0	0	0	0	0	29	4	2	1	0	0	0	36		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>102</b>		
09:00	0	0	0	0	0	0	0	0	17	2	0	0	0	0	0	19		
09:15	0	0	0	0	0	0	0	0	25	4	1	0	0	0	2	32		
09:30	0	0	0	0	0	0	0	0	21	2	0	0	1	0	0	24		
09:45	0	0	0	0	0	0	0	0	25	6	3	0	0	0	0	34		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>88</b>	<b>14</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>109</b>		
10:00	0	0	0	0	0	0	0	0	36	6	0	0	1	0	0	43		
10:15	0	0	0	0	0	0	0	0	42	5	1	0	0	0	0	48		
10:30	0	0	0	0	0	0	0	0	33	3	1	0	0	0	0	37		
10:45	0	0	0	0	0	0	0	0	44	3	1	0	0	0	0	48		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>155</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>176</b>		
11:00	0	0	0	0	0	0	0	0	33	3	0	0	1	0	0	37		
11:15	0	0	0	0	0	0	0	0	32	2	0	0	0	0	0	34		
11:30	0	0	0	0	0	0	0	0	38	3	0	0	0	0	2	43		
11:45	0	0	0	0	0	0	0	0	29	1	0	0	0	0	1	31		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>132</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>145</b>		
12:00	0	0	0	0	0	0	0	0	39	0	0	0	1	0	0	40		
12:15	0	0	0	0	0	0	0	0	34	2	0	0	0	1	3	40		
12:30	0	0	0	0	0	0	0	0	48	4	0	0	0	0	0	52		
12:45	0	0	0	0	0	0	0	0	47	2	1	0	0	0	4	54		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>186</b>		
13:00	0	0	0	0	0	0	0	0	50	1	0	0	1	0	0	52		
13:15	0	0	0	0	0	0	0	0	36	4	0	0	0	0	0	40		
13:30	0	0	0	0	0	0	0	0	47	5	0	0	0	0	0	52		
13:45	0	0	0	0	0	0	0	0	37	4	0	0	0	0	2	43		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>170</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>187</b>		
14:00	0	0	0	0	0	0	0	0	51	6	0	0	1	0	0	58		
14:15	0	0	0	0	0	0	0	0	50	4	0	1	0	0	0	55		
14:30	0	0	0	0	0	0	0	0	49	2	0	0	0	0	0	51		
14:45	0	0	0	0	0	0	0	0	51	1	0	0	0	0	2	54		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>201</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>218</b>		
15:00	0	0	0	0	0	0	0	0	54	1	0	0	1	0	0	56		
15:15	0	0	0	0	0	0	0	0	38	4	0	0	0	0	2	44		
15:30	0	0	0	0	0	0	0	0	45	2	1	0	0	0	0	48		
15:45	0	0	0	0	0	0	0	0	37	4	1	0	1	0	1	44		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>174</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>192</b>		
16:00	0	0	0	0	0	0	0	0	50	6	0	0	1	0	0	57		
16:15	0	0	0	0	0	0	0	0	44	4	0	0	0	0	2	50		
16:30	0	0	0	0	0	0	0	0	68	2	0	0	1	1	6	78		
16:45	0	0	0	0	0	0	0	0	56	2	0	0	0	1	1	60		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>218</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>245</b>		
17:00	0	0	0	0	0	0	0	0	53	3	0	0	1	0	4	61		
17:15	0	0	0	0	0	0	0	0	64	2	0	0	0	0	2	68		
17:30	0	0	0	0	0	0	0	0	59	2	0	0	0	0	3	64		
17:45	0	0	0	0	0	0	0	0	63	4	0	0	1	0	1	69		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>239</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>262</b>		
18:00	0	0	0	0	0	0	0	0	49	2	0	0	0	0	0	51		
18:15	0	0	0	0	0	0	0	0	58	1	0	0	0	0	2	61		
18:30	0	0	0	0	0	0	0	0	42	2	0	0	1	0	2	47		
18:45	0	0	0	0	0	0	0	0	62	2	0	0	0	0	2	66		
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>211</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>225</b>		
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1869</b>	<b>141</b>	<b>14</b>	<b>2</b>	<b>17</b>	<b>4</b>	<b>54</b>	<b>2101</b>		



A => C								B => A							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
8	1	2	0	0	0	0	11	0	0	0	0	0	0	0	0
4	1	1	0	0	0	0	6	0	0	0	0	0	0	0	0
14	2	0	1	0	0	0	17	0	0	0	0	0	0	0	0
7	0	0	0	1	0	0	8	0	0	0	0	0	0	0	0
33	4	3	1	1	0	0	42	0	0	0	0	0	0	0	0
19	1	0	0	0	0	0	20	0	0	0	0	0	0	0	0
13	1	0	0	0	0	0	14	0	0	0	0	0	0	0	0
26	1	2	1	0	0	0	30	0	0	0	0	0	0	0	0
22	2	0	0	0	0	0	24	0	0	0	0	0	0	0	0
80	5	2	1	0	0	0	88	0	0	0	0	0	0	0	0
13	3	2	0	0	0	0	18	0	0	0	0	0	0	0	0
18	2	2	1	0	0	0	23	0	0	0	0	0	0	0	0
16	3	2	0	0	0	0	21	0	0	0	0	0	0	0	0
19	6	1	1	0	0	0	27	0	0	0	0	0	0	0	0
66	14	7	2	0	0	0	89	0	0	0	0	0	0	0	0
16	7	1	0	0	0	0	24	0	0	0	0	0	0	0	0
17	3	0	0	0	0	1	21	0	0	0	0	0	0	0	0
29	6	0	1	0	0	0	36	0	0	0	0	0	0	0	0
24	1	2	0	0	0	0	27	0	0	0	0	0	0	0	0
86	17	3	1	0	0	1	108	0	0	0	0	0	0	0	0
19	3	1	2	0	0	0	25	0	0	0	0	0	0	0	0
19	4	0	0	0	0	0	23	0	0	0	0	0	0	0	0
21	3	0	0	0	0	0	24	0	0	0	0	0	0	0	0
20	4	2	0	0	0	0	26	0	0	0	0	0	0	0	0
79	14	3	2	0	0	0	98	0	0	0	0	0	0	0	0
21	1	0	2	0	0	0	24	0	0	0	0	0	0	0	0
22	4	0	0	0	0	0	26	0	0	0	0	0	0	0	0
16	5	0	1	0	0	0	22	0	0	0	0	0	0	0	0
32	3	0	1	0	0	0	36	0	0	0	0	0	0	0	0
91	13	0	4	0	0	0	108	0	0	0	0	0	0	0	0
25	5	0	1	0	0	0	31	0	0	0	0	0	0	0	0
24	5	0	1	0	0	0	30	0	0	0	0	0	0	0	0
22	2	0	1	0	0	0	25	0	0	0	0	0	0	0	0
29	3	0	1	0	0	0	33	0	0	0	0	0	0	0	0
100	15	0	4	0	0	0	119	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0
28	4	0	1	0	0	0	33	0	0	0	0	0	0	0	0
19	4	0	1	0	0	0	24	0	0	0	0	0	0	0	0
20	4	0	2	0	0	0	26	0	0	0	0	0	0	1	1
94	12	0	4	0	0	0	110	0	0	0	0	0	0	1	1
24	6	0	0	0	0	0	30	0	0	0	0	0	0	0	0
21	4	0	0	0	0	0	25	0	0	0	0	0	0	0	0
18	2	0	1	0	0	0	21	0	0	0	0	0	0	0	0
25	4	0	1	0	0	0	30	0	0	0	0	0	0	1	1
88	16	0	2	0	0	0	106	0	0	0	0	0	0	1	1
24	7	0	1	0	0	1	33	0	0	0	0	0	0	0	0
21	2	0	0	0	0	0	23	0	0	0	0	0	0	0	0
24	4	1	0	0	0	1	30	0	0	0	0	0	0	0	0
17	1	0	0	0	0	0	18	0	0	0	0	0	0	0	0
86	14	1	1	0	0	2	104	0	0	0	0	0	0	0	0
35	4	0	0	0	0	0	39	1	0	0	0	0	0	0	1
25	1	0	0	0	1	0	27	1	0	0	0	0	0	0	1
20	1	0	0	0	0	0	21	1	0	0	0	0	0	0	1
25	1	0	0	0	0	0	26	0	0	0	0	0	0	0	0
105	7	0	0	0	1	0	113	3	0	0	0	0	0	0	3
26	1	0	0	0	0	0	27	0	0	0	0	0	0	0	0
27	1	0	0	0	0	0	28	0	0	0	0	0	0	0	0
47	2	0	0	0	0	0	49	0	0	0	0	0	0	0	0
33	3	0	0	0	0	0	36	0	0	0	0	0	0	0	0
133	7	0	0	0	0	0	140	0	0	0	0	0	0	0	0
1041	138	19	22	1	1	3	1225	3	0	0	0	0	0	2	5



B => B								B => C							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	30	3	0	0	1	0	2	36
0	0	0	0	0	0	0	0	31	4	0	0	3	0	3	41
0	0	0	0	0	0	0	0	37	5	0	1	1	1	4	49
0	0	0	0	0	0	0	0	44	5	1	0	1	0	3	54
0	0	0	0	0	0	0	0	142	17	1	1	6	1	12	180
0	0	0	0	0	0	0	0	51	4	0	0	1	0	9	65
0	0	0	0	0	0	0	0	69	7	3	0	0	0	6	85
0	0	0	0	0	0	0	0	87	10	3	0	2	0	2	104
0	0	0	0	0	0	0	0	66	8	2	1	0	0	2	79
0	0	0	0	0	0	0	0	273	29	8	1	3	0	19	333
0	0	0	0	0	0	0	0	74	7	2	0	1	0	1	85
0	0	0	0	0	0	0	0	56	8	1	1	2	0	1	69
0	0	0	0	0	0	0	0	72	8	1	0	0	0	4	85
1	0	0	0	0	0	0	1	70	10	0	0	2	0	4	86
1	0	0	0	0	0	0	1	272	33	4	1	5	0	10	325
0	0	0	0	0	0	0	0	88	8	4	0	1	0	0	101
0	0	0	0	0	0	0	0	74	6	3	0	1	0	2	86
0	0	0	0	0	0	0	0	89	9	4	0	1	1	0	104
0	0	0	0	0	0	0	0	94	11	0	0	1	1	3	110
0	0	0	0	0	0	0	0	345	34	11	0	4	2	5	401
0	0	0	0	0	0	0	0	102	6	1	0	1	0	2	112
0	0	0	0	0	0	0	0	86	10	5	0	1	0	1	103
0	0	0	0	0	0	0	0	87	8	2	0	0	0	1	98
0	0	0	0	0	0	0	0	96	5	4	0	1	1	5	112
0	0	0	0	0	0	0	0	371	29	12	0	3	1	9	425
0	0	0	0	0	0	0	0	100	2	1	0	1	0	6	110
0	0	0	0	0	0	0	0	100	12	1	0	0	1	3	117
0	0	0	0	0	0	0	0	94	8	2	1	1	2	5	113
0	0	0	0	0	0	0	0	98	9	2	0	0	0	3	112
0	0	0	0	0	0	0	0	392	31	6	1	2	3	17	452
0	0	0	0	0	0	0	0	98	8	2	0	2	1	1	112
0	0	0	0	0	0	0	0	81	12	3	0	0	0	6	102
0	0	0	0	0	0	0	0	112	6	3	0	1	0	3	125
0	0	0	0	0	0	0	0	93	10	0	0	0	0	6	109
0	0	0	0	0	0	0	0	384	36	8	0	3	1	16	448
0	0	0	0	0	0	0	0	93	10	0	0	3	1	5	112
0	0	0	0	0	0	0	0	87	6	0	0	0	0	2	95
0	0	0	0	0	0	0	0	95	16	3	0	1	0	3	118
0	0	0	0	0	0	0	0	96	2	1	2	0	0	5	106
0	0	0	0	0	0	0	0	371	34	4	2	4	1	15	431
0	0	0	0	0	0	0	0	91	8	2	1	3	1	7	113
0	0	0	0	0	0	0	0	87	11	2	1	0	1	3	105
0	0	0	0	0	0	0	0	107	15	5	1	2	0	5	135
0	0	0	0	0	0	0	0	104	10	1	0	0	1	0	116
0	0	0	0	0	0	0	0	389	44	10	3	5	3	15	469
0	0	0	0	0	0	0	0	88	7	1	0	3	0	5	104
0	0	0	0	0	0	0	0	85	7	2	0	0	0	4	98
0	0	0	0	0	0	0	0	90	7	0	0	2	0	4	103
0	0	0	0	0	0	0	0	107	14	0	0	1	1	9	132
0	0	0	0	0	0	0	0	370	35	3	0	6	1	22	437
0	0	0	0	0	0	0	0	93	10	2	0	1	1	5	112
0	0	0	0	0	0	0	0	81	5	0	0	0	0	8	94
0	0	0	0	0	0	0	0	90	9	0	0	2	0	5	106
0	0	0	0	0	0	0	0	89	5	1	0	2	0	6	103
0	0	0	0	0	0	0	0	353	29	3	0	5	1	24	415
0	0	0	0	0	0	0	0	79	8	0	0	2	0	5	94
0	0	0	0	0	0	0	0	85	6	0	0	2	1	5	99
0	0	0	0	0	0	0	0	81	2	1	0	1	0	8	93
0	0	0	0	0	0	0	0	86	3	0	0	2	2	6	99
0	0	0	0	0	0	0	0	331	19	1	0	7	3	24	385
1	0	0	0	0	0	0	1	3993	370	71	9	53	17	188	4701

C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	13	2	1	0	3	0	1	20
0	0	0	0	0	0	0	0	12	9	1	1	0	0	2	25
0	0	0	0	0	0	0	0	28	6	1	0	1	0	2	38
0	0	0	0	0	0	0	0	41	11	1	0	0	0	2	55
0	0	0	0	0	0	0	0	94	28	4	1	4	0	7	138
0	0	0	0	0	0	0	0	29	9	6	0	1	0	0	45
0	0	0	0	0	0	0	0	27	6	1	2	0	0	3	39
0	0	0	0	0	0	0	0	40	5	1	0	1	0	3	50
0	0	0	0	0	0	0	0	40	10	2	0	0	0	2	54
0	0	0	0	0	0	0	0	136	30	10	2	2	0	8	188
0	0	0	0	0	0	0	0	30	4	4	0	1	0	1	40
0	0	0	0	0	0	0	0	44	8	2	0	0	0	1	55
0	0	0	0	0	0	0	0	41	9	4	0	1	0	1	56
0	0	0	0	0	0	0	0	55	5	2	0	0	0	0	62
0	0	0	0	0	0	0	0	170	26	12	0	2	0	3	213
0	0	0	0	0	0	0	0	50	2	3	0	2	1	0	58
0	0	0	0	0	0	0	0	59	7	0	0	0	0	0	66
0	0	0	0	0	0	0	0	38	8	1	0	1	0	2	50
0	0	0	0	0	0	0	0	54	3	4	0	0	0	1	62
0	0	0	0	0	0	0	0	201	20	8	0	3	1	3	236
0	0	0	0	0	0	0	0	49	5	0	0	1	0	0	55
0	0	0	0	0	0	0	0	64	4	5	0	0	0	0	73
0	0	0	0	0	0	0	0	66	5	0	0	1	0	1	73
0	0	0	0	0	0	0	0	67	2	2	0	0	0	0	71
0	0	0	0	0	0	0	0	246	16	7	0	2	0	1	272
0	0	0	0	0	0	0	0	80	5	1	0	1	0	0	87
0	0	0	0	0	0	0	0	69	7	2	0	1	0	2	81
0	0	0	0	0	0	0	0	68	5	1	0	1	0	2	77
0	0	0	0	0	0	0	0	73	8	1	0	0	0	4	86
0	0	0	0	0	0	0	0	290	25	5	0	3	0	8	331
0	0	0	0	0	0	0	0	69	9	1	0	1	0	2	82
0	0	0	0	0	0	0	0	72	2	0	0	0	0	4	78
0	0	0	0	0	0	0	0	70	2	2	0	1	1	1	77
0	0	0	0	0	0	0	0	68	4	1	0	0	0	1	74
0	0	0	0	0	0	0	0	279	17	4	0	2	1	8	311
0	0	0	0	0	0	0	0	71	4	1	0	0	0	5	81
0	0	0	0	0	0	0	0	76	4	0	0	1	0	1	82
0	0	0	0	0	0	0	0	73	9	2	0	1	0	2	87
0	0	0	0	0	0	0	0	76	5	0	0	0	0	5	86
0	0	0	0	0	0	0	0	296	22	3	0	2	0	13	336
0	0	0	0	0	0	0	0	52	5	0	0	1	0	3	61
0	0	0	0	0	0	0	0	64	4	0	0	0	0	3	71
0	0	0	0	0	0	0	0	67	5	0	0	0	0	2	74
0	0	0	0	0	0	0	0	66	3	0	1	1	1	2	74
0	0	0	0	0	0	0	0	249	17	0	1	2	1	10	280
0	0	0	0	0	0	0	0	82	5	0	0	1	2	1	91
0	0	0	0	0	0	0	0	94	7	0	0	0	1	2	104
0	0	0	0	0	0	0	0	60	1	1	0	1	1	5	69
0	0	0	0	0	0	0	0	71	2	0	0	1	1	7	82
0	0	0	0	0	0	0	0	307	15	1	0	3	5	15	346
0	0	0	0	0	0	0	0	76	6	0	0	2	0	6	90
0	0	0	0	0	0	0	0	59	3	0	1	0	0	3	66
0	0	0	0	0	0	0	0	63	9	0	1	0	0	2	75
0	0	0	0	0	0	0	0	73	2	0	1	1	0	4	81
0	0	0	0	0	0	0	0	271	20	0	3	3	0	15	312
0	0	0	0	0	0	0	0	73	1	0	1	1	0	2	78
0	0	0	0	0	0	0	0	70	6	0	0	0	0	2	78
0	0	0	0	0	0	0	0	79	1	0	0	1	0	5	86
0	0	0	0	0	0	0	0	80	1	0	0	1	0	9	91
0	0	0	0	0	0	0	0	302	9	0	1	3	0	18	333
0	0	0	0	0	0	0	0	2841	245	54	8	31	8	109	3296



Survey Name :	ITS J-410 Malahide
Site:	6
Date:	03.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

Site 6, Card T1



Mapping Image



Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	3 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

Site 6, Card S14



Site 6, Card T1



Site 6, Card A14





Survey Name :	ITS J-410 Malahide
Site:	site 6
Date:	15-07-2020
Time:	07:00-19:00
Location:	
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C



TIME	A => A								TOT	A => B								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	CAR		LGV	OGV1	OGV2	PSV	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	3	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	
08:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
09:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	
10:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
10:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
10:30	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	
11:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	
12:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
13:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
13:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	
14:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
14:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
14:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	
15:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	
15:15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	
15:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
15:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	
16:00	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3	
16:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
16:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	
17:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:30	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	
18:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
<b>12 TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>49</b>	



A => C								B => A							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2	1	0	0	0	0	0	1	2
1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2	3	0	0	0	0	0	0	3
1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2
1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2
2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	4	6	0	0	0	0	0	0	6
1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	4	2	0	0	0	0	0	1	3
1	1	0	0	0	0	0	2	1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
6	1	0	0	0	0	0	7	3	0	0	0	0	0	0	3
1	1	0	0	0	0	0	2	1	1	0	0	0	0	0	2
1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
4	1	0	0	0	0	0	5	3	1	0	0	0	0	0	4
2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
3	0	0	0	0	0	0	3	1	0	0	0	0	0	0	1
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	8	4	0	0	0	0	0	0	4
2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2	1	1	0	0	0	0	0	2
0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	4	2	1	0	0	0	0	0	3
0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
1	1	0	0	0	0	0	2	0	1	0	0	0	0	0	1
4	1	0	0	0	0	0	5	2	2	0	0	0	0	0	4
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	5	1	0	0	0	0	0	0	1
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
2	0	0	0	0	0	1	3	1	0	0	0	0	0	0	1
1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	3	2	0	0	0	0	0	0	2
9	0	0	0	0	0	1	10	3	0	0	0	0	0	0	3
57	4	0	0	0	0	1	62	30	4	0	0	0	0	2	36

B => B								B => C							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	30	3	0	0	1	0	2	36
0	0	0	0	0	0	0	0	31	4	0	0	3	0	3	41
0	0	0	0	0	0	0	0	37	5	0	1	1	1	4	49
0	0	0	0	0	0	0	0	44	5	1	0	1	0	3	54
0	0	0	0	0	0	0	0	142	17	1	1	6	1	12	180
0	0	0	0	0	0	0	0	51	4	0	0	1	0	9	65
0	0	0	0	0	0	0	0	69	7	3	0	0	0	6	85
0	0	0	0	0	0	0	0	87	10	3	0	2	0	2	104
0	0	0	0	0	0	0	0	66	8	2	1	0	0	2	79
0	0	0	0	0	0	0	0	273	29	8	1	3	0	19	333
0	0	0	0	0	0	0	0	74	7	2	0	1	0	1	85
0	0	0	0	0	0	0	0	56	8	1	1	2	0	1	69
0	0	0	0	0	0	0	0	72	8	1	0	0	0	4	85
1	0	0	0	0	0	0	1	70	10	0	0	2	0	4	86
1	0	0	0	0	0	0	1	272	33	4	1	5	0	10	325
0	0	0	0	0	0	0	0	88	8	4	0	1	0	0	101
0	0	0	0	0	0	0	0	74	6	3	0	1	0	2	86
0	0	0	0	0	0	0	0	89	9	4	0	1	1	0	104
0	0	0	0	0	0	0	0	94	11	0	0	1	1	3	110
0	0	0	0	0	0	0	0	345	34	11	0	4	2	5	401
0	0	0	0	0	0	0	0	102	6	1	0	1	0	2	112
0	0	0	0	0	0	0	0	86	10	5	0	1	0	1	103
0	0	0	0	0	0	0	0	87	8	2	0	0	0	1	98
0	0	0	0	0	0	0	0	96	5	4	0	1	1	5	112
0	0	0	0	0	0	0	0	371	29	12	0	3	1	9	425
0	0	0	0	0	0	0	0	100	2	1	0	1	0	6	110
0	0	0	0	0	0	0	0	100	12	1	0	0	1	3	117
0	0	0	0	0	0	0	0	94	8	2	1	1	2	5	113
0	0	0	0	0	0	0	0	98	9	2	0	0	0	3	112
0	0	0	0	0	0	0	0	392	31	6	1	2	3	17	452
0	0	0	0	0	0	0	0	98	8	2	0	2	1	1	112
0	0	0	0	0	0	0	0	81	12	3	0	0	0	6	102
0	0	0	0	0	0	0	0	112	6	3	0	1	0	3	125
0	0	0	0	0	0	0	0	93	10	0	0	0	0	6	109
0	0	0	0	0	0	0	0	384	36	8	0	3	1	16	448
0	0	0	0	0	0	0	0	93	10	0	0	3	1	5	112
0	0	0	0	0	0	0	0	87	6	0	0	0	0	2	95
0	0	0	0	0	0	0	0	95	16	3	0	1	0	3	118
0	0	0	0	0	0	0	0	96	2	1	2	2	0	5	108
0	0	0	0	0	0	0	0	371	34	4	2	6	1	15	433
0	0	0	0	0	0	0	0	91	8	2	1	3	1	7	113
0	0	0	0	0	0	0	0	87	11	2	1	0	1	3	105
0	0	0	0	0	0	0	0	107	15	5	1	2	0	5	135
0	0	0	0	0	0	0	0	104	10	1	0	0	1	0	116
0	0	0	0	0	0	0	0	389	44	10	3	5	3	15	469
0	0	0	0	0	0	0	0	88	7	1	0	3	0	5	104
0	0	0	0	0	0	0	0	85	7	2	0	0	0	4	98
0	0	0	0	0	0	0	0	90	7	0	0	0	0	4	101
0	0	0	0	0	0	0	0	107	14	0	0	1	1	9	132
0	0	0	0	0	0	0	0	370	35	3	0	4	1	22	435
0	0	0	0	0	0	0	0	93	10	2	0	1	1	5	112
0	0	0	0	0	0	0	0	81	5	0	0	0	0	8	94
0	0	0	0	0	0	0	0	90	9	0	0	2	0	5	106
0	0	0	0	0	0	0	0	89	5	1	0	2	0	6	103
0	0	0	0	0	0	0	0	353	29	3	0	5	1	24	415
0	0	0	0	0	0	0	0	79	8	0	0	2	0	5	94
0	0	0	0	0	0	0	0	85	6	0	0	2	1	5	99
0	0	0	0	0	0	0	0	81	2	1	0	1	0	8	93
0	0	0	0	0	0	0	0	86	3	0	0	2	2	6	99
0	0	0	0	0	0	0	0	331	19	1	0	7	3	24	385
1	0	0	0	0	0	0	1	3993	370	71	9	53	17	188	4701

C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	1	0	0	0	0	0	1	13	2	1	0	3	0	1	20
0	1	1	0	0	0	0	2	12	9	1	1	0	0	2	25
0	0	0	0	0	0	0	0	28	6	1	0	1	0	2	38
2	0	0	0	0	0	0	2	41	11	1	0	0	0	2	55
2	2	1	0	0	0	0	5	94	28	4	1	4	0	7	138
0	0	0	0	0	0	0	0	29	9	6	0	1	0	0	45
2	0	0	0	0	0	0	2	27	6	1	2	0	0	3	39
2	0	0	0	0	0	0	2	40	5	1	0	1	0	3	50
2	0	0	0	0	0	0	2	40	10	2	0	0	0	2	54
6	0	0	0	0	0	0	6	136	30	10	2	2	0	8	188
0	0	0	0	0	0	0	0	30	4	4	0	1	0	1	40
0	0	0	0	0	0	0	0	44	8	2	0	0	0	1	55
3	0	0	0	0	0	0	3	41	9	4	0	1	0	1	56
4	0	0	0	0	0	0	4	55	5	2	0	0	0	0	62
7	0	0	0	0	0	0	7	170	26	12	0	2	0	3	213
1	0	0	0	0	0	0	1	50	2	3	0	2	1	0	58
2	0	0	0	0	0	0	2	59	7	0	0	0	0	0	66
3	0	0	0	0	0	0	3	38	8	1	0	1	0	2	50
1	0	0	0	0	0	0	1	54	3	4	0	0	0	1	62
7	0	0	0	0	0	0	7	201	20	8	0	3	1	3	236
0	0	0	0	0	0	0	0	49	5	0	0	1	0	0	55
0	0	0	0	0	0	0	0	64	4	5	0	0	0	0	73
0	0	0	0	0	0	1	1	66	5	0	0	1	0	1	73
1	0	0	0	0	0	0	1	67	2	2	0	0	0	0	71
1	0	0	0	0	0	1	2	246	16	7	0	2	0	1	272
4	0	0	0	0	0	0	4	80	5	1	0	1	0	0	87
1	0	0	0	0	0	0	1	69	7	2	0	1	0	2	81
0	0	0	0	0	0	0	0	68	5	1	0	1	0	2	77
1	0	0	0	0	0	0	1	73	8	1	0	0	0	4	86
6	0	0	0	0	0	0	6	290	25	5	0	3	0	8	331
0	0	0	0	0	0	0	0	69	9	1	0	1	0	2	82
0	0	0	0	0	0	0	0	72	2	0	0	0	0	4	78
2	0	0	0	0	0	0	2	70	2	2	0	1	1	1	77
1	0	0	0	0	0	0	1	68	4	1	0	0	0	1	74
3	0	0	0	0	0	0	3	279	17	4	0	2	1	8	311
2	0	0	0	0	0	0	2	71	4	1	0	0	0	5	81
3	0	0	0	0	0	0	3	76	4	0	0	1	0	1	82
0	0	0	0	0	0	0	0	73	9	2	0	1	0	2	87
1	0	0	0	0	0	0	1	76	5	0	0	0	0	5	86
6	0	0	0	0	0	0	6	296	22	3	0	2	0	13	336
0	0	0	0	0	0	0	0	52	5	0	0	1	0	3	61
0	0	0	0	0	0	0	0	64	4	0	0	0	0	3	71
1	0	0	0	0	0	0	1	67	5	0	0	0	0	2	74
2	0	0	0	0	0	0	2	66	3	0	1	1	1	2	74
3	0	0	0	0	0	0	3	249	17	0	1	2	1	10	280
0	0	0	0	0	0	0	0	82	5	0	0	1	2	1	91
1	0	0	0	0	0	0	1	94	7	0	0	0	1	2	104
0	0	0	0	0	0	1	1	60	1	1	0	1	1	5	69
0	0	0	0	0	0	0	0	71	2	0	0	1	1	7	82
1	0	0	0	0	0	1	2	307	15	1	0	3	5	15	346
1	0	0	0	0	0	0	1	76	6	0	0	2	0	6	90
2	0	0	0	0	0	0	2	59	3	0	1	0	0	3	66
0	0	0	0	0	0	0	0	63	9	0	1	0	0	2	75
2	0	0	0	0	0	0	2	73	2	0	1	1	0	4	81
5	0	0	0	0	0	0	5	271	20	0	3	3	0	15	312
2	0	0	0	0	0	0	2	73	1	0	1	1	0	2	78
3	0	0	0	0	0	0	3	70	6	0	0	0	0	2	78
2	0	0	0	0	0	0	2	79	1	0	0	1	0	5	86
2	0	0	0	0	0	0	2	80	1	0	0	1	0	9	91
9	0	0	0	0	0	0	9	302	9	0	1	3	0	18	333
56	2	1	0	0	0	2	61	2841	245	54	8	31	8	109	3296





Survey Name :	ITS J-410 Malahide
Site:	7
Date:	03.07.2020
Time:	07:00-19:00
Location:	53.451441, -6.153758
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C

**Site 7, Card S23**



Survey duration:	12h
Time Period:	07:00-19:00
Junction Type:	3 Arm Junction
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C
Queues Required:	Yes
Pedestrian required:	No

**Mapping Image**



**Site 7, Card S23**



**Site 7, Card T22**



**Site 7, Card T1**







A => C								B => A							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	3	2	1	0	0	0	1	7
0	0	0	0	0	0	0	0	5	1	0	0	0	0	2	8
0	0	0	0	0	0	0	0	6	0	0	0	0	1	0	7
0	0	0	0	0	0	0	0	9	2	0	0	0	0	0	11
0	0	0	0	0	0	0	0	23	5	1	0	0	1	3	33
0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12
0	0	0	0	0	0	0	0	11	2	0	0	0	0	0	13
0	0	0	0	0	0	0	0	15	6	1	0	0	0	0	22
0	0	0	0	0	0	0	0	13	3	0	0	0	0	0	16
0	0	0	0	0	0	0	0	51	11	1	0	0	0	0	63
0	0	0	0	0	0	0	0	18	1	2	0	0	0	0	21
0	0	0	0	0	0	0	0	12	3	0	0	0	0	0	15
0	0	0	0	0	0	0	0	20	1	0	0	0	0	2	23
0	0	0	0	0	0	0	0	16	3	0	0	0	0	0	19
0	0	0	0	0	0	0	0	66	8	2	0	0	0	2	78
0	0	0	0	0	0	0	0	23	4	0	0	0	0	0	27
0	0	0	0	0	0	0	0	17	3	0	0	0	0	1	21
0	0	0	0	0	0	0	0	29	3	1	0	0	0	0	33
0	0	0	0	0	0	0	0	16	2	0	0	0	0	2	20
0	0	0	0	0	0	0	0	85	12	1	0	0	0	3	101
0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	27
0	0	0	0	0	0	0	0	19	3	0	0	0	0	1	23
0	0	0	0	0	0	0	0	21	1	1	0	0	0	0	23
0	0	0	0	0	0	0	0	22	0	0	0	0	0	2	24
0	0	0	0	0	0	0	0	89	4	1	0	0	0	3	97
0	0	0	0	0	0	0	0	19	1	0	0	0	0	0	20
0	0	0	0	0	0	0	0	25	5	0	0	0	0	1	31
0	0	0	0	0	0	0	0	33	2	0	0	0	0	0	35
0	0	0	0	0	0	0	0	31	6	0	0	0	0	1	38
0	0	0	0	0	0	0	0	108	14	0	0	0	0	2	124
0	0	0	0	0	0	0	0	29	4	0	0	0	1	0	34
0	0	0	0	0	0	0	0	27	4	0	0	0	0	0	31
0	0	0	0	0	0	0	0	32	0	0	0	0	0	1	33
0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
0	0	0	0	0	0	0	0	109	8	0	0	0	1	1	119
0	0	0	0	0	0	0	0	30	1	0	0	0	0	0	31
0	0	0	0	0	0	0	0	27	1	0	0	0	0	0	28
0	0	0	0	0	0	0	0	22	2	0	0	0	0	0	24
0	0	0	0	0	0	0	0	22	3	0	0	0	0	0	25
0	0	0	0	0	0	0	0	101	7	0	0	0	0	0	108
0	0	0	0	0	0	0	0	31	2	0	0	0	0	0	33
0	0	0	0	0	0	0	0	16	3	0	0	0	0	0	19
0	0	0	0	0	0	0	0	29	2	0	0	0	0	0	31
0	0	0	0	0	0	0	0	23	3	0	0	0	0	0	26
0	0	0	0	0	0	0	0	99	10	0	0	0	0	0	109
0	0	0	0	0	0	0	0	19	4	0	0	0	0	0	23
0	0	0	0	0	0	0	0	32	1	0	0	0	0	2	35
0	0	0	0	0	0	0	0	27	1	0	0	0	0	1	29
0	0	0	0	0	0	0	0	33	3	0	0	0	0	5	41
0	0	0	0	0	0	0	0	111	9	0	0	0	0	8	128
0	0	0	0	0	0	0	0	31	3	0	0	0	0	0	34
0	0	0	0	0	0	0	0	23	1	0	0	0	0	0	24
0	0	0	0	0	0	0	0	25	1	0	0	0	0	1	27
0	0	0	0	0	0	0	0	26	0	0	0	0	0	3	29
0	0	0	0	0	0	0	0	105	5	0	0	0	0	4	114
0	0	0	0	0	0	0	0	21	1	0	0	0	0	2	24
0	0	0	0	0	0	0	0	29	2	0	0	0	0	1	32
0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	37
0	0	0	0	0	0	0	0	23	0	0	0	0	1	3	27
0	0	0	0	0	0	0	0	110	3	0	0	0	1	6	120
0	0	0	0	0	0	0	0	1057	96	6	0	0	3	32	1194

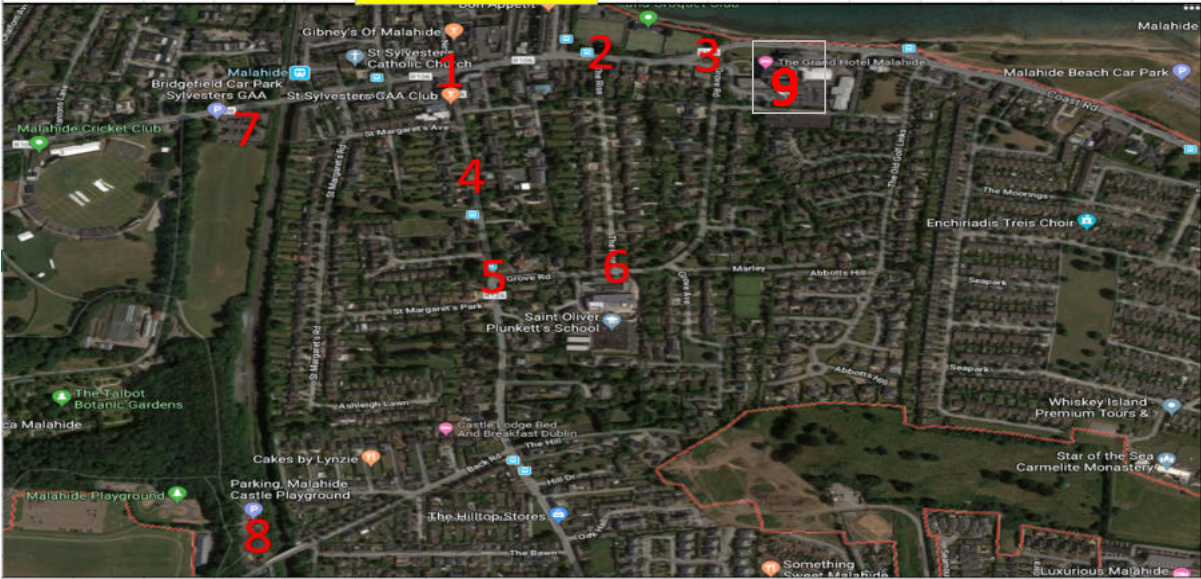


B => B								B => C							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	0	0	0	0	0	0	0	34	3	0	0	1	0	1	39
0	0	0	0	0	0	0	0	32	4	1	0	3	0	1	41
0	0	0	0	0	0	0	0	47	5	0	2	1	0	4	59
0	0	0	0	0	0	0	0	47	4	1	0	1	1	3	57
0	0	0	0	0	0	0	0	160	16	2	2	6	1	9	196
0	0	0	0	0	0	0	0	63	3	0	0	1	0	9	76
0	0	0	0	0	0	0	0	73	4	3	0	0	0	6	86
0	0	0	0	0	0	0	0	94	8	4	1	2	0	1	110
0	0	0	0	0	0	0	0	76	6	0	1	0	0	3	86
0	0	0	0	0	0	0	0	306	21	7	2	3	0	19	358
0	0	0	0	0	0	0	0	75	9	3	0	1	0	1	89
0	0	0	0	0	0	0	0	65	7	3	2	2	0	1	80
0	0	0	0	0	0	0	0	66	8	4	0	0	0	2	80
0	0	0	0	0	0	0	0	75	13	1	1	3	0	4	97
0	0	0	0	0	0	0	0	281	37	11	3	6	0	8	346
0	0	0	0	0	0	0	0	81	11	5	0	1	0	0	98
0	0	0	0	0	0	0	0	81	8	3	0	0	0	1	93
0	0	0	0	0	0	0	0	93	12	3	0	1	1	1	111
0	0	0	0	0	0	0	0	100	10	2	0	1	1	0	114
0	0	0	0	0	0	0	0	355	41	13	0	3	2	2	416
0	0	0	0	0	0	0	0	98	12	3	2	0	0	1	116
0	0	0	0	0	0	0	0	83	9	5	2	0	0	1	100
0	0	0	0	0	0	0	0	98	13	1	0	1	0	1	114
0	0	0	0	0	0	0	0	95	7	5	0	1	0	3	111
0	0	0	0	0	0	0	0	374	41	14	4	2	0	6	441
0	0	0	0	0	0	0	0	119	3	1	2	1	0	5	131
0	0	0	0	0	0	0	0	102	10	1	1	1	1	2	118
0	0	0	0	0	0	0	0	85	10	2	2	0	3	4	106
0	0	0	0	0	0	0	0	98	11	2	1	0	0	2	114
0	0	0	0	0	0	0	0	404	34	6	6	2	4	13	469
0	0	0	0	0	0	0	0	99	10	2	1	2	0	2	116
0	0	0	0	0	0	0	0	90	9	2	0	0	0	5	106
0	0	0	0	0	0	0	0	115	7	3	1	1	0	2	129
0	0	0	0	0	0	0	0	98	13	0	1	0	0	5	117
0	0	0	0	0	0	0	0	402	39	7	3	3	0	14	468
0	0	0	0	0	0	0	0	112	9	0	0	3	1	5	130
0	0	0	0	0	0	0	0	104	10	0	1	0	0	2	117
0	0	0	0	0	0	0	0	100	15	3	1	1	0	1	121
0	0	0	0	0	0	0	0	113	6	2	2	0	0	6	129
0	0	0	0	0	0	0	0	429	40	5	4	4	1	14	497
0	0	0	0	0	0	0	0	105	11	2	2	3	1	7	131
0	0	0	0	0	0	0	0	95	14	2	1	0	2	3	117
0	0	0	0	0	0	0	0	118	13	4	2	2	0	3	142
0	0	0	0	0	0	0	0	109	8	0	1	0	1	1	120
0	0	0	0	0	0	0	0	427	46	8	6	5	4	14	510
0	0	0	0	0	0	0	0	119	12	2	0	3	0	3	139
0	0	0	0	0	0	0	0	91	8	2	0	0	0	3	104
0	0	0	0	0	0	0	0	97	10	1	0	2	0	4	114
0	0	0	0	0	0	0	0	101	12	0	0	1	1	2	117
0	0	0	0	0	0	0	0	408	42	5	0	6	1	12	474
0	0	0	0	0	0	0	0	101	13	1	0	1	0	5	121
0	0	0	0	0	0	0	0	90	7	0	0	0	1	8	106
0	0	0	0	0	0	0	0	99	9	0	0	2	1	3	114
0	0	0	0	0	0	0	0	98	8	1	0	0	0	7	114
0	0	0	0	0	0	0	0	388	37	2	0	3	2	23	455
0	0	0	0	0	0	0	0	100	7	0	0	2	0	3	112
0	0	0	0	0	0	0	0	90	5	0	0	2	1	s	98
0	0	0	0	0	0	0	0	108	6	1	0	1	0	8	124
0	0	0	0	0	0	0	0	117	5	0	0	2	1	3	128
0	0	0	0	0	0	0	0	415	23	1	0	7	2	14	462
0	0	0	0	0	0	0	0	4349	417	81	30	50	17	148	5092

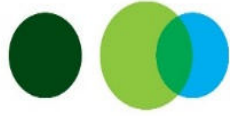
C => A								C => B							
CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
0	3	0	0	0	0	0	3	13	5	0	0	0	0	1	19
1	2	1	0	0	0	0	4	15	10	3	0	0	0	2	30
4	3	0	0	0	0	0	7	29	5	1	0	1	0	2	38
4	0	1	0	0	0	0	5	47	14	1	0	0	0	2	64
9	8	2	0	0	0	0	19	104	34	5	0	1	0	7	151
7	0	0	0	0	0	0	7	29	8	5	0	1	0	0	43
8	1	0	0	0	0	0	9	28	6	1	2	0	0	0	37
10	0	0	1	0	0	0	11	41	5	1	0	1	0	2	50
17	3	0	0	0	0	0	20	47	8	2	0	0	0	3	60
42	4	0	1	0	0	0	47	145	27	9	2	2	0	5	190
8	3	2	1	0	0	0	14	32	7	3	0	1	0	1	44
9	0	1	0	0	1	0	11	49	7	3	0	1	0	0	60
8	1	2	0	0	0	0	11	41	15	4	0	1	0	1	62
15	4	1	1	0	0	0	21	67	5	2	0	0	0	0	74
40	8	6	2	0	1	0	57	189	34	12	0	3	0	2	240
17	2	0	0	0	0	0	19	50	3	3	0	2	1	0	59
14	4	0	0	0	0	0	18	58	8	0	0	0	0	0	66
20	2	0	0	0	0	0	22	45	8	0	0	1	0	1	55
27	3	0	1	0	0	0	31	58	4	4	0	0	0	1	67
78	11	0	1	0	0	0	90	211	23	7	0	3	1	2	247
13	1	0	1	0	0	0	15	50	6	2	0	1	0	1	60
17	2	0	0	0	0	0	19	66	5	3	1	0	0	0	75
11	0	1	0	0	0	1	13	74	5	1	0	1	0	2	83
12	1	0	0	0	0	0	13	77	3	1	0	0	0	0	81
53	4	1	1	0	0	1	60	267	19	7	1	2	0	3	299
26	2	0	1	0	0	0	29	84	5	1	0	1	0	0	91
12	2	0	1	0	0	0	15	73	7	2	0	0	0	2	84
23	3	1	0	0	0	0	27	68	6	1	0	1	0	1	77
21	2	0	1	0	0	0	24	81	8	1	0	0	0	4	94
82	9	1	3	0	0	0	95	306	26	5	0	2	0	7	346
13	1	0	1	0	0	0	15	69	10	1	0	1	0	2	83
20	3	0	1	0	0	0	24	77	3	0	0	0	1	4	85
21	0	0	2	0	0	1	24	69	3	0	0	1	0	1	74
17	3	0	0	0	0	0	20	79	4	1	0	1	0	1	86
71	7	0	4	0	0	1	83	294	20	2	0	3	1	8	328
13	0	0	1	0	0	0	14	75	5	1	0	0	0	5	86
31	0	0	1	0	0	1	33	84	8	0	0	1	0	1	94
18	3	0	0	0	0	0	21	80	9	1	0	1	0	2	93
21	0	0	1	0	0	0	22	77	6	0	0	0	1	4	88
83	3	0	3	0	0	1	90	316	28	2	0	2	1	12	361
20	4	0	1	0	0	0	25	55	7	0	0	1	0	3	66
18	0	1	0	0	0	0	19	67	5	0	0	0	0	1	73
20	0	0	1	0	0	1	22	66	5	0	0	1	0	3	75
18	1	1	1	0	1	1	23	80	3	0	1	0	0	2	86
76	5	2	3	0	1	2	89	268	20	0	1	2	0	9	300
22	1	0	0	0	0	0	23	77	6	0	0	1	2	1	87
18	0	0	0	0	0	0	18	100	8	0	0	1	1	2	112
18	0	0	0	0	0	0	18	66	1	1	0	2	0	5	75
18	0	0	0	0	0	0	18	69	2	0	0	0	0	7	78
76	1	0	0	0	0	0	77	312	17	1	0	4	3	15	352
18	0	0	0	0	0	0	18	80	6	0	0	1	1	6	94
14	0	0	0	0	0	0	14	74	3	0	1	0	0	3	81
17	2	0	0	0	0	0	19	69	9	0	1	0	0	2	81
12	1	0	0	0	0	0	13	78	2	0	1	1	0	4	86
61	3	0	0	0	0	0	64	301	20	0	3	2	1	15	342
24	1	0	0	0	0	0	25	84	3	0	1	1	0	2	91
23	2	0	0	0	0	0	25	71	8	0	0	0	0	2	81
16	0	0	0	0	0	0	16	87	0	0	0	1	0	5	93
17	1	0	0	0	0	0	18	82	0	0	0	0	0	9	91
80	4	0	0	0	0	0	84	324	11	0	1	2	0	18	356
751	67	12	18	0	2	5	855	3037	279	50	8	28	7	103	3512



### Sites Overview







# Irish Traffic Surveys

Survey Name :	ITS J-347 Malahide
Site:	
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.4449143,-6.1781695,5326
Classification:	Car, LGV, OGV1, OGV2, PSV, P/C, M/C, Peds



Survey Name :	ITS J-347 Malahide
Site:	Site 1
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.450726, -6.15363
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	A => A							TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	4	1
07:30	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	3	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>2</b>
08:00	0	0	0	0	0	0	0	0	4	2
08:15	0	0	0	0	0	0	0	0	3	0
08:30	0	0	0	0	0	0	0	0	4	0
08:45	0	0	0	0	0	0	0	0	5	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>2</b>
09:00	0	0	0	0	0	0	0	0	5	1
09:15	0	0	0	0	0	0	0	0	2	0
09:30	0	0	0	0	0	0	0	0	4	0
09:45	0	0	0	0	0	0	0	0	5	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>1</b>
10:00	0	0	0	0	0	0	0	0	6	0
10:15	0	0	0	0	0	0	0	0	4	0
10:30	0	0	0	0	0	0	0	0	4	0
10:45	0	0	0	0	0	0	0	0	3	2
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>2</b>
11:00	0	0	0	0	0	0	0	0	6	3
11:15	0	0	0	0	0	0	0	0	7	2
11:30	0	0	0	0	0	0	0	0	3	1
11:45	0	0	0	0	0	0	0	0	4	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>6</b>
<b>4 hr TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>77</b>	<b>13</b>



A => B						A => C							
OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
2	0	0	0	0	3	2	1	0	0	0	0	0	3
1	0	0	0	0	6	6	1	0	0	0	0	0	7
0	0	0	0	0	0	7	0	1	0	0	0	0	8
0	0	0	0	0	4	7	0	0	0	0	0	0	7
3	0	0	0	0	13	22	2	1	0	0	0	0	25
0	0	0	0	0	6	26	0	0	0	0	0	0	26
1	0	0	0	0	4	45	0	1	0	0	0	0	46
0	0	0	0	0	4	29	2	0	0	0	0	0	31
0	0	0	0	0	5	38	2	0	0	0	1	0	41
1	0	0	0	0	19	138	4	1	0	0	1	0	144
0	0	0	0	0	6	18	1	0	0	0	0	0	19
1	0	0	0	0	3	8	1	0	0	0	0	0	9
1	0	0	0	0	5	14	0	0	0	0	0	1	15
0	0	0	0	0	5	7	1	0	0	0	0	1	9
2	0	0	0	0	19	47	3	0	0	0	0	2	52
0	0	0	0	0	6	8	1	0	0	0	0	0	9
0	0	0	0	0	4	9	1	0	0	0	0	0	10
0	0	0	0	0	4	15	2	0	0	0	0	0	17
0	0	0	0	2	7	10	0	0	0	0	0	0	10
0	0	0	0	2	21	42	4	0	0	0	0	0	46
1	0	0	0	0	10	17	0	1	0	0	0	0	18
0	0	0	0	0	9	12	3	0	0	0	0	0	15
0	0	0	0	0	4	12	2	0	0	0	0	0	14
0	0	0	0	0	4	20	0	0	0	0	0	0	20
1	0	0	0	0	27	61	5	1	0	0	0	0	67
7	0	0	0	2	99	310	18	3	0	0	1	2	334

A => D								B => A							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
11	1	0	0	0	0	0	3	4	1	0	0	0	0	0	5
14	1	1	0	0	0	0	7	1	0	0	0	2	0	0	3
11	2	0	0	0	0	1	8	1	0	1	0	1	0	0	3
8	2	1	0	0	0	0	7	4	0	0	0	0	0	0	4
44	6	2	0	0	0	1	25	10	1	1	0	3	0	0	15
10	1	1	0	0	0	0	26	5	0	0	0	1	0	0	6
15	2	0	0	0	0	0	46	5	0	1	0	0	1	0	7
17	2	2	0	0	0	0	31	2	0	0	0	0	0	0	2
14	0	0	0	0	0	0	41	9	1	0	0	1	0	0	11
56	5	3	0	0	0	0	144	21	1	1	0	2	1	0	26
13	0	0	0	0	0	0	19	8	0	1	0	0	0	0	9
10	3	0	0	0	0	0	9	4	2	0	0	0	0	0	6
12	3	1	0	0	0	0	15	9	1	0	0	1	0	0	11
7	2	0	0	0	0	0	9	5	2	0	0	1	0	0	8
42	8	1	0	0	0	0	52	26	5	1	0	2	0	0	34
22	0	0	0	0	0	0	9	8	1	0	0	0	0	2	11
14	4	1	0	0	0	0	10	10	0	0	0	0	0	0	10
16	3	0	0	0	0	0	17	12	2	0	0	0	0	0	14
14	4	0	0	0	0	0	10	9	1	0	0	0	0	1	11
66	11	1	0	0	0	0	46	39	4	0	0	0	0	3	46
14	3	0	0	0	0	0	18	7	0	0	0	1	0	0	8
2	2	1	0	0	0	0	15	8	2	1	0	0	0	0	11
12	0	1	0	0	0	0	14	2	0	0	0	0	0	0	2
8	4	0	0	0	0	0	20	9	3	0	0	0	0	0	12
36	9	2	0	0	0	0	67	26	5	1	0	1	0	0	33
244	39	9	0	0	0	1	334	122	16	4	0	8	1	3	154



B => B								B => C							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
0	0	0	0	0	0	0	0	5	0	1	0	0	0	0	6
0	0	0	0	0	0	0	0	9	3	0	0	0	0	0	12
0	0	0	0	0	0	0	0	5	1	0	0	0	0	1	7
0	0	0	0	0	0	0	0	26	4	1	0	0	0	1	32
0	0	0	0	0	0	0	0	5	3	1	0	0	0	0	9
0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	9
0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10
0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
0	0	0	0	0	0	0	0	43	5	1	0	0	0	0	49
0	0	0	0	0	0	0	0	18	1	0	0	0	0	0	19
0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	9
0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
0	0	0	0	0	0	0	0	34	3	0	0	0	0	0	37
0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9
0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10
0	0	0	0	0	0	0	0	12	1	1	0	0	0	0	14
0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10
0	0	0	0	0	0	0	0	39	3	1	0	0	0	0	43
0	0	0	0	0	0	0	0	13	3	0	0	0	0	0	16
0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	8
0	0	0	0	0	0	0	0	6	4	0	0	0	0	0	10
0	0	0	0	0	0	0	0	10	2	0	0	0	1	0	13
0	0	0	0	0	0	0	0	36	10	0	0	0	1	0	47
0	0	0	0	0	0	0	0	178	25	3	0	0	1	1	208

B => D								C => A							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
38	2	0	3	2	0	2	7	5	0	0	0	0	0	0	5
70	7	0	1	2	0	0	6	4	2	0	0	0	0	0	6
63	5	0	0	1	0	3	12	5	0	0	0	0	0	0	5
87	4	1	0	4	0	1	7	12	0	0	0	0	0	0	12
258	18	1	4	9	0	6	32	26	2	0	0	0	0	0	28
72	4	3	0	3	0	1	9	12	0	0	0	0	0	0	12
99	3	2	0	0	0	0	9	18	1	0	0	0	0	0	19
79	5	1	1	3	0	0	10	24	1	0	0	0	0	0	25
81	4	0	0	0	0	1	21	17	0	0	0	0	0	0	17
331	16	6	1	6	0	2	49	71	2	0	0	0	0	0	73
78	5	1	0	1	0	1	19	24	0	0	0	0	0	0	24
77	11	2	0	1	0	0	2	11	2	0	0	0	0	0	13
64	2	0	1	1	0	2	9	5	0	0	0	0	0	1	6
57	4	2	1	0	0	0	7	10	1	0	0	0	0	0	11
276	22	5	2	3	0	3	37	50	3	0	0	0	0	1	54
69	6	1	0	3	0	0	9	7	1	0	0	0	0	0	8
54	6	1	3	0	0	1	10	18	0	0	0	0	0	0	18
61	7	1	0	1	1	0	14	10	1	0	0	0	0	0	11
56	4	0	0	0	0	0	10	10	0	0	0	0	0	0	10
240	23	3	3	4	1	1	43	45	2	0	0	0	0	0	47
53	7	1	0	1	0	2	16	15	2	0	0	0	0	0	17
74	5	5	1	0	0	1	8	8	0	0	0	0	0	0	8
66	6	3	4	2	0	4	10	10	1	0	0	0	0	0	11
70	4	4	0	0	0	1	13	9	1	0	0	0	0	0	10
263	22	13	5	3	0	8	47	42	4	0	0	0	0	0	46
1368	101	28	15	25	1	20	208	234	13	0	0	0	0	1	248



C => D								D => A							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
5	1	1	0	1	0	0	8	12	2	0	0	0	1	0	15
21	1	0	0	2	0	2	26	2	1	0	0	0	0	0	3
14	2	0	0	1	0	0	17	2	0	2	0	0	0	0	4
14	2	1	0	3	0	1	21	5	1	1	1	0	0	0	8
54	6	2	0	7	0	3	72	21	4	3	1	0	1	0	30
19	0	0	0	5	0	0	24	4	0	0	0	0	0	0	4
22	0	1	0	0	0	0	23	4	0	1	0	0	0	0	5
23	0	0	0	1	0	0	24	5	0	2	0	0	0	0	7
17	0	0	0	1	0	0	18	14	0	0	0	0	0	0	14
81	0	1	0	7	0	0	89	27	0	3	0	0	0	0	30
23	0	0	0	1	0	0	24	7	1	0	0	0	0	0	8
18	2	2	0	1	0	0	23	6	1	0	0	0	0	0	7
12	1	1	1	0	0	0	15	8	0	0	0	0	0	0	8
11	3	0	0	0	0	0	14	7	1	1	0	0	1	0	10
64	6	3	1	2	0	0	76	28	3	1	0	0	1	0	33
8	1	0	0	0	0	0	9	7	0	0	0	0	0	0	7
16	2	1	0	1	0	0	20	5	2	0	0	0	0	0	7
16	2	0	0	0	0	0	18	11	2	0	0	0	0	0	13
19	2	3	0	1	0	0	25	9	3	1	0	0	0	0	13
59	7	4	0	2	0	0	72	32	7	1	0	0	0	0	40
17	2	1	0	0	0	0	20	10	1	0	0	0	0	0	11
16	3	0	0	1	0	0	20	9	0	2	0	0	0	0	11
21	3	0	1	0	0	0	25	5	1	1	0	0	0	0	7
10	3	0	0	1	0	0	14	8	2	1	0	0	0	0	11
64	11	1	1	2	0	0	79	32	4	4	0	0	0	0	40
322	30	11	2	20	0	3	388	140	18	12	1	0	2	0	173



D => B								D => C							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
22	5	0	0	3	0	0	30	2	4	0	0	0	0	0	6
38	10	0	0	3	0	0	51	9	1	0	0	0	0	0	10
48	6	1	0	1	0	0	56	8	3	0	0	2	0	0	13
57	9	2	1	4	0	0	73	13	2	0	0	2	0	0	17
165	30	3	1	11	0	0	210	32	10	0	0	4	0	0	46
41	11	1	0	5	0	1	59	22	2	0	0	1	0	1	26
49	8	2	2	0	1	1	63	41	0	0	0	1	0	0	42
41	3	1	0	1	0	1	47	28	1	0	1	3	0	0	33
56	2	5	0	2	0	1	66	16	1	1	1	0	0	0	19
187	24	9	2	8	1	4	235	107	4	1	2	5	0	1	120
54	5	0	2	2	0	1	64	17	0	0	0	1	0	1	19
49	6	3	0	3	0	1	62	5	4	0	0	1	0	1	11
46	6	1	1	1	0	0	55	6	0	0	0	0	0	0	6
64	8	2	0	1	0	0	75	5	0	0	0	1	0	0	6
213	25	6	3	7	0	2	256	33	4	0	0	3	0	2	42
65	8	2	2	1	0	0	78	9	1	0	0	0	0	0	10
53	7	1	1	0	0	0	62	9	3	1	0	1	0	0	14
49	9	0	0	1	0	0	59	4	0	2	0	1	0	0	7
56	6	2	0	0	0	1	65	5	0	0	0	1	0	0	6
223	30	5	3	2	0	1	264	27	4	3	0	3	0	0	37
45	11	4	2	1	0	0	63	8	1	1	0	0	0	0	10
60	4	3	0	0	0	0	67	9	1	1	0	1	0	0	12
42	7	1	1	2	0	2	55	3	2	0	0	1	0	0	6
60	4	1	0	0	0	2	67	6	3	0	0	0	0	0	9
207	26	9	3	3	0	4	252	26	7	2	0	2	0	0	37
995	135	32	12	31	1	11	1217	225	29	6	2	17	0	3	282





Survey Name :	ITS J-347 Malahide
Site:	Site 2
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.450925, -6.1509
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	A => A							TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C			
07:00	1	0	0	0	0	0	0	1	0	0
07:15	0	0	0	0	0	0	0	0	5	1
07:30	0	0	0	0	0	0	0	0	1	0
07:45	0	0	0	0	0	0	0	0	2	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>1</b>
08:00	0	0	0	0	0	0	0	0	5	0
08:15	0	0	0	0	0	0	0	0	6	0
08:30	0	0	0	0	0	0	0	0	6	1
08:45	0	0	0	0	0	0	0	0	1	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>1</b>
09:00	1	0	0	0	0	0	0	1	0	0
09:15	0	0	0	0	0	0	0	0	3	0
09:30	0	0	0	0	0	0	0	0	7	0
09:45	0	0	0	0	0	0	0	0	3	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>13</b>	<b>0</b>
10:00	0	0	0	0	0	0	0	0	3	0
10:15	2	0	0	0	0	0	0	2	3	0
10:30	0	0	0	0	0	0	0	0	3	0
10:45	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>0</b>
11:00	0	0	0	0	0	0	0	0	5	0
11:15	0	0	0	0	0	0	0	0	2	0
11:30	0	0	0	0	0	0	0	0	3	0
11:45	1	0	0	0	0	0	0	1	5	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>15</b>	<b>0</b>
<b>4hr TOT</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>63</b>	<b>2</b>



A => B						A => C							
OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	0	47	1	2	0	2	0	1	53
0	0	0	0	0	6	72	3	2	0	5	0	0	82
0	0	0	0	0	1	79	7	0	0	4	0	4	94
0	0	0	0	0	2	104	6	2	0	3	0	1	116
0	0	0	0	0	9	302	17	6	0	14	0	6	345
0	0	0	0	0	5	91	9	3	0	0	0	0	103
0	0	0	0	0	6	145	9	1	0	0	0	1	156
0	0	0	0	0	7	98	6	1	1	3	0	0	109
0	0	0	0	0	1	86	7	0	0	1	0	1	95
0	0	0	0	0	19	420	31	5	1	4	0	2	463
0	0	0	0	0	0	95	6	1	0	1	0	1	104
0	0	0	0	0	3	94	14	2	0	1	0	2	113
0	0	0	0	0	7	90	5	0	1	2	0	3	101
0	0	0	0	0	3	86	6	3	1	1	0	2	99
0	0	0	0	0	13	365	31	6	2	5	0	8	417
0	0	0	0	0	3	87	5	2	0	3	0	4	101
0	1	0	0	0	4	102	9	2	2	0	0	2	117
0	0	0	0	0	3	92	11	1	0	1	1	5	111
0	0	0	0	0	0	80	3	1	0	0	0	1	85
0	1	0	0	0	10	361	28	6	2	4	1	12	414
0	0	0	0	0	5	83	12	2	0	2	0	2	101
0	0	0	0	0	2	67	8	4	0	0	1	4	84
0	0	0	0	0	3	77	12	3	1	2	0	3	98
0	0	0	0	0	5	104	4	4	0	0	0	1	113
0	0	0	0	0	15	331	36	13	1	4	1	10	396
0	1	0	0	0	66	1779	143	36	6	31	2	38	2035





B => C							C => A								
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
2	0	0	0	0	0	0	2	23	5	0	0	4	0	0	32
4	0	0	0	0	0	0	4	70	8	1	0	4	0	1	84
4	0	0	0	0	0	1	5	75	5	1	0	2	0	1	84
2	1	0	0	0	0	0	3	98	10	1	1	6	0	2	118
12	1	0	0	0	0	1	14	266	28	3	1	16	0	4	318
4	0	0	0	0	0	0	4	86	10	1	0	3	0	1	101
6	0	0	0	0	0	0	6	126	11	2	2	3	0	0	144
17	0	0	0	0	0	0	17	109	7	3	0	2	0	1	122
50	2	0	0	0	0	0	52	111	2	5	0	3	0	0	121
77	2	0	0	0	0	0	79	432	30	11	2	11	0	2	488
29	0	0	0	0	0	0	29	109	8	2	1	4	0	1	125
5	1	0	0	0	0	0	6	80	8	4	0	3	0	0	95
1	0	0	0	0	0	0	1	72	11	1	0	2	0	0	86
5	0	0	0	0	0	0	5	81	8	2	0	2	0	1	94
40	1	0	0	0	0	0	41	342	35	9	1	11	0	2	400
5	0	0	0	0	0	0	5	95	4	1	1	2	0	2	105
2	0	1	1	0	0	0	4	69	6	4	1	0	0	1	81
5	1	0	0	0	0	0	6	68	7	0	0	1	0	1	77
2	0	0	0	0	0	0	2	89	7	5	0	1	0	4	106
14	1	1	1	0	0	0	17	321	24	10	2	4	0	8	369
4	0	0	0	0	0	0	4	89	13	4	1	2	0	1	110
3	0	0	0	0	0	0	3	93	8	2	0	0	0	1	104
0	1	0	0	0	0	0	1	78	8	0	0	2	0	2	90
4	0	0	0	0	0	0	4	93	5	1	0	0	0	1	100
11	1	0	0	0	0	0	12	353	34	7	1	4	0	5	404
154	6	1	1	0	0	1	163	1714	151	40	7	46	0	21	1979





Survey Name :	ITS J-347 Malahide
Site:	Site 3
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.450911, -6.14919
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	A => A							TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	2	0
07:15	0	0	0	0	0	0	0	0	2	0
07:30	0	0	0	0	0	0	0	0	2	0
07:45	0	0	0	0	0	0	0	0	3	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>
08:00	0	0	0	0	0	0	0	0	11	1
08:15	0	0	0	0	0	0	0	0	17	0
08:30	0	0	0	0	0	0	0	0	28	2
08:45	0	0	0	0	0	0	0	0	16	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>72</b>	<b>3</b>
09:00	2	0	0	0	0	0	0	2	7	0
09:15	0	0	0	0	0	0	0	0	5	0
09:30	0	0	0	0	0	0	0	0	4	1
09:45	0	0	0	0	0	0	0	0	7	0
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>23</b>	<b>1</b>
10:00	0	0	0	0	0	0	0	0	3	0
10:15	0	0	0	0	0	0	0	0	2	0
10:30	0	0	0	0	0	0	0	0	8	0
10:45	0	0	0	0	0	0	0	0	12	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0</b>
11:00	0	0	0	0	0	0	0	0	6	0
11:15	0	0	0	0	0	0	0	0	7	0
11:30	0	0	0	0	0	0	0	0	2	2
11:45	0	0	0	0	0	0	0	0	5	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>4 hr TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>149</b>	<b>7</b>





A => B					A => C								
OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	2	43	3	1	1	2	0	2	52
0	0	0	0	0	2	67	7	0	1	4	0	0	79
0	0	0	0	0	2	73	6	0	0	4	0	4	87
0	0	0	0	0	3	94	8	1	0	3	0	1	107
0	0	0	0	0	9	277	24	2	2	13	0	7	325
0	0	0	0	0	12	98	9	4	0	3	0	1	115
0	0	0	0	0	17	129	7	1	0	0	0	1	138
0	0	0	0	0	30	107	4	1	1	3	0	0	116
0	0	0	0	0	16	67	8	2	0	1	0	1	79
0	0	0	0	0	75	401	28	8	1	7	0	3	448
0	0	0	0	0	7	82	2	1	0	1	0	1	87
0	0	0	0	0	5	88	12	2	0	1	0	1	104
1	0	0	0	0	6	81	6	0	1	2	0	3	93
0	0	0	0	0	7	77	4	2	0	1	0	3	87
1	0	0	0	0	25	328	24	5	1	5	0	8	371
0	0	0	0	0	3	76	3	2	0	3	0	4	88
0	0	0	0	0	2	92	8	1	3	0	0	5	109
0	0	0	0	0	8	71	10	2	0	1	0	2	86
1	0	0	0	0	13	60	4	0	0	0	0	1	65
1	0	0	0	0	26	299	25	5	3	4	0	12	348
0	0	0	0	0	6	73	10	1	0	2	0	2	88
0	0	0	0	0	7	62	6	5	1	0	0	4	78
0	0	0	0	0	4	61	10	3	1	2	0	3	80
0	0	0	0	0	6	82	4	3	1	0	0	1	91
0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	158	1583	131	32	10	33	0	40	1829

B => A							B => B								
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0
14	1	0	0	0	0	0	15	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	11	1	0	0	0	0	0	0	1
4	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0
42	1	0	0	0	0	0	43	1	0	0	0	0	0	0	1
18	1	0	0	0	0	0	19	1	0	0	0	0	0	0	1
9	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
41	1	0	0	0	0	0	42	1	0	0	0	0	0	0	1
8	3	1	0	0	0	0	12	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
35	3	1	0	0	0	0	39	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0
7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
8	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
9	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	9	1	0	0	0	0	176	2	0	0	0	0	0	0	2

B => C								C => A							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
2	0	1	0	0	0	0	3	19	3	1	0	4	0	0	27
3	2	1	0	0	0	0	6	54	12	1	0	3	0	1	71
6	2	0	0	0	0	0	8	63	4	1	0	2	0	0	70
9	0	0	0	0	0	0	9	75	9	1	1	6	0	1	93
20	4	2	0	0	0	0	26	211	28	4	1	15	0	2	261
4	1	0	0	0	0	0	5	67	12	1	0	3	0	1	84
15	0	0	0	0	0	0	15	97	9	2	2	3	1	0	114
5	1	0	0	0	0	0	6	95	8	3	0	0	0	2	108
24	0	0	0	0	0	0	24	81	5	5	0	3	0	1	95
48	2	0	0	0	0	0	50	340	34	11	2	9	1	4	401
9	2	0	0	0	0	0	11	84	8	1	2	4	0	0	99
8	0	0	0	0	0	1	9	52	7	4	0	3	0	0	66
12	2	0	0	0	0	0	14	62	11	1	0	2	0	0	76
7	0	1	0	0	0	0	8	73	6	2	0	1	0	1	83
36	4	1	0	0	0	1	42	271	32	8	2	10	0	1	324
11	3	0	0	0	0	0	14	75	5	1	2	2	0	1	86
9	0	1	0	0	0	0	10	63	4	1	1	0	0	0	69
16	2	0	0	0	0	0	18	56	11	0	0	1	0	2	70
17	0	0	0	0	0	0	17	66	7	0	0	1	0	4	78
53	5	1	0	0	0	0	59	260	27	2	3	4	0	7	303
12	1	1	0	0	0	0	14	70	14	4	2	2	0	2	94
8	0	0	0	0	0	1	9	71	8	2	0	0	0	1	82
15	2	0	0	0	0	0	17	72	8	2	0	2	0	3	87
17	1	1	0	0	0	0	19	91	5	0	1	0	0	4	101
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
209	19	6	0	0	0	2	236	1386	156	33	11	42	1	24	1653

C => B							C => C								
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
7	1	0	0	0	0	0	8	0	0	0	0	0	0	0	0
8	2	0	0	0	0	0	10	1	0	0	0	0	0	0	1
16	2	0	0	0	0	0	18	1	0	0	0	0	0	0	1
37	5	0	0	0	0	0	42	2	0	0	0	0	0	0	2
17	0	0	0	0	0	0	17	1	0	0	0	0	0	0	1
16	2	1	0	0	0	0	19	0	0	0	0	0	0	0	0
17	0	0	0	1	0	0	18	1	0	0	0	0	0	0	1
33	0	0	0	0	0	0	33	0	0	0	0	0	0	0	0
83	2	1	0	1	0	0	87	2	0	0	0	0	0	0	2
23	1	0	0	0	0	0	24	0	0	0	0	0	0	0	0
24	1	0	0	0	0	0	25	0	0	0	0	0	0	0	0
6	1	0	0	0	0	0	7	1	0	0	0	0	0	0	1
10	3	0	0	0	0	0	13	0	0	0	0	0	0	0	0
63	6	0	0	0	0	0	69	1	0	0	0	0	0	0	1
15	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0
6	4	2	0	0	0	0	12	2	0	0	0	0	0	0	2
12	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0
17	1	0	0	0	0	0	18	3	0	0	0	0	0	0	3
50	5	2	0	0	0	0	57	5	0	0	0	0	0	0	5
12	0	0	0	0	0	0	12	1	0	0	0	0	0	0	1
16	0	0	0	0	0	0	16	2	0	0	0	0	0	0	2
7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
7	1	1	0	0	0	0	9	2	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
275	19	4	0	1	0	0	299	15	0	0	0	0	0	0	15





Survey Name :	ITS J-347 Malahide
Site:	Site 4
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.448917, -6.15321
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	CAR	LGV	A => A				M/C	P/C	TOT	CAR	LGV
			OGV1	OGV2	Bus						
07:00	0	0	0	0	0	0	0	0	12	1	
07:15	0	0	0	0	0	0	0	0	25	1	
07:30	0	0	0	0	0	0	0	0	27	6	
07:45	0	0	0	0	0	0	0	0	25	4	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>12</b>	
08:00	0	0	0	0	0	0	0	0	52	4	
08:15	0	0	0	0	0	0	0	0	110	3	
08:30	0	0	0	0	0	0	0	0	74	4	
08:45	0	0	0	0	0	0	0	0	75	3	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>311</b>	<b>14</b>	
09:00	0	0	0	0	0	0	0	0	77	3	
09:15	0	0	0	0	0	0	0	0	24	1	
09:30	0	0	0	0	0	0	0	0	29	1	
09:45	0	0	0	0	0	0	0	0	17	2	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147</b>	<b>7</b>	
10:00	0	0	0	0	0	0	0	0	23	3	
10:15	0	0	0	0	0	0	0	0	26	4	
10:30	0	0	0	0	0	0	0	0	35	2	
10:45	0	0	0	0	0	0	0	0	26	3	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>12</b>	
11:00	0	0	0	0	0	0	0	0	36	5	
11:15	0	0	0	0	0	0	0	0	28	6	
11:30	0	0	0	0	0	0	0	0	24	6	
11:45	0	0	0	0	0	0	0	0	39	5	
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>127</b>	<b>22</b>	
<b>4 hr TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>784</b>	<b>67</b>	



A => B					B => A								
OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	13	15	2	0	0	1	0	0	18
0	0	1	0	0	27	29	1	0	0	2	0	2	34
1	0	2	0	0	36	26	1	0	0	2	0	0	29
0	0	1	0	0	30	35	3	0	0	2	0	1	41
1	0	4	0	0	106	105	7	0	0	7	0	3	122
1	0	1	0	1	59	46	1	0	0	5	0	0	52
1	0	1	0	1	116	69	1	2	0	0	0	0	72
0	1	2	0	0	81	55	2	1	0	1	0	0	59
1	0	0	0	0	79	62	0	1	0	2	0	1	66
3	1	4	0	2	335	232	4	4	0	8	0	1	249
0	0	1	0	0	81	74	0	1	0	1	0	0	76
1	0	1	0	0	27	42	4	1	0	1	0	0	48
0	0	0	1	1	32	27	0	1	1	0	0	2	31
1	0	1	0	0	21	35	4	0	0	1	0	0	40
2	0	3	1	1	161	178	8	3	1	3	0	2	195
0	0	0	0	0	26	34	3	0	0	0	0	0	37
1	0	1	0	0	32	52	3	2	0	1	0	0	58
1	0	0	0	0	38	37	2	0	0	0	0	0	39
2	0	1	0	0	32	52	5	1	0	2	0	0	60
4	0	2	0	0	128	175	13	3	0	3	0	0	194
0	0	0	0	0	41	43	3	1	0	0	0	0	47
2	0	1	0	0	37	35	3	0	1	1	0	0	40
0	0	1	0	0	31	40	2	0	0	0	0	0	42
0	0	0	0	0	44	27	10	0	0	1	0	0	38
2	0	2	0	0	153	145	18	1	1	2	0	0	167
12	1	15	1	3	883	835	50	11	2	23	0	6	927





Survey Name :	ITS J-347 Malahide
Site:	Site 5
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.447320, -6.1529
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	A => A							TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	1	0
07:15	0	0	0	0	0	0	0	0	1	0
07:30	0	0	0	0	0	0	0	0	2	2
07:45	0	0	0	0	0	0	0	0	2	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>
08:00	0	0	0	0	0	0	0	0	3	3
08:15	0	0	0	0	0	0	0	0	3	3
08:30	0	0	0	0	0	0	0	0	12	1
08:45	0	0	0	0	0	0	0	0	19	1
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>8</b>
09:00	0	0	0	0	0	0	0	0	11	0
09:15	0	0	0	0	0	0	0	0	1	0
09:30	0	0	0	0	0	0	0	0	2	1
09:45	0	0	0	0	0	0	0	0	1	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>1</b>
10:00	0	0	0	0	0	0	0	0	1	0
10:15	0	0	0	0	0	0	0	0	3	0
10:30	0	0	0	0	0	0	0	0	2	0
10:45	0	0	0	0	0	0	0	0	1	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>
11:00	0	0	0	0	0	0	0	0	3	0
11:15	0	0	0	0	0	0	0	0	3	1
11:30	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	2	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>1</b>
<b>4hr TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>13</b>





A => B						A => C							
OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	1	11	2	0	0	0	0	0	13
0	0	0	0	0	1	22	2	1	0	0	0	0	25
0	0	0	0	0	4	26	5	0	0	2	0	0	33
1	0	0	0	0	4	24	1	0	0	2	0	0	27
1	0	0	0	0	10	83	10	1	0	4	0	0	98
0	0	0	0	0	6	47	3	1	0	0	0	2	53
0	0	0	0	0	6	106	3	0	0	2	0	2	113
0	0	0	0	0	13	64	1	0	1	2	0	0	68
0	0	0	0	0	20	60	3	1	0	0	0	0	64
0	0	0	0	0	45	277	10	2	1	4	0	4	298
0	0	0	0	0	11	77	3	0	0	1	0	0	81
1	0	0	0	0	2	28	1	0	0	1	0	0	30
1	0	0	0	0	4	25	0	0	0	0	1	1	27
0	0	0	0	0	1	18	2	1	0	1	0	0	22
2	0	0	0	0	18	148	6	1	0	3	1	1	160
0	0	0	0	0	1	18	2	0	0	0	0	0	20
0	0	0	0	0	3	25	3	1	0	1	0	0	30
0	0	0	0	0	2	30	3	1	0	0	0	0	34
0	0	0	0	0	1	26	2	0	0	0	0	0	28
0	0	0	0	0	7	99	10	2	0	1	0	0	112
0	0	0	0	0	3	29	3	0	0	0	0	0	32
0	0	0	0	0	4	26	4	2	0	1	0	0	33
0	0	0	0	0	0	25	4	0	0	1	0	0	30
0	0	0	0	0	2	33	7	0	0	0	1	1	42
0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	89	720	54	8	1	14	2	6	805



B => C								C => A							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
1	0	0	0	0	0	0	1	12	3	0	0	1	0	0	16
10	0	0	0	0	0	0	10	28	1	0	0	2	0	2	33
5	0	0	0	0	0	0	5	21	3	0	0	0	0	0	24
12	1	1	0	0	0	0	14	35	1	1	0	1	0	2	40
28	1	1	0	0	0	0	30	96	8	1	0	4	0	4	113
23	0	0	0	0	0	1	24	45	0	0	0	5	0	0	50
26	0	0	0	0	0	0	26	71	2	1	0	1	0	0	75
30	1	1	0	0	0	0	32	55	1	0	0	0	0	0	56
56	0	0	0	0	0	0	56	74	0	1	0	2	0	0	77
135	1	1	0	0	0	1	138	245	3	2	0	8	0	0	258
49	1	0	0	1	0	0	51	48	0	1	0	1	0	0	50
24	0	0	0	0	0	0	24	38	4	1	0	1	0	0	44
23	0	0	0	0	0	0	23	27	1	1	1	0	1	1	32
3	1	0	0	0	0	0	4	29	3	0	0	1	0	0	33
99	2	0	0	1	0	0	102	142	8	3	1	3	1	1	159
4	0	0	0	0	0	0	4	30	3	0	0	0	0	0	33
15	0	0	0	0	0	0	15	51	2	2	0	1	0	0	56
11	1	0	0	0	0	0	12	36	1	0	0	0	0	0	37
16	1	0	0	0	0	0	17	48	5	3	0	2	0	0	58
46	2	0	0	0	0	0	48	165	11	5	0	3	0	0	184
11	0	1	0	0	0	0	12	31	3	1	0	0	0	0	35
18	0	0	0	0	0	0	18	32	1	0	1	1	0	0	35
13	0	0	0	0	0	0	13	39	2	0	0	0	1	0	42
14	2	0	0	0	1	0	17	20	9	0	0	1	0	0	30
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
364	8	3	0	1	1	1	378	770	45	12	2	20	2	5	856







Survey Name :	ITS J-347 Malahide
Site:	Site 6
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.447465, -6.15065
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	A => A							TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	2	0
07:30	0	0	0	0	0	0	0	0	2	0
07:45	0	0	0	0	0	0	0	0	2	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>
08:00	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0	1	0
08:45	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
09:00	0	0	0	0	0	0	0	0	1	0
09:15	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	2	0
09:45	0	0	0	0	0	0	0	0	2	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>
10:00	0	0	0	0	0	0	0	0	0	3
10:15	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	2	0
10:45	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>
11:00	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	1	0
11:45	0	0	0	0	0	0	0	0	1	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>4 hr TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>4</b>



A => B						A => C							
OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	2	2	0	0	0	0	0	0	2
0	0	0	0	0	2	1	0	0	0	0	0	0	1
0	0	0	0	0	2	5	0	0	0	0	0	0	5
0	0	0	0	0	6	8	0	0	0	0	0	0	8
0	0	0	0	0	0	11	0	0	0	0	0	1	12
0	0	0	0	0	1	21	0	0	0	0	0	0	21
0	0	0	0	0	1	10	0	0	0	0	0	0	10
0	0	0	0	0	0	10	0	0	0	0	0	0	10
0	0	0	0	0	2	52	0	0	0	0	0	1	53
0	0	0	0	0	1	6	0	0	0	0	0	0	6
0	0	0	0	0	0	7	0	0	0	0	0	0	7
1	0	0	0	0	3	7	0	0	0	0	0	0	7
0	0	0	0	0	2	7	0	0	0	0	0	0	7
1	0	0	0	0	6	27	0	0	0	0	0	0	27
0	0	0	0	0	3	14	0	0	0	0	0	0	14
0	0	0	0	0	0	4	0	0	0	0	0	0	4
0	0	0	0	0	2	5	0	0	0	0	0	0	5
0	0	0	0	0	0	1	1	0	0	0	0	0	2
0	0	0	0	0	5	24	1	0	0	0	0	0	25
1	0	0	0	0	1	13	0	0	0	0	0	0	13
1	0	0	0	0	1	6	0	0	0	0	0	0	6
0	0	0	0	0	1	7	0	0	0	0	0	0	7
0	0	0	0	0	1	8	1	0	0	0	0	0	9
0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	23	145	2	0	0	0	0	1	148



B => C								C => A							
CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C	TOT
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	6	1	0	0	0	0	0	0	1
5	1	0	0	0	0	0	6	1	0	0	0	0	0	0	1
13	1	0	0	0	0	0	14	2	0	0	0	0	0	0	2
24	2	0	0	0	0	0	26	4	0	0	0	0	0	0	4
20	1	0	0	0	0	0	21	9	0	0	0	0	0	0	9
21	1	0	0	0	0	0	22	7	0	0	0	0	0	0	7
25	1	1	0	0	0	0	27	10	0	0	0	0	0	0	10
56	1	0	0	0	0	0	57	48	3	0	0	0	0	0	51
122	4	1	0	0	0	0	127	74	3	0	0	0	0	0	77
50	1	0	0	0	0	0	51	8	0	0	0	0	0	0	8
18	0	0	0	0	0	0	18	6	0	0	0	0	0	0	6
16	0	1	0	0	0	0	17	5	1	0	0	0	0	0	6
11	1	0	0	0	0	0	12	7	0	0	0	0	0	0	7
95	2	1	0	0	0	0	98	26	1	0	0	0	0	0	27
7	1	0	0	0	0	0	8	6	1	0	0	0	0	0	7
11	1	0	0	0	0	0	12	6	0	0	0	0	0	0	6
7	1	0	0	0	0	0	8	3	1	0	0	0	0	0	4
13	1	1	0	0	0	0	15	3	0	0	0	0	0	0	3
38	4	1	0	0	0	0	43	18	2	0	0	0	0	0	20
10	0	0	0	0	0	0	10	7	0	0	0	0	0	0	7
15	1	0	0	0	0	1	17	1	0	0	0	0	0	0	1
8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
7	1	0	0	0	0	1	9	5	0	0	0	0	0	0	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
319	14	3	0	0	0	2	338	135	6	0	0	0	0	0	141







Survey Name :	ITS J-347 Malahide
Site:	Site 9
Date:	09.10.2019
Time:	07:00 - 12:00
Location:	53.451484, -6.1538
Classification:	Car, LGV, OGV1, OGV2, Bus, P/C, M/C

TIME	A => A							TOT	CAR	LGV
	CAR	LGV	OGV1	OGV2	Bus	M/C	P/C			
07:00	0	0	0	0	0	0	0	0	12	2
07:15	0	0	0	0	0	0	0	0	25	3
07:30	0	0	0	0	0	0	0	0	20	2
07:45	0	0	0	0	0	0	0	0	17	2
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>9</b>
08:00	0	0	0	0	0	0	0	0	45	2
08:15	0	0	0	0	0	0	0	0	66	3
08:30	0	0	0	0	0	0	0	0	45	6
08:45	0	0	0	0	0	0	0	0	55	4
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>211</b>	<b>15</b>
09:00	0	0	0	0	0	0	0	0	34	1
09:15	0	0	0	0	0	0	0	0	18	3
09:30	0	0	0	0	0	0	0	0	28	3
09:45	0	0	0	0	0	0	0	0	23	3
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>10</b>
10:00	0	0	0	0	0	0	0	0	42	1
10:15	0	0	0	0	0	0	0	0	26	3
10:30	0	0	0	0	0	0	0	0	34	3
10:45	0	0	0	0	0	0	0	0	29	7
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>131</b>	<b>14</b>
11:00	0	0	0	0	0	0	0	0	37	4
11:15	0	0	0	0	0	0	0	0	25	6
11:30	0	0	0	0	0	0	0	0	21	2
11:45	0	0	0	0	0	0	0	0	33	4
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116</b>	<b>16</b>
<b>4 hr TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>635</b>	<b>64</b>



A => B					TOT	B => A				
OGV1	OGV2	Bus	M/C	P/C		CAR	LGV	OGV1	OGV2	Bus
1	0	0	0	0	15	11	1	0	0	0
2	0	0	0	0	30	6	3	0	0	2
1	0	0	0	1	24	8	1	3	0	1
2	0	0	0	0	21	19	1	1	1	0
6	0	0	0	1	90	44	6	4	1	3
1	0	0	0	0	48	19	0	0	0	1
3	0	0	0	1	73	25	1	2	0	0
0	0	0	0	0	51	29	3	2	0	0
0	0	0	0	1	60	32	1	0	0	1
4	0	0	0	2	232	105	5	4	0	2
1	0	0	0	0	36	35	2	0	0	0
0	0	0	0	0	21	24	4	0	0	0
2	0	0	1	0	34	23	2	0	0	1
1	0	0	0	1	28	25	3	1	0	1
4	0	0	1	1	119	107	11	1	0	2
0	0	0	0	0	43	22	2	0	0	0
1	0	0	0	0	30	34	2	0	0	0
0	0	0	0	0	37	32	5	0	0	0
0	0	0	0	0	36	26	4	1	0	0
1	0	0	0	0	146	114	13	1	0	0
2	0	0	0	0	43	33	3	0	0	1
0	0	0	0	0	31	27	1	3	0	0
1	0	0	0	0	24	15	3	1	0	0
0	0	0	0	0	37	28	4	2	0	0
3	0	0	0	0	135	103	11	6	0	1
18	0	0	1	4	722	473	46	16	1	8

M/C	P/C	TOT	B => B					M/C	P/C	TOT
			CAR	LGV	OGV1	OGV2	Bus			
1	0	13	0	0	0	0	0	0	0	
0	0	11	0	0	0	0	0	0	0	
0	0	13	0	0	0	0	0	0	0	
0	1	23	0	0	0	0	0	0	0	
1	1	60	0	0	0	0	0	0	0	
0	0	20	0	0	0	0	0	0	0	
0	1	29	0	0	0	0	0	0	0	
0	0	34	0	0	0	0	0	0	0	
0	0	34	0	0	0	0	0	0	0	
0	1	117	0	0	0	0	0	0	0	
0	0	37	0	0	0	0	0	0	0	
0	1	29	0	0	0	0	0	0	0	
0	1	27	0	0	0	0	0	0	0	
0	1	31	0	0	0	0	0	0	0	
0	3	124	0	0	0	0	0	0	0	
0	2	26	0	0	0	0	0	0	0	
0	0	36	0	0	0	0	0	0	0	
0	0	37	0	0	0	0	0	0	0	
0	1	32	0	0	0	0	0	0	0	
0	3	131	0	0	0	0	0	0	0	
0	1	38	0	0	0	0	0	0	0	
0	0	31	0	0	0	0	0	0	0	
0	0	19	0	0	0	0	0	0	0	
0	0	34	0	0	0	0	0	0	0	
0	1	122	0	0	0	0	0	0	0	
1	9	554	0	0	0	0	0	0	0	



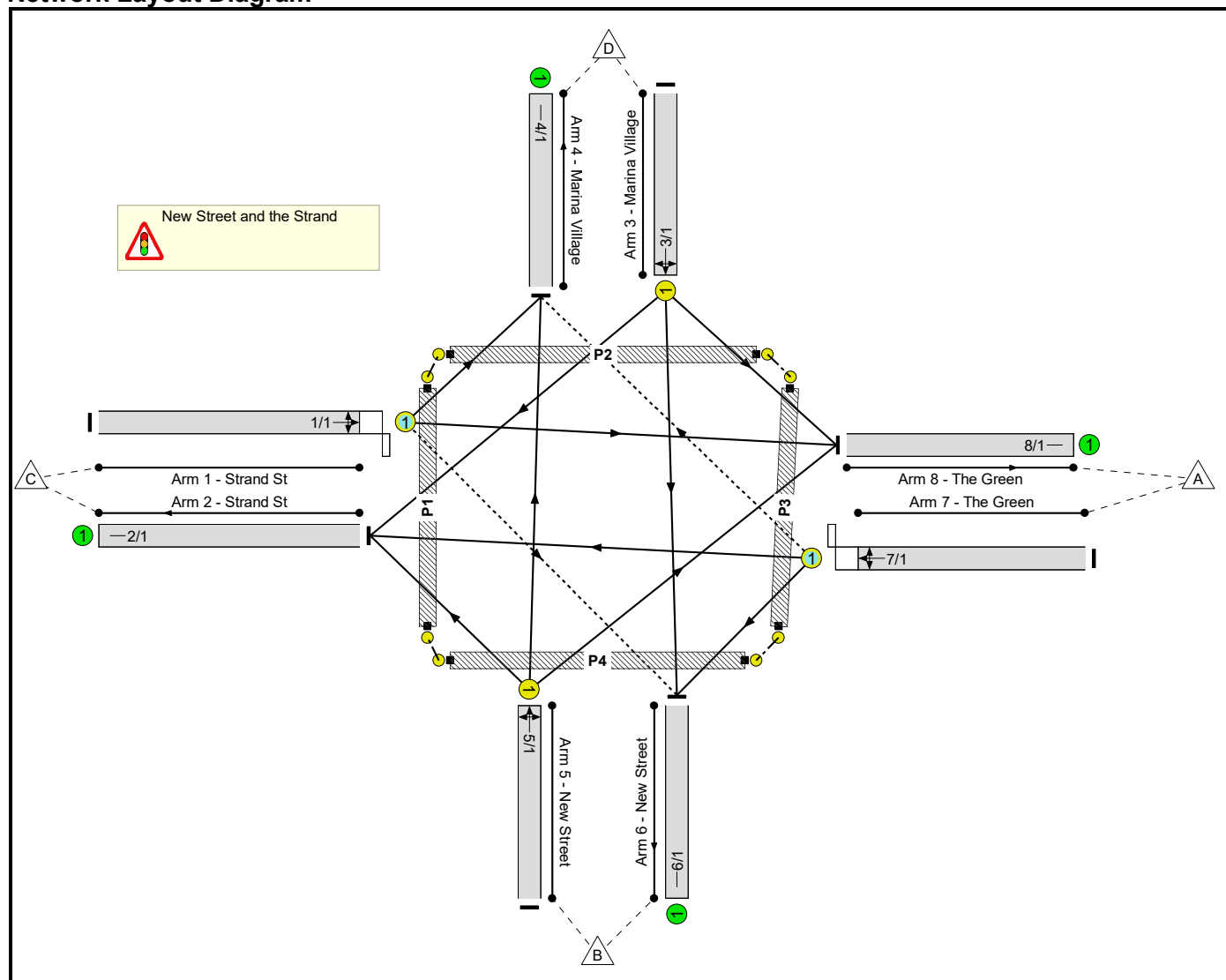
**Appendix B      Junction 1 - New Street and the Strand - Linsig Analysis**

Full Input Data And Results  
**Full Input Data And Results**

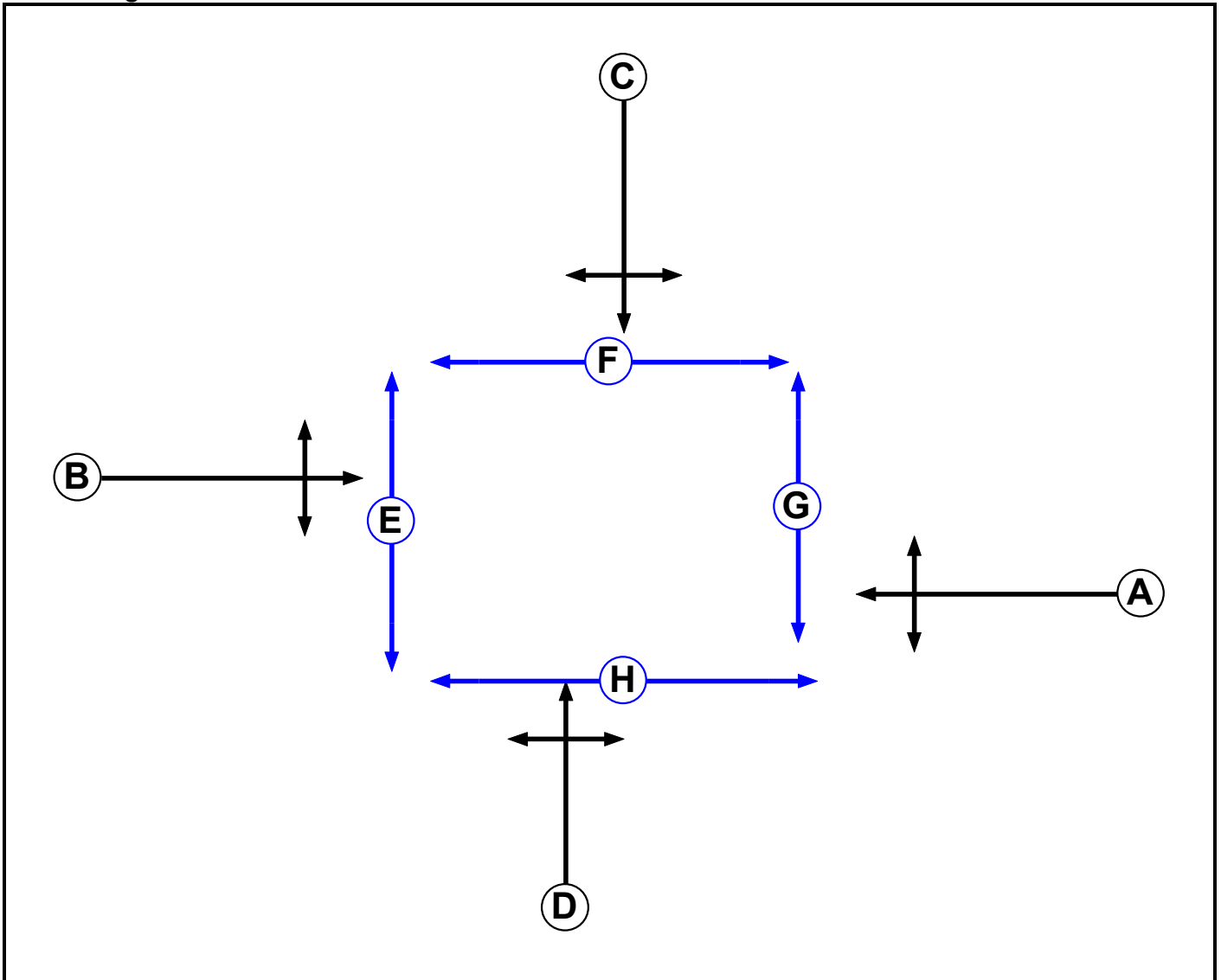
**User and Project Details**

Project:	Public Realm at New Street, Malahide, Co. Dublin
Title:	Public Realm at New Street, Malahide, Co. Dublin
Location:	
Client:	Fingal County Council
Date Started:	January 2023
Checked By:	D Lehane
Additional detail:	
File name:	222126 New Street - Jn 1_JPM 2023-01-30.lsg3x
Author:	JP Murray
Company:	PUNCH Consulting Engineers
Address:	Carnegie House, Library Road, Dun Laoghaire, Co Dublin, A96 C7W7, Ireland

**Network Layout Diagram**



**Phase Diagram**



**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7

Full Input Data And Results

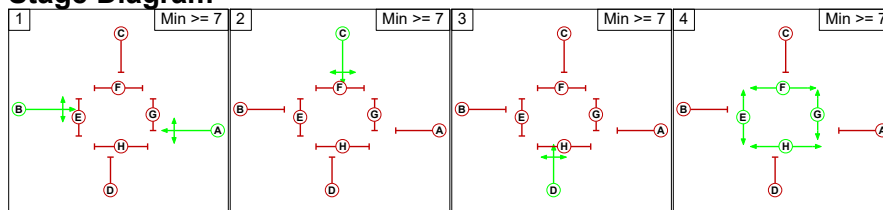
**Phase Intergrens Matrix**

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A	-	6	5	8	6	6	7	
	B	-	-	5	12	6	7	14	12
	C	6	6	-	6	6	6	7	8
	D	6	6	6	-	7	8	6	6
	E	9	9	9	9	-	-	-	-
	F	13	13	13	13	-	-	-	-
	G	11	11	11	11	-	-	-	-
	H	9	9	9	9	-	-	-	-

**Phases in Stage**

Stage No.	Phases in Stage
1	A B
2	C
3	D
4	E F G H

**Stage Diagram**



**Phase Delays**

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

**Prohibited Stage Change**

		To Stage			
		1	2	3	4
From Stage	1	-	6	12	14
	2	6	-	6	8
	3	6	6	-	8
	4	13	13	13	-



Full Input Data And Results

**Give-Way Lane Input Data**

Junction: New Street and the Strand											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Strand St)	6/1 (Right)	1439	0	7/1	1.09	To 2/1 (Ahead) To 6/1 (Left)	2.00	0.50	0.50	2	2.00
7/1 (The Green)	4/1 (Right)	1439	0	1/1	1.09	To 4/1 (Left) To 8/1 (Ahead)	2.00	0.50	0.50	2	2.00

Full Input Data And Results

**Lane Input Data**

Junction: New Street and the Strand												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Strand St)	O	B	2	3	10.4	Geom	-	3.50	0.00	Y	Arm 4 Left	8.78
											Arm 6 Right	12.17
											Arm 8 Ahead	Inf
2/1 (Strand St)	U		2	3	60.0	Geom	-	4.00	0.00	Y		
3/1 (Marina Village)	U	C	2	3	12.2	Geom	-	3.15	0.00	Y	Arm 2 Right	13.47
											Arm 6 Ahead	Inf
											Arm 8 Left	8.13
4/1 (Marina Village)	U		2	3	60.0	Geom	-	3.50	0.00	Y		
5/1 (New Street)	U	D	2	3	4.4	Geom	-	2.50	0.00	Y	Arm 2 Left	8.13
											Arm 4 Ahead	Inf
											Arm 8 Right	15.78
6/1 (New Street)	U		2	3	60.0	Geom	-	2.50	0.00	Y		
7/1 (The Green)	O	A	2	3	17.4	Geom	-	5.00	0.00	Y	Arm 2 Ahead	Inf
											Arm 4 Right	12.39
											Arm 6 Left	15.78
8/1 (The Green)	U		2	3	60.0	Geom	-	3.90	0.00	Y		

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: '2023 Existing Survey AM'	08:30	09:30	01:00	
2: '2023 Existing Survey PM'	16:30	17:30	01:00	
3: '2019 Estimated AM'	08:30	09:30	01:00	
4: '2019 Estimated PM'	16:30	17:30	01:00	
5: '2020 Existing Survey AM'	08:30	09:30	01:00	
6: '2020 Existing Survey PM'	16:30	17:30	01:00	

Full Input Data And Results

**Traffic Flows, Desired**

**Scenario 1: '2023 AM'** (FG1: '2023 Existing Survey AM', Plan 1: 'Sequence 1')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	39	33	72
	B	12	0	6	16	34
	C	218	3	0	76	297
	D	70	0	45	0	115
	Tot.	300	3	90	125	518

**Scenario 2: '2023 PM'** (FG2: '2023 Existing Survey PM', Plan 1: 'Sequence 1')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1	71	52	124
	B	3	0	2	2	7
	C	177	3	0	113	293
	D	99	0	69	0	168
	Tot.	279	4	142	167	592

**Scenario 3: '2020 AM'** (FG5: '2020 Existing Survey AM', Plan 1: 'Sequence 1')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	2	65	26	93
	B	5	0	1	0	6
	C	165	3	0	56	224
	D	51	0	31	0	82
	Tot.	221	5	97	82	405

**Scenario 4: '2020 PM'** (FG6: '2020 Existing Survey PM', Plan 1: 'Sequence 1')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1	59	48	108
	B	1	0	0	1	2
	C	212	2	0	100	314
	D	85	1	40	0	126
	Tot.	298	4	99	149	550

Full Input Data And Results

**Scenario 5: '2019 AM'** (FG3: '2019 Estimated AM', Plan 1: 'Sequence 1')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	86	37	31	154
	B	50	0	45	54	149
	C	203	89	0	70	362
	D	65	86	42	0	193
	Tot.	318	261	124	155	858

**Scenario 6: '2019 PM'** (FG4: '2019 Estimated PM', Plan 1: 'Sequence 1')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	70	66	48	184
	B	74	0	73	73	220
	C	165	72	0	105	342
	D	92	69	64	0	225
	Tot.	331	211	203	226	971



Full Input Data And Results

**Network Results**

**Scenario 1: '2023 AM'** (FG1: '2023 Existing Survey AM', Plan 1: 'Sequence 1')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	N/A	-	-		-	-	-	-	-	-	45.9%
<b>New Street and the Strand</b>	-	-	N/A	-	-		-	-	-	-	-	-	45.9%
1/1	Strand St Left Right Ahead	O	N/A	N/A	B		1	30	-	297	1880	648	45.9%
2/1	Strand St	U	N/A	N/A	-		-	-	-	90	2015	2015	4.5%
3/1	Marina Village Right Ahead Left	U	N/A	N/A	C		1	13	-	115	1670	260	44.3%
4/1	Marina Village	U	N/A	N/A	-		-	-	-	125	1965	1965	6.4%
5/1	New Street Left Ahead Right	U	N/A	N/A	D		1	7	-	34	1749	155	21.9%
6/1	New Street	U	N/A	N/A	-		-	-	-	3	1865	1865	0.2%
7/1	The Green Ahead Right Left	O	N/A	N/A	A		1	30	-	72	2004	460	15.6%
8/1	The Green	U	N/A	N/A	-		-	-	-	300	2005	2005	15.0%
Ped Link: P1	E	-	N/A	-	E		1	8	-	0	-	0	0.0%
Ped Link: P2	F	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P3	G	-	N/A	-	G		1	9	-	0	-	0	0.0%
Ped Link: P4	H	-	N/A	-	H		1	9	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>36</b>	<b>0</b>	<b>0</b>	<b>3.8</b>	<b>1.2</b>	<b>0.0</b>	<b>5.0</b>	-	-	-	-
<b>New Street and the Strand</b>	-	-	<b>36</b>	<b>0</b>	<b>0</b>	<b>3.8</b>	<b>1.2</b>	<b>0.0</b>	<b>5.0</b>	-	-	-	-
1/1	297	297	3	0	0	1.9	0.4	0.0	2.3	28.1	5.8	0.4	6.2
2/1	90	90	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
3/1	115	115	-	-	-	1.1	0.4	-	1.5	46.8	2.6	0.4	3.0
4/1	125	125	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
5/1	34	34	-	-	-	0.4	0.1	-	0.5	52.9	0.8	0.1	0.9
6/1	3	3	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	72	72	33	0	0	0.4	0.1	0.0	0.5	27.0	1.2	0.1	1.3
8/1	300	300	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		96.2	Total Delay for Signalled Lanes (pcuHr):		4.85	Cycle Time (s):		90		
			PRC Over All Lanes (%):		96.2	Total Delay Over All Lanes(pcuHr):		5.00					

Full Input Data And Results

**Scenario 2: '2023 PM'** (FG2: '2023 Existing Survey PM', Plan 1: 'Sequence 1')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	N/A	-	-		-	-	-	-	-	-	53.1%
<b>New Street and the Strand</b>	-	-	N/A	-	-		-	-	-	-	-	-	53.1%
1/1	Strand St Left Right Ahead	O	N/A	N/A	B		1	26	-	293	1841	552	53.1%
2/1	Strand St	U	N/A	N/A	-		-	-	-	142	2015	2015	7.0%
3/1	Marina Village Right Ahead Left	U	N/A	N/A	C		1	17	-	168	1672	334	50.2%
4/1	Marina Village	U	N/A	N/A	-		-	-	-	167	1965	1965	8.5%
5/1	New Street Left Ahead Right	U	N/A	N/A	D		1	7	-	7	1706	152	4.6%
6/1	New Street	U	N/A	N/A	-		-	-	-	4	1865	1865	0.2%
7/1	The Green Ahead Right Left	O	N/A	N/A	A		1	26	-	124	2011	352	35.2%
8/1	The Green	U	N/A	N/A	-		-	-	-	279	2005	2005	13.9%
Ped Link: P1	E	-	N/A	-	E		1	8	-	0	-	0	0.0%
Ped Link: P2	F	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P3	G	-	N/A	-	G		1	9	-	0	-	0	0.0%
Ped Link: P4	H	-	N/A	-	H		1	9	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>54</b>	<b>0</b>	<b>1</b>	<b>4.5</b>	<b>1.5</b>	<b>0.1</b>	<b>6.1</b>	-	-	-	-
<b>New Street and the Strand</b>	-	-	<b>54</b>	<b>0</b>	<b>1</b>	<b>4.5</b>	<b>1.5</b>	<b>0.1</b>	<b>6.1</b>	-	-	-	-
1/1	293	293	3	0	0	2.1	0.6	0.0	2.7	33.1	6.0	0.6	6.6
2/1	142	142	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
3/1	168	168	-	-	-	1.5	0.5	-	2.0	42.8	3.7	0.5	4.2
4/1	167	167	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
5/1	7	7	-	-	-	0.1	0.0	-	0.1	50.3	0.2	0.0	0.2
6/1	4	4	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	124	124	51	0	1	0.8	0.3	0.1	1.2	34.6	2.3	0.3	2.6
8/1	279	279	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		69.6	Total Delay for Signalled Lanes (pcuHr):		5.98	Cycle Time (s): 90				
			PRC Over All Lanes (%):		69.6	Total Delay Over All Lanes(pcuHr):		6.15					



Full Input Data And Results

**Scenario 3: '2020 AM'** (FG5: '2020 Existing Survey AM', Plan 1: 'Sequence 1')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>34.0%</b>
<b>New Street and the Strand</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>34.0%</b>
1/1	Strand St Left Right Ahead	O	N/A	N/A	B		1	31	-	224	1882	669	33.5%
2/1	Strand St	U	N/A	N/A	-		-	-	-	97	2015	2015	4.8%
3/1	Marina Village Right Ahead Left	U	N/A	N/A	C		1	12	-	82	1668	241	34.0%
4/1	Marina Village	U	N/A	N/A	-		-	-	-	82	1965	1965	4.2%
5/1	New Street Left Ahead Right	U	N/A	N/A	D		1	7	-	6	1680	149	4.0%
6/1	New Street	U	N/A	N/A	-		-	-	-	5	1865	1865	0.3%
7/1	The Green Ahead Right Left	O	N/A	N/A	A		1	31	-	93	2042	584	15.9%
8/1	The Green	U	N/A	N/A	-		-	-	-	221	2005	2005	11.0%
Ped Link: P1	E	-	N/A	-	E		1	8	-	0	-	0	0.0%
Ped Link: P2	F	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P3	G	-	N/A	-	G		1	9	-	0	-	0	0.0%
Ped Link: P4	H	-	N/A	-	H		1	9	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	29	0	0	2.7	0.7	0.0	3.4	-	-	-	-
<b>New Street and the Strand</b>	-	-	29	0	0	2.7	0.7	0.0	3.4	-	-	-	-
1/1	224	224	3	0	0	1.3	0.3	0.0	1.6	25.3	4.0	0.3	4.3
2/1	97	97	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
3/1	82	82	-	-	-	0.8	0.3	-	1.0	45.9	1.8	0.3	2.1
4/1	82	82	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
5/1	6	6	-	-	-	0.1	0.0	-	0.1	50.4	0.1	0.0	0.2
6/1	5	5	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	93	93	26	0	0	0.5	0.1	0.0	0.6	24.3	1.6	0.1	1.6
8/1	221	221	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):	164.4	Total Delay for Signalled Lanes (pcuHr):			3.33	Cycle Time (s): 90				
			PRC Over All Lanes (%):	164.4	Total Delay Over All Lanes(pcuHr):			3.44					

Full Input Data And Results

**Scenario 4: '2020 PM'** (FG6: '2020 Existing Survey PM', Plan 1: 'Sequence 1')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>49.0%</b>
<b>New Street and the Strand</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>49.0%</b>
1/1	Strand St Left Right Ahead	O	N/A	N/A	B		1	30	-	314	1862	641	49.0%
2/1	Strand St	U	N/A	N/A	-		-	-	-	99	2015	2015	4.9%
3/1	Marina Village Right Ahead Left	U	N/A	N/A	C		1	13	-	126	1664	259	48.7%
4/1	Marina Village	U	N/A	N/A	-		-	-	-	149	1965	1965	7.6%
5/1	New Street Left Ahead Right	U	N/A	N/A	D		1	7	-	2	1780	158	1.3%
6/1	New Street	U	N/A	N/A	-		-	-	-	4	1865	1865	0.2%
7/1	The Green Ahead Right Left	O	N/A	N/A	A		1	30	-	108	2005	439	24.6%
8/1	The Green	U	N/A	N/A	-		-	-	-	298	2005	2005	14.9%
Ped Link: P1	E	-	N/A	-	E		1	8	-	0	-	0	0.0%
Ped Link: P2	F	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P3	G	-	N/A	-	G		1	9	-	0	-	0	0.0%
Ped Link: P4	H	-	N/A	-	H		1	9	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>49</b>	<b>0</b>	<b>1</b>	<b>3.9</b>	<b>1.3</b>	<b>0.1</b>	<b>5.2</b>	-	-	-	-
<b>New Street and the Strand</b>	-	-	<b>49</b>	<b>0</b>	<b>1</b>	<b>3.9</b>	<b>1.3</b>	<b>0.1</b>	<b>5.2</b>	-	-	-	-
1/1	314	314	2	0	0	2.0	0.5	0.0	2.5	28.7	6.1	0.5	6.6
2/1	99	99	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
3/1	126	126	-	-	-	1.2	0.5	-	1.7	48.2	2.9	0.5	3.3
4/1	149	149	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
5/1	2	2	-	-	-	0.0	0.0	-	0.0	49.3	0.0	0.0	0.1
6/1	4	4	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
7/1	108	108	47	0	1	0.6	0.2	0.1	0.9	29.0	1.9	0.2	2.0
8/1	298	298	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		83.8	Total Delay for Signalled Lanes (pcuHr):		5.09	Cycle Time (s): 90				
			PRC Over All Lanes (%):		83.8	Total Delay Over All Lanes(pcuHr):		5.24					



Full Input Data And Results

**Scenario 5: '2019 AM'** (FG3: '2019 Estimated AM', Plan 1: 'Sequence 1')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>69.3%</b>
<b>New Street and the Strand</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>69.3%</b>
1/1	Strand St Left Right Ahead	O	N/A	N/A	B		1	25	-	362	1848	523	69.3%
2/1	Strand St	U	N/A	N/A	-		-	-	-	124	2015	2015	6.2%
3/1	Marina Village Right Ahead Left	U	N/A	N/A	C		1	14	-	193	1777	296	65.2%
4/1	Marina Village	U	N/A	N/A	-		-	-	-	155	1965	1965	7.9%
5/1	New Street Left Ahead Right	U	N/A	N/A	D		1	11	-	149	1715	229	65.2%
6/1	New Street	U	N/A	N/A	-		-	-	-	261	1865	1865	14.0%
7/1	The Green Ahead Right Left	O	N/A	N/A	A		1	25	-	154	1963	386	39.9%
8/1	The Green	U	N/A	N/A	-		-	-	-	318	2005	2005	15.9%
Ped Link: P1	E	-	N/A	-	E		1	8	-	0	-	0	0.0%
Ped Link: P2	F	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P3	G	-	N/A	-	G		1	9	-	0	-	0	0.0%
Ped Link: P4	H	-	N/A	-	H		1	9	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Public Realm at New Street, Malahide, Co. Dublin	-	-	119	0	1	7.4	3.5	0.1	10.9	-	-	-	-
New Street and the Strand	-	-	119	0	1	7.4	3.5	0.1	10.9	-	-	-	-
1/1	362	362	88	0	1	2.9	1.1	0.0	4.0	40.2	8.0	1.1	9.2
2/1	124	124	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
3/1	193	193	-	-	-	1.9	0.9	-	2.8	52.2	4.5	0.9	5.4
4/1	155	155	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
5/1	149	149	-	-	-	1.5	0.9	-	2.4	59.1	3.5	0.9	4.4
6/1	261	261	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
7/1	154	154	31	0	0	1.1	0.3	0.0	1.4	32.9	3.0	0.3	3.3
8/1	318	318	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):		29.9	Total Delay for Signalled Lanes (pcuHr):		10.70	Cycle Time (s): 90				
			PRC Over All Lanes (%):		29.9	Total Delay Over All Lanes(pcuHr):		10.95					

Full Input Data And Results

**Scenario 6: '2019 PM'** (FG4: '2019 Estimated PM', Plan 1: 'Sequence 1')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	N/A	-	-		-	-	-	-	-	-	77.5%
<b>New Street and the Strand</b>	-	-	N/A	-	-		-	-	-	-	-	-	77.5%
1/1	Strand St Left Right Ahead	O	N/A	N/A	B		1	22	-	342	1822	466	73.5%
2/1	Strand St	U	N/A	N/A	-		-	-	-	203	2015	2015	10.1%
3/1	Marina Village Right Ahead Left	U	N/A	N/A	C		1	14	-	225	1743	290	77.5%
4/1	Marina Village	U	N/A	N/A	-		-	-	-	226	1965	1965	11.5%
5/1	New Street Left Ahead Right	U	N/A	N/A	D		1	14	-	220	1706	284	77.4%
6/1	New Street	U	N/A	N/A	-		-	-	-	211	1865	1865	11.3%
7/1	The Green Ahead Right Left	O	N/A	N/A	A		1	22	-	184	1981	247	74.5%
8/1	The Green	U	N/A	N/A	-		-	-	-	331	2005	2005	16.5%
Ped Link: P1	E	-	N/A	-	E		1	8	-	0	-	0	0.0%
Ped Link: P2	F	-	N/A	-	F		1	7	-	0	-	0	0.0%
Ped Link: P3	G	-	N/A	-	G		1	9	-	0	-	0	0.0%
Ped Link: P4	H	-	N/A	-	H		1	9	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Public Realm at New Street, Malahide, Co. Dublin	-	-	119	0	1	8.8	6.3	0.1	15.2	-	-	-	-
New Street and the Strand	-	-	119	0	1	8.8	6.3	0.1	15.2	-	-	-	-
1/1	342	342	71	0	1	2.9	1.4	0.0	4.3	45.3	7.8	1.4	9.1
2/1	203	203	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
3/1	225	225	-	-	-	2.2	1.6	-	3.9	62.1	5.4	1.6	7.0
4/1	226	226	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
5/1	220	220	-	-	-	2.2	1.6	-	3.8	62.5	5.3	1.6	6.9
6/1	211	211	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
7/1	184	184	47	0	1	1.4	1.4	0.1	2.9	56.5	3.8	1.4	5.2
8/1	331	331	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1			PRC for Signalled Lanes (%):	16.2	Total Delay for Signalled Lanes (pcuHr):			14.89	Cycle Time (s): 90				
			PRC Over All Lanes (%):	16.2	Total Delay Over All Lanes(pcuHr):			15.17					



**Appendix C      Junction 2 - Old Street and the Strand  
Junctions 9 Analysis**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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**Filename:** Junction 2 - Strand Street.Old Street.Gasyard Lane.j9  
**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9  
**Report generation date:** 27/01/2023 11:24:57

- »2023 Survey Year, AM
- »2023 Survey Year, PM
- »2020 Survey Year, AM
- »2020 Survey Year, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-ACD	0.2	8.83	0.20	A	0.6	12.00	0.37	B
Stream A-BCD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream D-ABC	1.3	17.51	0.56	C	0.6	12.58	0.36	B
Stream C-ABD	0.2	6.73	0.13	A	0.4	7.67	0.26	A
<b>2020 Survey Year</b>								
Stream B-ACD	0.3	9.70	0.26	A	0.5	11.32	0.35	B
Stream A-BCD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream D-ABC	0.4	10.86	0.29	B	0.9	14.93	0.47	B
Stream C-ABD	0.2	7.30	0.18	A	0.3	7.32	0.21	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	23/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNETRLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15
D2	2023 Survey Year	PM	ONE HOUR	16:45	18:15	15
D3	2020 Survey Year	AM	ONE HOUR	08:15	09:45	15
D4	2020 Survey Year	PM	ONE HOUR	16:45	18:15	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Strand Street/Old Street/Gasyard Lan	Crossroads	Two-way		12.18	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Gasyard Lane		Major
B	Strand Street		Minor
C	Old Street		Major
D	Strand Street		Minor

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - Gasyard Lane	6.00			80.0	✓	0.00
C - Old Street	6.00			0.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Strand Street	One lane	4.00	25	15
D - Strand Street	One lane	3.00	20	12

### Slope / Intercept / Capacity

#### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	620	-	-	-	-	-	-	0.240	0.343	0.240	-	-	-
1	B-A	542	0.099	0.250	0.250	-	-	-	0.157	0.357	-	0.250	0.250	0.125
1	B-C	697	0.107	0.270	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	542	0.099	0.250	0.250	-	-	-	0.157	0.357	0.157	-	-	-
1	B-D, offside lane	542	0.099	0.250	0.250	-	-	-	0.157	0.357	0.157	-	-	-
1	C-B	574	0.222	0.222	0.318	-	-	-	-	-	-	-	-	-
1	D-A	631	-	-	-	-	-	-	0.245	-	0.097	-	-	-
1	D-B, nearside lane	490	0.142	0.142	0.322	-	-	-	0.226	0.226	0.089	-	-	-



1	D-B, offside lane	490	0.142	0.142	0.322	-	-	-	0.226	0.226	0.089	-	-	-
1	D-C	490	-	0.142	0.322	0.113	0.226	0.226	0.226	0.226	0.089	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Gasyard Lane		✓	4	100.000
B - Strand Street		✓	90	100.000
C - Old Street		✓	119	100.000
D - Strand Street		✓	239	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	2	0	2
	B - Strand Street	1	0	0	89
	C - Old Street	0	65	0	54
	D - Strand Street	0	239	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	0
	B - Strand Street	0	0	0	0
	C - Old Street	0	0	0	0
	D - Strand Street	0	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.20	8.83	0.2	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.56	17.51	1.3	C
C-ABD	0.13	6.73	0.2	A
C-D				
C-A				

## Main Results for each time segment

## 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	68	518	0.131	67	0.1	7.972	A
A-BCD	0	594	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	180	475	0.379	178	0.6	11.997	B
C-ABD	52	602	0.087	52	0.1	6.546	A
C-D	37			37			
C-A	0			0			

## 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	81	513	0.158	81	0.2	8.321	A
A-BCD	0	588	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	215	472	0.455	214	0.8	13.881	B
C-ABD	64	607	0.105	63	0.1	6.622	A
C-D	43			43			
C-A	0			0			

## 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	99	507	0.196	99	0.2	8.823	A
A-BCD	0	581	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	263	468	0.562	261	1.2	17.244	C
C-ABD	79	614	0.129	79	0.2	6.725	A
C-D	52			52			
C-A	0			0			

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	99	507	0.196	99	0.2	8.833	A
A-BCD	0	581	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	263	468	0.562	263	1.3	17.505	C
C-ABD	79	615	0.129	79	0.2	6.727	A
C-D	52			52			
C-A	0			0			

## 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	81	513	0.158	81	0.2	8.336	A
A-BCD	0	588	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	215	472	0.455	216	0.9	14.154	B
C-ABD	64	607	0.105	64	0.1	6.629	A
C-D	43			43			

C-A	0			0		
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## 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	68	518	0.131	68	0.2	8.003	A
A-BCD	0	594	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	180	475	0.379	181	0.6	12.271	B
C-ABD	53	602	0.087	53	0.1	6.560	A
C-D	37			37			
C-A	0			0			

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Strand Street/Old Street/Gasyard Lan	Crossroads	Two-way		9.42	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Gasyard Lane		✓	0	100.000
B - Strand Street		✓	160	100.000
C - Old Street		✓	215	100.000
D - Strand Street		✓	148	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	0
	B - Strand Street	1	0	0	159
	C - Old Street	0	130	0	85
	D - Strand Street	0	148	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	0



From	B - Strand Street	0	0	0	0
	C - Old Street	0	0	0	0
	D - Strand Street	0	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.37	12.00	0.6	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.36	12.58	0.6	B
C-ABD	0.26	7.67	0.4	A
C-D				
C-A				

### Main Results for each time segment

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	120	497	0.242	119	0.3	9.489	A
A-BCD	0	571	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	111	462	0.241	110	0.3	10.191	B
C-ABD	109	618	0.177	108	0.2	7.058	A
C-D	53			53			
C-A	0			0			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	144	488	0.295	143	0.4	10.428	B
A-BCD	0	561	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	133	457	0.291	133	0.4	11.104	B
C-ABD	133	626	0.213	133	0.3	7.300	A
C-D	60			60			
C-A	0			0			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	176	476	0.370	176	0.6	11.949	B
A-BCD	0	548	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	163	449	0.363	162	0.6	12.524	B
C-ABD	168	638	0.263	168	0.4	7.654	A
C-D	69			69			
C-A	0			0			

#### 17:30 - 17:45

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Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	176	476	0.370	176	0.6	12.004	B
A-BCD	0	548	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	163	449	0.363	163	0.6	12.580	B
C-ABD	168	638	0.263	168	0.4	7.665	A
C-D	69			69			
C-A	0			0			

## 17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	144	488	0.295	144	0.4	10.497	B
A-BCD	0	561	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	133	457	0.291	134	0.4	11.169	B
C-ABD	133	626	0.213	134	0.3	7.318	A
C-D	60			60			
C-A	0			0			

## 18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	120	497	0.242	121	0.3	9.582	A
A-BCD	0	571	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	111	462	0.241	112	0.3	10.292	B
C-ABD	109	618	0.177	110	0.2	7.090	A
C-D	53			53			
C-A	0			0			

# 2020 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Strand Street/Old Street/Gasyard Lan	Crossroads	Two-way		8.55	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2020 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Gasyard Lane		✓	2	100.000
B - Strand Street		✓	116	100.000
C - Old Street		✓	133	100.000
D - Strand Street		✓	120	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	2
	B - Strand Street	0	0	0	116
	C - Old Street	2	93	0	38
	D - Strand Street	1	119	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	0

From	B - Strand Street	0	0	0	0
	C - Old Street	0	0	0	0
	D - Strand Street	0	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.26	9.70	0.3	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.29	10.86	0.4	B
C-ABD	0.18	7.30	0.2	A
C-D				
C-A				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	87	513	0.170	87	0.2	8.430	A
A-BCD	0	589	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	90	472	0.191	89	0.2	9.380	A
C-ABD	74	594	0.124	73	0.1	6.899	A
C-D	25			25			
C-A	1			1			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	104	507	0.206	104	0.3	8.935	A
A-BCD	0	583	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	108	469	0.230	108	0.3	9.966	A
C-ABD	89	598	0.149	89	0.2	7.062	A
C-D	29			29			
C-A	2			2			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	128	499	0.256	127	0.3	9.685	A
A-BCD	0	574	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	132	464	0.285	132	0.4	10.836	B
C-ABD	111	604	0.183	110	0.2	7.291	A
C-D	34			34			
C-A	2			2			

#### 09:00 - 09:15

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Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	128	499	0.256	128	0.3	9.704	A
A-BCD	0	574	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	132	463	0.285	132	0.4	10.863	B
C-ABD	111	604	0.183	111	0.2	7.295	A
C-D	34			34			
C-A	2			2			

## 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	104	507	0.206	105	0.3	8.962	A
A-BCD	0	583	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	108	468	0.230	108	0.3	10.005	B
C-ABD	89	599	0.149	89	0.2	7.074	A
C-D	29			29			
C-A	2			2			

## 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	87	512	0.170	88	0.2	8.477	A
A-BCD	0	589	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	90	472	0.191	91	0.2	9.443	A
C-ABD	74	595	0.124	74	0.2	6.920	A
C-D	25			25			
C-A	1			1			

# 2020 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Strand Street/Old Street/Gasyard Lan	Crossroads	Two-way		10.52	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2020 Survey Year	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Gasyard Lane		✓	0	100.000
B - Strand Street		✓	155	100.000
C - Old Street		✓	177	100.000
D - Strand Street		✓	195	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	0
	B - Strand Street	1	0	1	153
	C - Old Street	5	107	0	65
	D - Strand Street	0	195	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A - Gasyard Lane	B - Strand Street	C - Old Street	D - Strand Street
From	A - Gasyard Lane	0	0	0	0
	B - Strand Street				

From	B - Strand Street	0	0	0	0
	C - Old Street	0	0	0	0
	D - Strand Street	0	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.35	11.32	0.5	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.47	14.93	0.9	B
C-ABD	0.21	7.32	0.3	A
C-D				
C-A				

### Main Results for each time segment

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	117	506	0.231	116	0.3	9.189	A
A-BCD	0	580	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	147	467	0.315	145	0.5	11.132	B
C-ABD	88	610	0.145	87	0.2	6.883	A
C-D	42			42			
C-A	3			3			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	139	499	0.279	139	0.4	9.998	A
A-BCD	0	572	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	175	462	0.380	175	0.6	12.507	B
C-ABD	107	617	0.174	107	0.2	7.059	A
C-D	48			48			
C-A	4			4			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	171	489	0.349	170	0.5	11.278	B
A-BCD	0	561	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	215	456	0.471	214	0.9	14.807	B
C-ABD	134	627	0.215	134	0.3	7.312	A
C-D	56			56			
C-A	4			4			

#### 17:30 - 17:45

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Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	171	489	0.349	171	0.5	11.321	B
A-BCD	0	561	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	215	456	0.471	215	0.9	14.933	B
C-ABD	134	627	0.215	134	0.3	7.321	A
C-D	56			56			
C-A	4			4			

## 17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	139	499	0.280	140	0.4	10.055	B
A-BCD	0	572	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	175	462	0.380	176	0.6	12.653	B
C-ABD	107	617	0.174	108	0.2	7.072	A
C-D	48			48			
C-A	4			4			

## 18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	117	506	0.231	117	0.3	9.270	A
A-BCD	0	580	0.000	0	0.0	0.000	A
A-B	0			0			
A-C	0			0			
D-ABC	147	466	0.315	147	0.5	11.310	B
C-ABD	88	610	0.145	88	0.2	6.906	A
C-D	42			42			
C-A	3			3			



**Appendix D      Junction 3 - Townyard Lane and the Strand  
Junctions 9 Analysis**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Junction 3 - Townyard Lane.The Green.j9

**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 27/01/2023 11:23:26

»2023 Survey Year, AM

»2023 Survey Year, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.7	11.84	0.40	B	0.9	14.02	0.47	B
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	10:15	11:45	15
D2	2023 Survey Year	PM	ONE HOUR	16:30	18:00	15

**Analysis Set Details**

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Townyard Lane/The Green	T-Junction	Two-way		5.07	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	The Green		Major
B	Townyard Lane		Minor
C	The Green		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - The Green	6.00			0.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Townyard Lane	One lane	3.20	40	20

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	510	0.093	0.235	0.148	0.336
1	B-C	649	0.100	0.252	-	-
1	C-B	574	0.222	0.222	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

### Demand Set Details

--	--	--	--	--	--	--



ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	10:15	11:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - The Green		✓	246	100.000
B - Townyard Lane		✓	184	100.000
C - The Green		✓	0	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - The Green	B - Townyard Lane	C - The Green
From	A - The Green	0	0	246
	B - Townyard Lane	90	0	94
	C - The Green	0	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - The Green	B - Townyard Lane	C - The Green
From	A - The Green	0	0	0
	B - Townyard Lane	0	0	0
	C - The Green	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.40	11.84	0.7	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 10:15 - 10:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	528	0.263	137	0.4	9.187	A
C-AB	0	533	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	185			185			

#### 10:30 - 10:45

Stream	Total Demand	Capacity	RFC	Throughput	End queue	Delay (s)	Unsignalised

	(PCU/hr)	(PCU/hr)		(PCU/hr)	(PCU)		level of service
B-AC	165	519	0.319	165	0.5	10.161	B
C-AB	0	525	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	221			221			

## 10:45 - 11:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	203	507	0.400	202	0.7	11.781	B
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	271			271			

## 11:00 - 11:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	203	507	0.400	203	0.7	11.839	B
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	271			271			

## 11:15 - 11:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	165	519	0.319	166	0.5	10.229	B
C-AB	0	525	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	221			221			

## 11:30 - 11:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	528	0.263	139	0.4	9.276	A
C-AB	0	533	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	185			185			

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Townyard Lane/The Green	T-Junction	Two-way		5.99	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - The Green		✓	278	100.000
B - Townyard Lane		✓	207	100.000
C - The Green		✓	1	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - The Green	B - Townyard Lane	C - The Green
From	A - The Green	0	0	278
	B - Townyard Lane	123	0	84
	C - The Green	1	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - The Green	B - Townyard Lane	C - The Green
From	A - The Green	0	0	0
	B - Townyard Lane	0	0	0
	C - The Green	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.47	14.02	0.9	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	508	0.307	154	0.4	10.124	B
C-AB	0	527	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	209			209			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	186	498	0.374	185	0.6	11.492	B
C-AB	0	518	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	250			250			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	228	484	0.470	227	0.9	13.910	B
C-AB	0	506	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	306			306			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	228	484	0.470	228	0.9	14.025	B
C-AB	0	506	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	306			306			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	186	498	0.374	187	0.6	11.617	B
C-AB	0	518	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	250			250			



## 17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	508	0.307	156	0.4	10.259	B
C-AB	0	527	0.000	0	0.0	0.000	A
C-A	0			0			
A-B	0			0			
A-C	209			209			

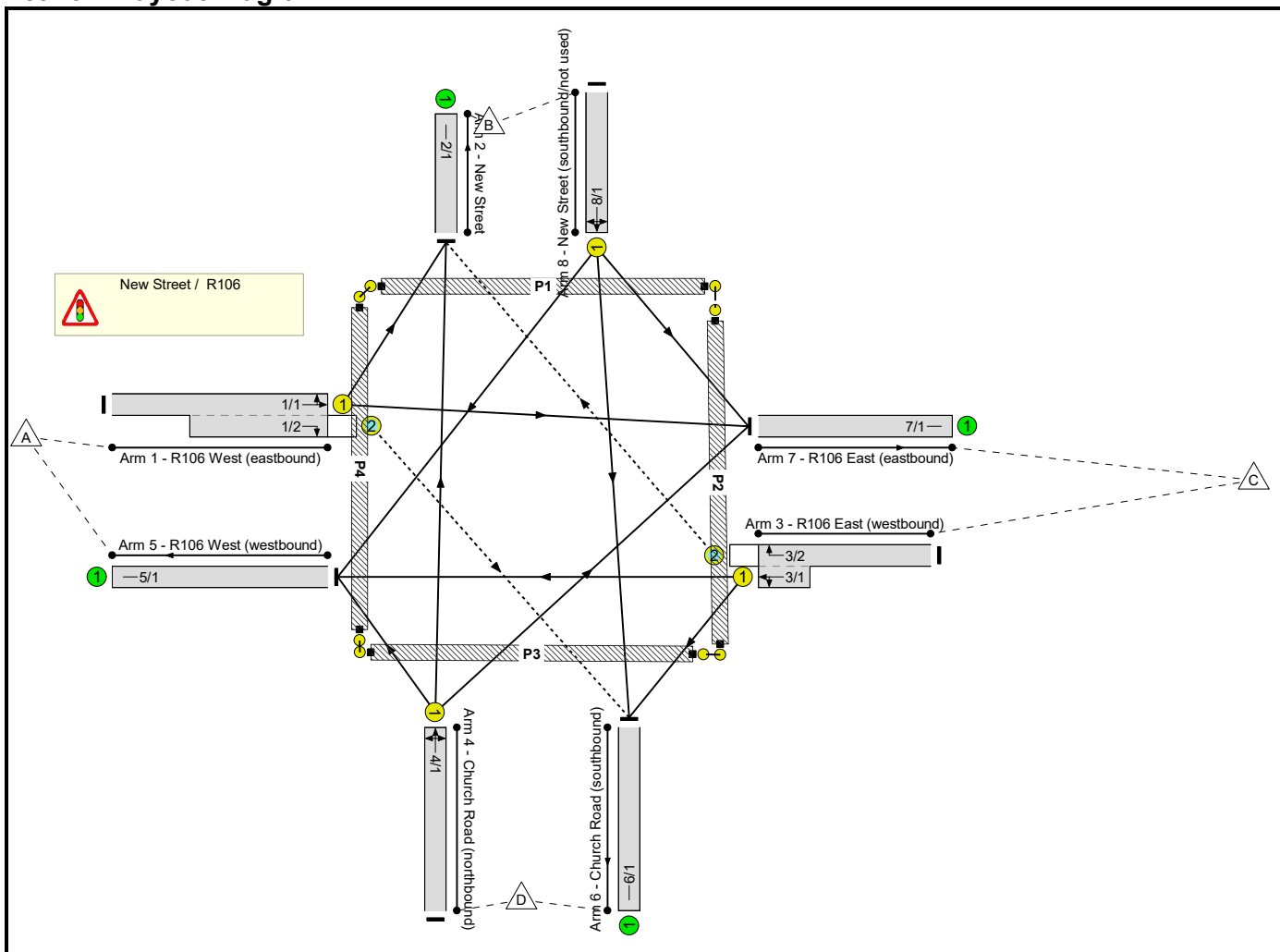
**Appendix E      Junction 4 - New Street and the R106 - Linsig Analysis**

Full Input Data And Results  
**Full Input Data And Results**

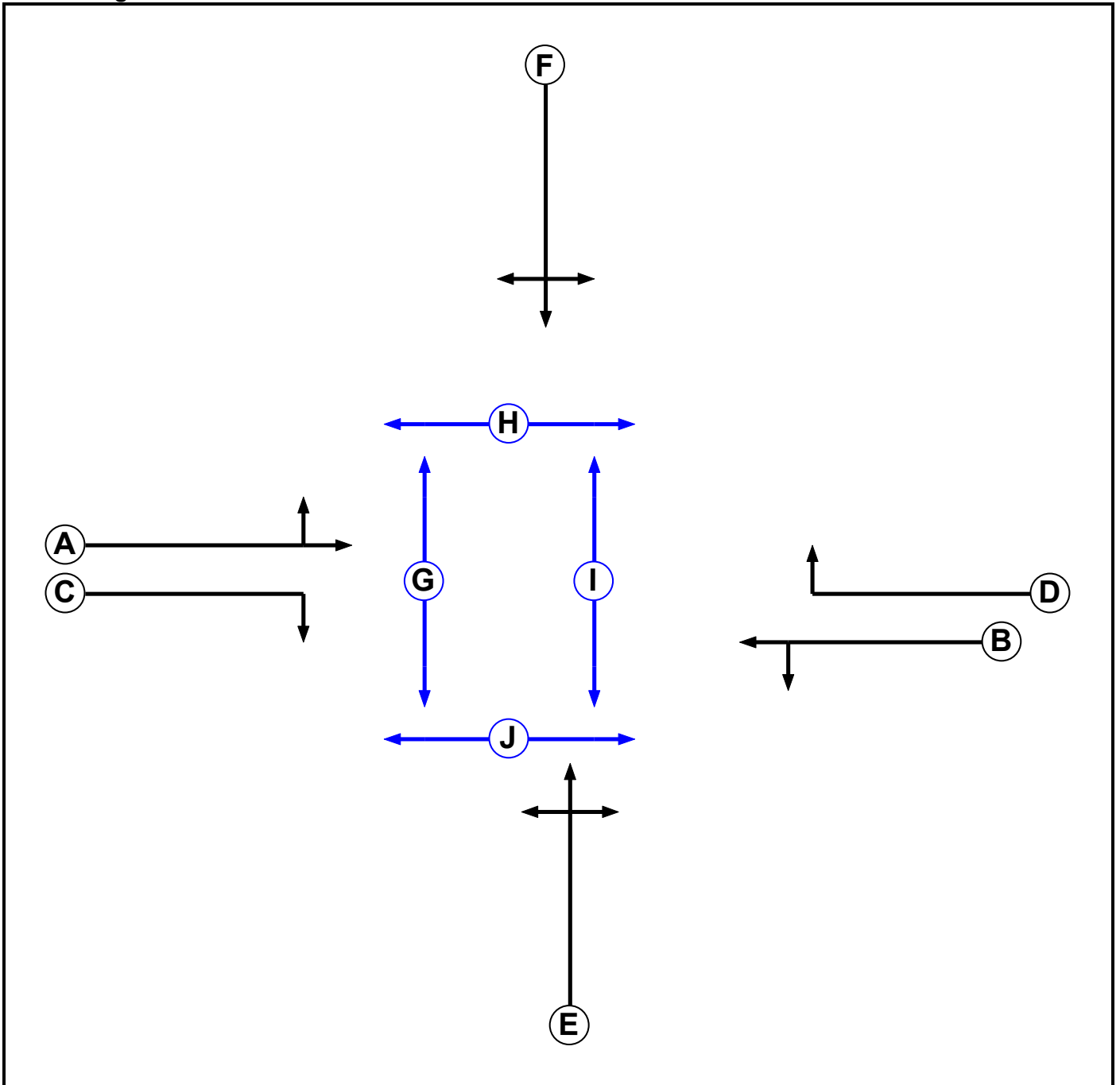
**User and Project Details**

<b>Project:</b>	<b>Public Realm at New Street, Malahide, Co. Dublin</b>
<b>Title:</b>	<b>Public Realm at New Street, Malahide, Co. Dublin</b>
<b>Location:</b>	
<b>Client:</b>	Fingal County Council
<b>Date Started:</b>	January 2023
<b>Checked By:</b>	D Lehane
<b>Additional detail:</b>	
<b>File name:</b>	222126 New Street - Jn 4_JPM 2023-01-27.lsg3x
<b>Author:</b>	JP Murray
<b>Company:</b>	PUNCH Consulting Engineers
<b>Address:</b>	Carnegie House, Library Road, Dun Laoghaire, Co Dublin, A96 C7W7, Ireland

**Network Layout Diagram**



Phase Diagram





# Full Input Data And Results

## Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7
J	Pedestrian		7	7

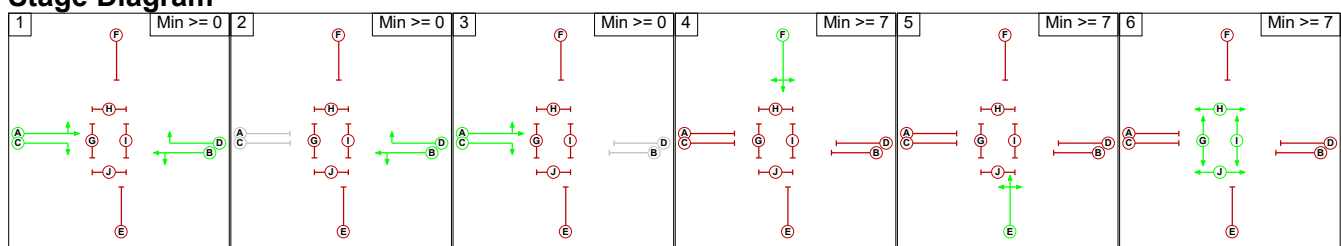
## Phase Intergreens Matrix

		Starting Phase									
		A	B	C	D	E	F	G	H	I	J
Terminating Phase	A	-	-	-	-	5	6	5	7	8	-
	B	-	-	-	-	6	5	8	-	5	7
	C	-	-	-	-	5	5	5	-	-	8
	D	-	-	-	-	5	5	-	7	5	-
	E	6	5	5	6	-	6	7	8	8	5
	F	5	5	6	5	6	-	8	5	7	8
	G	12	12	12	-	12	12	-	-	-	-
	H	12	-	-	12	12	12	-	-	-	-
	I	12	12	-	12	12	12	-	-	-	-
	J	-	11	11	-	11	11	-	-	-	-

## Phases in Stage

Stage No.	Phases in Stage
1	A B C D
2	B D
3	A C
4	F
5	E
6	G H I J

## Stage Diagram



Full Input Data And Results

**Phase Delays**

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

**Prohibited Stage Change**

		To Stage					
		1	2	3	4	5	6
From Stage	1		0	0	6	6	8
	2	2		2	5	6	8
	3	2	2		6	5	8
	4	6	5	6		6	8
	5	6	6	6	6		8
	6	12	12	12	12	12	

Full Input Data And Results

**Give-Way Lane Input Data**

Junction: New Street / R106											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (R106 West (eastbound))	6/1 (Right)	1439	0	3/1	1.09	All	2.00	-	0.50	2	2.00
3/2 (R106 East (westbound))	2/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

**Lane Input Data**

Junction: New Street / R106												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (R106 West eastbound)	U	A	2	3	60.0	Geom	-	2.65	0.00	Y	Arm 2 Left	10.68
											Arm 7 Ahead	Inf
1/2 (R106 West eastbound)	O	C	2	3	9.6	Geom	-	2.74	0.00	N	Arm 6 Right	18.47
2/1 (New Street)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (R106 East westbound)	U	B	2	3	3.6	Geom	-	2.60	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Left	10.65
3/2 (R106 East westbound)	O	D	2	3	3.5	Geom	-	2.60	0.00	N	Arm 2 Right	13.49
4/1 (Church Road northbound)	U	E	2	3	60.0	Geom	-	2.40	0.00	Y	Arm 2 Ahead	Inf
											Arm 5 Left	17.37
											Arm 7 Right	17.13
5/1 (R106 West westbound)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Church Road southbound)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (R106 East eastbound)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (New Street southbound/not used)	U	F	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.97
											Arm 6 Ahead	Inf
											Arm 7 Left	13.49

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: '2023 Survey Year AM'	08:30	09:30	01:00	
2: '2023 Survey Year PM'	15:45	16:45	01:00	
3: '2019 Survey Year AM'	08:30	09:30	01:00	
4: '2019 Survey Year PM'	18:00	19:00	01:00	
5: '2020 Survey Year AM'	08:30	09:30	01:00	
6: '2020 Survey Year PM'	15:45	16:45	01:00	



Full Input Data And Results

**Traffic Flows, Desired**

**Scenario 1: '2023 Existing Survey AM'** (FG1: '2023 Survey Year AM', Plan 2: 'Network Control Plan 2 (2023)')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	7	261	138	406
	B	0	0	0	0	0
	C	389	7	0	124	520
	D	162	27	93	0	282
	Tot.	551	41	354	262	1208

**Scenario 2: '2023 Existing Survey PM'** (FG2: '2023 Survey Year PM', Plan 2: 'Network Control Plan 2 (2023)')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	280	107	387
	B	0	0	0	0	0
	C	353	0	0	84	437
	D	172	0	78	0	250
	Tot.	525	0	358	191	1074

**Scenario 3: '2020 Existing Survey AM'** (FG5: '2020 Survey Year AM', Plan 2: 'Network Control Plan 2 (2023)')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1	316	50	367
	B	0	0	0	0	0
	C	382	0	0	63	445
	D	117	0	58	0	175
	Tot.	499	1	374	113	987

**Scenario 4: '2020 Existing Survey PM'** (FG6: '2020 Survey Year PM', Plan 2: 'Network Control Plan 2 (2023)')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	2	338	58	398
	B	0	0	1	1	2
	C	382	0	0	82	464
	D	106	0	101	0	207
	Tot.	488	2	440	141	1071

Full Input Data And Results

**Scenario 5: '2019 Existing Survey AM'** (FG3: '2019 Survey Year AM', Plan 1: 'Network Control Plan 1 (2019)')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	28	287	110	425
	B	97	0	15	150	262
	C	338	15	0	75	428
	D	86	75	104	0	265
	Tot.	521	118	406	335	1380

**Scenario 6: '2019 Existing Survey PM'** (FG4: '2019 Survey Year PM', Plan 1: 'Network Control Plan 1 (2019)')

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	77	261	78	416
	B	81	0	43	85	209
	C	277	70	0	44	391
	D	89	70	66	0	225
	Tot.	447	217	370	207	1241

Full Input Data And Results

**Network Results**

**Scenario 1: '2023 Existing Survey AM'** (FG1: '2023 Survey Year AM', Plan 2: 'Network Control Plan 2 (2023)')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>79.6%</b>
<b>New Street / R106</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>79.6%</b>
1/1+1/2	R106 West (eastbound) Left Right Ahead	U+O	N/A	N/A	A C		2	38	-	406	1873:1877	707+311	37.9 : 44.4%
2/1	New Street	U	N/A	N/A	-		-	-	-	41	Inf	Inf	0.0%
3/2+3/1	R106 East (westbound) Right Ahead Left	O+U	N/A	N/A	D B		1	31	-	520	1813:1813	9+645	79.6 : 79.6%
4/1	Church Road (northbound) Ahead Left Right	U	N/A	N/A	E		1	18	-	282	1720	363	77.7%
5/1	R106 West (westbound)	U	N/A	N/A	-		-	-	-	551	Inf	Inf	0.0%
6/1	Church Road (southbound)	U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
7/1	R106 East (eastbound)	U	N/A	N/A	-		-	-	-	354	Inf	Inf	0.0%
8/1	New Street (southbound/not used) Right Ahead Left	U	N/A	N/A	F		0	0	-	0	1965	0	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%





Full Input Data And Results

Scenario 2: '2023 Existing Survey PM' (FG2: '2023 Survey Year PM', Plan 2: 'Network Control Plan 2 (2023)')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Public Realm at New Street, Malahide, Co. Dublin	-	-	N/A	-	-		-	-	-	-	-	-	73.2%
New Street / R106	-	-	N/A	-	-		-	-	-	-	-	-	73.2%
1/1+1/2	R106 West (eastbound) Left Right Ahead	U+O	N/A	N/A	A C		2	39	-	387	1880:1877	754+288	37.1 : 37.1%
2/1	New Street	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
3/2+3/1	R106 East (westbound) Right Ahead Left	O+U	N/A	N/A	D B		1	32	-	437	2015:1826	0+670	0.0 : 65.3%
4/1	Church Road (northbound) Ahead Left Right	U	N/A	N/A	E		1	17	-	250	1707	341	73.2%
5/1	R106 West (westbound)	U	N/A	N/A	-		-	-	-	525	Inf	Inf	0.0%
6/1	Church Road (southbound)	U	N/A	N/A	-		-	-	-	191	Inf	Inf	0.0%
7/1	R106 East (eastbound)	U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%
8/1	New Street (southbound/not used) Right Ahead Left	U	N/A	N/A	F		0	0	-	0	1965	0	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%



Full Input Data And Results

Scenario 3: '2020 Existing Survey AM' (FG5: '2020 Survey Year AM', Plan 2: 'Network Control Plan 2 (2023)')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Public Realm at New Street, Malahide, Co. Dublin	-	-	N/A	-	-		-	-	-	-	-	-	115.3%
New Street / R106	-	-	N/A	-	-		-	-	-	-	-	-	115.3%
1/1+1/2	R106 West (eastbound) Left Right Ahead	U+O	N/A	N/A	A C		2	42	-	367	1879:1877	883+139	35.9 : 35.9%
2/1	New Street	U	N/A	N/A	-		-	-	-	1	Inf	Inf	0.0%
3/2+3/1	R106 East (westbound) Right Ahead Left	O+U	N/A	N/A	D B		1	42	-	445	2015:1838	0+878	0.0 : 50.7%
4/1	Church Road (northbound) Ahead Left Right	U	N/A	N/A	E		1	7	-	175	1707	152	115.3%
5/1	R106 West (westbound)	U	N/A	N/A	-		-	-	-	499	Inf	Inf	0.0%
6/1	Church Road (southbound)	U	N/A	N/A	-		-	-	-	113	Inf	Inf	0.0%
7/1	R106 East (eastbound)	U	N/A	N/A	-		-	-	-	374	Inf	Inf	0.0%
8/1	New Street (southbound/not used) Right Ahead Left	U	N/A	N/A	F		0	0	-	0	1965	0	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%





Full Input Data And Results

Scenario 4: '2020 Existing Survey PM' (FG6: '2020 Survey Year PM', Plan 2: 'Network Control Plan 2 (2023)')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Public Realm at New Street, Malahide, Co. Dublin	-	-	N/A	-	-		-	-	-	-	-	-	Inf %
New Street / R106	-	-	N/A	-	-		-	-	-	-	-	-	Inf %
1/1+1/2	R106 West (eastbound) Left Right Ahead	U+O	N/A	N/A	A C		2	42	-	398	1878:1877	880+150	38.7 : 38.7%
2/1	New Street	U	N/A	N/A	-		-	-	-	2	Inf	Inf	0.0%
3/2+3/1	R106 East (westbound) Right Ahead Left	O+U	N/A	N/A	D B		1	42	-	464	2015:1829	0+874	0.0 : 53.1%
4/1	Church Road (northbound) Ahead Left Right	U	N/A	N/A	E		1	7	-	207	1707	152	136.4%
5/1	R106 West (westbound)	U	N/A	N/A	-		-	-	-	488	Inf	Inf	0.0%
6/1	Church Road (southbound)	U	N/A	N/A	-		-	-	-	141	Inf	Inf	0.0%
7/1	R106 East (eastbound)	U	N/A	N/A	-		-	-	-	440	Inf	Inf	0.0%
8/1	New Street (southbound/not used) Right Ahead Left	U	N/A	N/A	F		0	0	-	2	1862	0	Inf %
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%



Full Input Data And Results

Scenario 5: '2019 Existing Survey AM' (FG3: '2019 Survey Year AM', Plan 1: 'Network Control Plan 1 (2019)')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Public Realm at New Street, Malahide, Co. Dublin	-	-	N/A	-	-		-	-	-	-	-	-	170.7%
New Street / R106	-	-	N/A	-	-		-	-	-	-	-	-	170.7%
1/1+1/2	R106 West (eastbound) Left Right Ahead	U+O	N/A	N/A	A C		2	28	-	425	1857:1877	618+216	51.0 : 51.0%
2/1	New Street	U	N/A	N/A	-		-	-	-	118	Inf	Inf	0.0%
3/2+3/1	R106 East (westbound) Right Ahead Left	O+U	N/A	N/A	D B		1	28	-	428	1813:1828	21+583	70.8 : 70.8%
4/1	Church Road (northbound) Ahead Left Right	U	N/A	N/A	E		1	7	-	265	1746	155	170.7%
5/1	R106 West (westbound)	U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%
6/1	Church Road (southbound)	U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
7/1	R106 East (eastbound)	U	N/A	N/A	-		-	-	-	406	Inf	Inf	0.0%
8/1	New Street (southbound/not used) Right Ahead Left	U	N/A	N/A	F		1	7	-	262	1887	168	156.2%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%





Full Input Data And Results

**Scenario 6: '2019 Existing Survey PM'** (FG4: '2019 Survey Year PM', Plan 1: 'Network Control Plan 1 (2019)')

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Public Realm at New Street, Malahide, Co. Dublin</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>144.6%</b>
<b>New Street / R106</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>144.6%</b>
1/1+1/2	R106 West (eastbound) Left Right Ahead	U+O	N/A	N/A	A C		2	28	-	416	1822:1877	603+139	56.1 : 56.1%
2/1	New Street	U	N/A	N/A	-		-	-	-	217	Inf	Inf	0.0%
3/2+3/1	R106 East (westbound) Right Ahead Left	O+U	N/A	N/A	D B		1	28	-	391	1813:1839	113+520	61.8 : 61.8%
4/1	Church Road (northbound) Ahead Left Right	U	N/A	N/A	E		1	7	-	225	1750	156	<b>144.6%</b>
5/1	R106 West (westbound)	U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
6/1	Church Road (southbound)	U	N/A	N/A	-		-	-	-	207	Inf	Inf	0.0%
7/1	R106 East (eastbound)	U	N/A	N/A	-		-	-	-	370	Inf	Inf	0.0%
8/1	New Street (southbound/not used) Right Ahead Left	U	N/A	N/A	F		1	7	-	209	1855	165	<b>126.8%</b>
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	8	-	0	-	0	0.0%



**Appendix F      Junction 5 - Townyard Lane and the R106  
Junctions 9 Analysis**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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**Filename:** Junction 5 - Townyard Lane.R106.j9

**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 31/01/2023 11:09:36

- »2023 Survey Year, AM
- »2023 Survey Year, PM
- »2020 Survey Year, AM
- »2020 Survey Year, PM
- »2019 Estimated, AM
- »2019 Estimated, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.9	5.66	0.32	A	0.8	5.88	0.30	A
<b>2020 Survey Year</b>								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.7	5.53	0.26	A	1.0	6.14	0.36	A
<b>2019 Estimated</b>								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.6	5.10	0.23	A	0.1	4.78	0.07	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
----------------	-------------	---------------------	-----------------------	------------	---------------------	-------------------	---------------------



m	kph	PCU	PCU	perHour	s	-Min	perMin
---	-----	-----	-----	---------	---	------	--------

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:30	10:00	15
D2	2023 Survey Year	PM	ONE HOUR	12:45	14:15	15
D3	2020 Survey Year	AM	ONE HOUR	08:30	10:00	15
D4	2020 Survey Year	PM	ONE HOUR	12:45	14:15	15
D5	2019 Estimated	AM	ONE HOUR	08:30	10:00	15
D6	2019 Estimated	PM	ONE HOUR	12:45	14:15	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way		1.34	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R106		Major
B	Townyard Lane		Minor
C	R106		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - R106	6.00			100.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Townyard Lane	One lane	3.20	0	0

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	487	0.089	0.224	0.141	0.321
1	B-C	636	0.098	0.247	-	-
1	C-B	632	0.245	0.245	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

### Demand Set Details

--	--	--	--	--	--	--

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:30	10:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	376	100.000
B - Townyard Lane		✓	0	100.000
C - R106		✓	628	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	From	To		
		A - R106	B - Townyard Lane	C - R106
	A - R106	0	51	325
	B - Townyard Lane	0	0	0
	C - R106	524	104	0

## Vehicle Mix

### Heavy Vehicle Percentages

	From	To		
		A - R106	B - Townyard Lane	C - R106
	A - R106	0	0	0
	B - Townyard Lane	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.32	5.66	0.9	A
C-A				
A-B				
A-C				

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way		1.28	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	12:45	14:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	410	100.000
B - Townyard Lane		✓	0	100.000
C - R106		✓	556	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	81	329
	B - Townyard Lane	0	0	0
	C - R106	454	102	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	0	0
	B - Townyard Lane	0	0	0
	C - R106	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.30	5.88	0.8	A
C-A				
A-B				
A-C				

# 2020 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way		1.13	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2020 Survey Year	AM	ONE HOUR	08:30	10:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	370	100.000
B - Townyard Lane		✓	0	100.000
C - R106		✓	545	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	80	290
	B - Townyard Lane	0	0	0
	C - R106	454	91	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	0	0
	B - Townyard Lane	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.26	5.53	0.7	A
C-A				
A-B				
A-C				

# 2020 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way		1.48	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2020 Survey Year	PM	ONE HOUR	12:45	14:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	443	100.000
B - Townyard Lane		✓	0	100.000
C - R106		✓	622	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	87	356
	B - Townyard Lane	0	0	0
	C - R106	509	113	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	0	0
	B - Townyard Lane	0	0	0
	C - R106	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.36	6.14	1.0	A
C-A				
A-B				
A-C				

# 2019 Estimated, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way		1.00	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2019 Estimated	AM	ONE HOUR	08:30	10:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	310	100.000
B - Townyard Lane		✓	0	100.000
C - R106		✓	569	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	7	303
	B - Townyard Lane	0	0	0
	C - R106	488	81	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	0	0
	B - Townyard Lane	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.23	5.10	0.6	A
C-A				
A-B				
A-C				

# 2019 Estimated, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way		0.29	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2019 Estimated	PM	ONE HOUR	12:45	14:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	352	100.000
B - Townyard Lane		✓	0	100.000
C - R106		✓	448	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	46	306
	B - Townyard Lane	0	0	0
	C - R106	423	25	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Townyard Lane	C - R106
From	A - R106	0	0	0
	B - Townyard Lane	0	0	0
	C - R106	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.07	4.78	0.1	A
C-A				
A-B				
A-C				

**Appendix G    Junction 6 - Old Street and the R106  
Junctions 9 Analysis**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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**Filename:** Junction 6 - Old Street.R106.j9

**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 31/01/2023 11:10:40

- »2023 Survey Year, AM
- »2023 Survey Year, PM
- »2020 Survey Year, AM
- »2020 Survey Year, PM
- »2019 Estimated, AM
- »2019 Estimated, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.5	5.26	0.21	A	0.6	5.70	0.26	A
<b>2020 Survey Year</b>								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.5	5.35	0.21	A	0.5	5.20	0.20	A
<b>2019 Estimated</b>								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.3	5.03	0.14	A	0.3	4.98	0.13	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
----------------	-------------	---------------------	-----------------------	------------	---------------------	-------------------	---------------------

m	kph	PCU	PCU	perHour	s	-Min	perMin
---	-----	-----	-----	---------	---	------	--------

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:00	09:30	15
D2	2023 Survey Year	PM	ONE HOUR	15:30	17:00	15
D3	2020 Survey Year	AM	ONE HOUR	08:00	09:30	15
D4	2020 Survey Year	PM	ONE HOUR	15:30	17:00	15
D5	2019 Estimated	AM	ONE HOUR	08:00	09:30	15
D6	2019 Estimated	PM	ONE HOUR	15:30	17:00	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000



# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Old Street/R106	T-Junction	Two-way		0.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R106		Major
B	Old Street		Minor
C	R106		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - R106	6.00			100.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Old Street	One lane	3.30	0	0

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	492	0.090	0.227	0.143	0.324
1	B-C	643	0.099	0.249	-	-
1	C-B	632	0.245	0.245	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

### Demand Set Details

--	--	--	--	--	--	--

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	483	100.000
B - Old Street		✓	0	100.000
C - R106		✓	536	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	70	413
	B - Old Street	0	0	0
	C - R106	467	69	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	0	0
	B - Old Street	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.21	5.26	0.5	A
C-A				
A-B				
A-C				

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Old Street/R106	T-Junction	Two-way		1.03	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	458	100.000
B - Old Street		✓	0	100.000
C - R106		✓	524	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	79	379
	B - Old Street	0	0	0
	C - R106	437	87	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	0	0
	B - Old Street	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.26	5.70	0.6	A
C-A				
A-B				
A-C				



# 2020 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Old Street/R106	T-Junction	Two-way		0.86	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2020 Survey Year	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	414	100.000
B - Old Street		✓	0	100.000
C - R106		✓	504	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	50	364
	B - Old Street	0	0	0
	C - R106	430	74	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	0	0
	B - Old Street	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.21	5.35	0.5	A
C-A				
A-B				
A-C				

# 2020 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Old Street/R106	T-Junction	Two-way		0.73	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2020 Survey Year	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	471	100.000
B - Old Street		✓	1	100.000
C - R106		✓	524	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	66	405
	B - Old Street	0	0	1
	C - R106	458	66	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	0	0
	B - Old Street	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.20	5.20	0.5	A
C-A				
A-B				
A-C				



# 2019 Estimated, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Old Street/R106	T-Junction	Two-way		0.52	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2019 Estimated	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	435	100.000
B - Old Street		✓	0	100.000
C - R106		✓	481	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	51	384
	B - Old Street	0	0	0
	C - R106	434	47	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	0	0
	B - Old Street	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.14	5.03	0.3	A
C-A				
A-B				
A-C				

# 2019 Estimated, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Old Street/R106	T-Junction	Two-way		0.54	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2019 Estimated	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	388	100.000
B - Old Street		✓	0	100.000
C - R106		✓	481	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	35	353
	B - Old Street	0	0	0
	C - R106	434	47	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Old Street	C - R106
From	A - R106	0	0	0
	B - Old Street	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.13	4.98	0.3	A
C-A				
A-B				
A-C				



**Appendix H    Junction 7 - James' Terrace and the R106  
Junctions 9 Analysis**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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**Filename:** Junction 7 - Jame's Terrace.R106.j9

**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 31/01/2023 11:11:32

- »2023 Survey Year, AM
- »2023 Survey Year, PM
- »2020 Survey Year, AM
- »2020 Survey Year, PM
- »2019 Estimated, AM
- »2019 Estimated, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	3.6	39.16	0.80	E	4.7	46.19	0.84	E
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
<b>2020 Survey Year</b>								
Stream B-AC	1.7	21.15	0.63	C	4.5	44.75	0.84	E
Stream C-AB	0.0	0.00	0.00	A	0.0	4.60	0.00	A
<b>2019 Estimated</b>								
Stream B-AC	0.7	13.58	0.41	B	1.1	16.16	0.53	C
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
----------------	-------------	---------------------	-----------------------	------------	---------------------	-------------------	---------------------

m	kph	PCU	PCU	perHour	s	-Min	perMin
---	-----	-----	-----	---------	---	------	--------

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15
D3	2020 Survey Year	AM	ONE HOUR	08:15	09:45	15
D4	2020 Survey Year	PM	ONE HOUR	16:15	17:45	15
D5	2019 Estimated	AM	ONE HOUR	08:15	09:45	15
D6	2019 Estimated	PM	ONE HOUR	16:15	17:45	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 7 - Jame's Terrace/R106	T-Junction	Two-way		11.27	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R106		Major
B	Jame's Terrace		Minor
C	R106		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - R106	6.00			80.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Jame's Terrace	One lane	3.25	0	0

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	490	0.089	0.225	0.142	0.322
1	B-C	640	0.098	0.248	-	-
1	C-B	620	0.240	0.240	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand



## Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	294	100.000
B - Jame's Terrace		✓	321	100.000
C - R106		✓	500	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	294
	B - Jame's Terrace	131	0	190
	C - R106	500	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	0
	B - Jame's Terrace	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.80	39.16	3.6	E
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 7 - Jame's Terrace/R106	T-Junction	Two-way		15.33	C

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	297	100.000
B - Jame's Terrace		✓	357	100.000
C - R106		✓	422	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	297
	B - Jame's Terrace	120	0	237
	C - R106	422	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	0
	B - Jame's Terrace	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.84	46.19	4.7	E
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

# 2020 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 7 - Jame's Terrace/R106	T-Junction	Two-way		5.86	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2020 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	268	100.000
B - Jame's Terrace		✓	265	100.000
C - R106		✓	424	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	268
	B - Jame's Terrace	103	0	162
	C - R106	424	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	0
	B - Jame's Terrace	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.63	21.15	1.7	C
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				



# 2020 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 7 - Jame's Terrace/R106	T-Junction	Two-way		14.03	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2020 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	332	100.000
B - Jame's Terrace		✓	349	100.000
C - R106		✓	433	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	332
	B - Jame's Terrace	110	0	239
	C - R106	432	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	0
	B - Jame's Terrace	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.84	44.75	4.5	E
C-AB	0.00	4.60	0.0	A
C-A				
A-B				
A-C				

# 2019 Estimated, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 7 - Jame's Terrace/R106	T-Junction	Two-way		2.53	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2019 Estimated	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	274	100.000
B - Jame's Terrace		✓	169	100.000
C - R106		✓	465	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	274
	B - Jame's Terrace	69	0	100
	C - R106	465	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	0
	B - Jame's Terrace	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.41	13.58	0.7	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

# 2019 Estimated, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 7 - Jame's Terrace/R106	T-Junction	Two-way		4.11	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2019 Estimated	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	276	100.000
B - Jame's Terrace		✓	228	100.000
C - R106		✓	393	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	276
	B - Jame's Terrace	77	0	151
	C - R106	393	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Jame's Terrace	C - R106
From	A - R106	0	0	0
	B - Jame's Terrace	0	0	0
	C - R106	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.53	16.16	1.1	C
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

**Appendix I      Junction 8 - The Rise and the R106  
Junctions 9 Analysis**

# Junctions 9

## PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896  
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**Filename:** Junction 8 - The Rise.R106.j9

**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 27/01/2023 11:17:46

»2023 Survey Year, AM

»2023 Survey Year, PM

»2019 Survey Year, AM

»2019 Survey Year, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.9	19.32	0.47	C	0.2	12.33	0.15	B
Stream C-AB	0.0	5.09	0.02	A	0.1	5.34	0.06	A
<b>2019 Survey Year</b>								
Stream B-AC	0.7	19.17	0.43	C	0.2	13.21	0.18	B
Stream C-AB	0.1	5.28	0.05	A	0.3	5.47	0.11	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15

<b>D2</b>	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15
<b>D3</b>	2019 Survey Year	AM	ONE HOUR	08:15	09:45	15
<b>D4</b>	2019 Survey Year	PM	ONE HOUR	16:15	17:45	15

### Analysis Set Details

ID	Network flow scaling factor (%)
<b>A1</b>	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 8 - The Rise/R106	T-Junction	Two-way		2.79	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R106		Major
B	The Rise		Minor
C	R106		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - R106	6.00			0.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - The Rise	One lane	2.50	30	25

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	475	0.086	0.218	0.137	0.312
1	B-C	608	0.093	0.235	-	-
1	C-B	574	0.222	0.222	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00



## Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	483	100.000
B - The Rise		✓	147	100.000
C - R106		✓	415	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	A - R106	B - The Rise	C - R106	
A - R106	0	22	461	
B - The Rise	92	0	55	
C - R106	408	7	0	

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	A - R106	B - The Rise	C - R106	
A - R106	0	0	0	
B - The Rise	0	0	0	
C - R106	0	0	0	

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.47	19.32	0.9	C
C-AB	0.02	5.09	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	403	0.275	109	0.4	12.212	B
C-AB	9	716	0.013	9	0.0	5.092	A
C-A	303			303			
A-B	17			17			
A-C	347			347			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	380	0.348	132	0.5	14.465	B
C-AB	12	747	0.017	12	0.0	4.900	A
C-A	361			361			
A-B	20			20			
A-C	414			414			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	348	0.465	161	0.8	19.082	C

C-AB	18	791	0.023	18	0.0	4.654	A
C-A	439			439			
A-B	24			24			
A-C	508			508			

## 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	348	0.465	162	0.9	19.325	C
C-AB	18	791	0.023	18	0.0	4.656	A
C-A	439			439			
A-B	24			24			
A-C	508			508			

## 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	380	0.348	133	0.5	14.684	B
C-AB	12	747	0.017	12	0.0	4.901	A
C-A	361			361			
A-B	20			20			
A-C	414			414			

## 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	403	0.275	111	0.4	12.390	B
C-AB	9	716	0.013	9	0.0	5.092	A
C-A	303			303			
A-B	17			17			
A-C	347			347			

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 8 - The Rise/R106	T-Junction	Two-way		0.77	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	536	100.000
B - The Rise		✓	46	100.000
C - R106		✓	406	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - The Rise	C - R106
From	A - R106	0	85	451
	B - The Rise	29	0	17
	C - R106	388	18	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - The Rise	C - R106
From	A - R106	0	0	0
	B - The Rise	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

--	--	--	--	--

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.15	12.33	0.2	B
C-AB	0.06	5.34	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	399	0.087	34	0.1	9.863	A
C-AB	23	698	0.033	23	0.0	5.335	A
C-A	282			282			
A-B	64			64			
A-C	340			340			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	375	0.110	41	0.1	10.768	B
C-AB	31	725	0.043	31	0.1	5.187	A
C-A	334			334			
A-B	76			76			
A-C	405			405			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	343	0.148	50	0.2	12.311	B
C-AB	45	765	0.059	45	0.1	5.000	A
C-A	402			402			
A-B	94			94			
A-C	497			497			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	343	0.148	51	0.2	12.326	B
C-AB	45	765	0.059	45	0.1	5.001	A
C-A	402			402			
A-B	94			94			
A-C	497			497			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41	375	0.110	42	0.1	10.789	B
C-AB	31	725	0.043	31	0.1	5.189	A
C-A	334			334			
A-B	76			76			
A-C	405			405			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	399	0.087	35	0.1	9.890	A
C-AB	23	698	0.034	23	0.0	5.341	A
C-A	282			282			
A-B	64			64			
A-C	340			340			

# 2019 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 8 - The Rise/R106	T-Junction	Two-way		2.39	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2019 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	541	100.000
B - The Rise		✓	126	100.000
C - R106		✓	408	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - The Rise	C - R106
From	A - R106	0	13	528
	B - The Rise	83	0	43
	C - R106	394	14	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - The Rise	C - R106
From	A - R106	0	0	0
	B - The Rise	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

--	--	--	--	--



Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.43	19.17	0.7	C
C-AB	0.05	5.28	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	387	0.245	94	0.3	12.234	B
C-AB	18	700	0.026	18	0.0	5.277	A
C-A	289			289			
A-B	10			10			
A-C	398			398			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	362	0.313	113	0.4	14.442	B
C-AB	25	728	0.034	25	0.0	5.114	A
C-A	342			342			
A-B	12			12			
A-C	475			475			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	326	0.425	138	0.7	18.966	C
C-AB	35	769	0.046	35	0.1	4.907	A
C-A	414			414			
A-B	14			14			
A-C	581			581			

#### 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	326	0.425	139	0.7	19.168	C
C-AB	36	769	0.046	36	0.1	4.910	A
C-A	414			414			
A-B	14			14			
A-C	581			581			

#### 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	113	361	0.313	114	0.5	14.627	B
C-AB	25	728	0.034	25	0.0	5.118	A
C-A	342			342			
A-B	12			12			
A-C	475			475			

#### 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	95	387	0.245	95	0.3	12.385	B
C-AB	18	700	0.026	18	0.0	5.280	A
C-A	289			289			
A-B	10			10			
A-C	398			398			

# 2019 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 8 - The Rise/R106	T-Junction	Two-way		1.05	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2019 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	541	100.000
B - The Rise		✓	53	100.000
C - R106		✓	434	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - The Rise	C - R106
From	A - R106	0	51	490
	B - The Rise	33	0	20
	C - R106	400	34	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - The Rise	C - R106
From	A - R106	0	0	0
	B - The Rise	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

--	--	--	--	--

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.18	13.21	0.2	B
C-AB	0.11	5.47	0.3	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	392	0.102	39	0.1	10.213	B
C-AB	45	704	0.064	44	0.1	5.458	A
C-A	282			282			
A-B	38			38			
A-C	369			369			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	366	0.130	48	0.1	11.287	B
C-AB	60	732	0.082	60	0.2	5.358	A
C-A	330			330			
A-B	46			46			
A-C	440			440			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	331	0.176	58	0.2	13.181	B
C-AB	87	774	0.113	87	0.3	5.242	A
C-A	391			391			
A-B	56			56			
A-C	540			540			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	58	331	0.176	58	0.2	13.207	B
C-AB	87	774	0.113	87	0.3	5.248	A
C-A	390			390			
A-B	56			56			
A-C	540			540			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	366	0.130	48	0.2	11.317	B
C-AB	60	733	0.083	61	0.2	5.364	A
C-A	330			330			
A-B	46			46			
A-C	440			440			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	391	0.102	40	0.1	10.249	B
C-AB	45	704	0.064	45	0.1	5.471	A
C-A	282			282			
A-B	38			38			
A-C	369			369			



**Appendix J      Junction 9 - Grove Road and the R106  
Junctions 9 Analysis**



<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Junction 9 - R106.Grove Road.j9

**Path:** I:\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 27/01/2023 11:16:40

- »2023 Survey Year, AM
- »2023 Survey Year, PM
- »2019 Survey Year, AM
- »2019 Survey Year, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.3	11.54	0.20	B	0.3	10.74	0.23	B
Stream C-AB	0.1	5.43	0.07	A	0.1	5.31	0.05	A
<b>2019 Survey Year</b>								
Stream B-AC	0.3	12.80	0.26	B	0.5	13.04	0.34	B
Stream C-AB	0.1	5.41	0.06	A	0.1	5.44	0.06	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

**Demand Set Summary**

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15
D3	2019 Survey Year	AM	ONE HOUR	08:15	09:45	15
D4	2019 Survey Year	PM	ONE HOUR	16:15	17:45	15

**Analysis Set Details**

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 9 - R106/Grove Road	T-Junction	Two-way		1.10	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R106		Major
B	Grove Road		Minor
C	R106		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - R106	6.00			0.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Grove Road	One lane	3.30	70	45

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	538	0.098	0.248	0.156	0.354
1	B-C	672	0.103	0.260	-	-
1	C-B	574	0.222	0.222	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

### Demand Set Details

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ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	517	100.000
B - Grove Road		✓	73	100.000
C - R106		✓	397	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	100	417
	B - Grove Road	47	0	26
	C - R106	374	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	0	0
	B - Grove Road	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.20	11.54	0.3	B
C-AB	0.07	5.43	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	453	0.121	54	0.1	9.027	A
C-AB	29	693	0.042	29	0.1	5.422	A
C-A	270			270			
A-B	75			75			
A-C	314			314			

#### 08:30 - 08:45

Stream	Total Demand	Capacity	RFC	Throughput	End queue	Delay (s)	Unsignalised
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	(PCU/hr)	(PCU/hr)		(PCU/hr)	(PCU)		level of service
B-AC	66	428	0.154	65	0.2	9.939	A
C-AB	39	719	0.054	39	0.1	5.295	A
C-A	318			318			
A-B	90			90			
A-C	375			375			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	392	0.205	80	0.3	11.522	B
C-AB	56	757	0.074	56	0.1	5.134	A
C-A	381			381			
A-B	110			110			
A-C	459			459			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	392	0.205	80	0.3	11.543	B
C-AB	56	757	0.074	56	0.1	5.138	A
C-A	381			381			
A-B	110			110			
A-C	459			459			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	427	0.154	66	0.2	9.964	A
C-AB	39	719	0.054	39	0.1	5.297	A
C-A	318			318			
A-B	90			90			
A-C	375			375			

**09:30 - 09:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	453	0.121	55	0.1	9.061	A
C-AB	29	693	0.042	29	0.1	5.427	A
C-A	270			270			
A-B	75			75			
A-C	314			314			



# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 9 - R106/Grove Road	T-Junction	Two-way		1.20	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	472	100.000
B - Grove Road		✓	92	100.000
C - R106		✓	385	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	55	417
	B - Grove Road	41	0	51
	C - R106	370	15	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	0	0
	B - Grove Road	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.23	10.74	0.3	B
C-AB	0.05	5.31	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	491	0.141	69	0.2	8.506	A
C-AB	19	697	0.027	19	0.0	5.308	A
C-A	271			271			
A-B	41			41			
A-C	314			314			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	83	468	0.177	83	0.2	9.323	A
C-AB	25	724	0.035	25	0.0	5.152	A
C-A	321			321			
A-B	49			49			
A-C	375			375			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	436	0.232	101	0.3	10.720	B
C-AB	36	762	0.047	36	0.1	4.954	A
C-A	388			388			
A-B	61			61			
A-C	459			459			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	101	436	0.232	101	0.3	10.742	B
C-AB	36	762	0.047	36	0.1	4.955	A
C-A	388			388			
A-B	61			61			
A-C	459			459			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	83	468	0.177	83	0.2	9.351	A
C-AB	25	724	0.035	25	0.0	5.154	A
C-A	321			321			
A-B	49			49			
A-C	375			375			

## 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	69	491	0.141	69	0.2	8.542	A
C-AB	19	697	0.027	19	0.0	5.311	A
C-A	271			271			
A-B	41			41			
A-C	314			314			

# 2019 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 9 - R106/Grove Road	T-Junction	Two-way		1.35	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2019 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	519	100.000
B - Grove Road		✓	90	100.000
C - R106		✓	384	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	130	389
	B - Grove Road	69	0	21
	C - R106	366	18	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	0	0
	B - Grove Road	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.26	12.80	0.3	B
C-AB	0.06	5.41	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	439	0.154	67	0.2	9.650	A
C-AB	23	688	0.033	22	0.0	5.407	A
C-A	266			266			
A-B	98			98			
A-C	293			293			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	415	0.195	81	0.2	10.770	B
C-AB	30	713	0.042	30	0.1	5.268	A
C-A	315			315			
A-B	117			117			
A-C	350			350			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	380	0.261	99	0.3	12.762	B
C-AB	43	750	0.057	43	0.1	5.092	A
C-A	380			380			
A-B	143			143			
A-C	428			428			

#### 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	99	380	0.261	99	0.3	12.800	B
C-AB	43	750	0.057	43	0.1	5.095	A
C-A	380			380			
A-B	143			143			
A-C	428			428			

#### 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	415	0.195	81	0.2	10.812	B
C-AB	30	713	0.042	30	0.1	5.273	A
C-A	315			315			
A-B	117			117			
A-C	350			350			



## 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	439	0.154	68	0.2	9.700	A
C-AB	23	688	0.033	23	0.0	5.411	A
C-A	266			266			
A-B	98			98			
A-C	293			293			

# 2019 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 9 - R106/Grove Road	T-Junction	Two-way		1.82	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2019 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R106		✓	513	100.000
B - Grove Road		✓	127	100.000
C - R106		✓	380	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	111	402
	B - Grove Road	69	0	58
	C - R106	361	19	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - R106	B - Grove Road	C - R106
From	A - R106	0	0	0
	B - Grove Road	0	0	0
	C - R106	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.34	13.04	0.5	B
C-AB	0.06	5.44	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	473	0.202	95	0.3	9.489	A
C-AB	24	686	0.035	24	0.0	5.431	A
C-A	262			262			
A-B	84			84			
A-C	303			303			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	449	0.254	114	0.3	10.722	B
C-AB	32	711	0.044	31	0.1	5.299	A
C-A	310			310			
A-B	100			100			
A-C	361			361			

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	416	0.336	139	0.5	12.977	B
C-AB	45	747	0.060	45	0.1	5.127	A
C-A	374			374			
A-B	122			122			
A-C	443			443			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	140	416	0.336	140	0.5	13.036	B
C-AB	45	747	0.060	45	0.1	5.131	A
C-A	373			373			
A-B	122			122			
A-C	443			443			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	114	449	0.254	115	0.3	10.784	B
C-AB	32	711	0.044	32	0.1	5.302	A
C-A	310			310			
A-B	100			100			
A-C	361			361			

## 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	96	473	0.202	96	0.3	9.559	A
C-AB	24	686	0.035	24	0.0	5.437	A
C-A	262			262			
A-B	84			84			
A-C	303			303			

**Appendix K      Junction 10 - Grove Road and The Rise  
Junctions 9 Analysis**



<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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**Filename:** Junction 10 - The Rise.Grove Road.j9

**Path:** \\w2k19-dl-fs01\users\CAD\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 31/01/2023 11:12:21

»2023 Survey Year, AM

»2023 Survey Year, PM

»2019 Survey Year, AM

»2019 Survey Year, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.1	9.14	0.11	A	0.3	10.87	0.26	B
Stream C-AB	0.3	7.97	0.24	A	0.0	6.14	0.01	A
<b>2019 Survey Year</b>								
Stream B-AC	0.1	8.53	0.05	A	0.1	9.20	0.12	A
Stream C-AB	0.5	8.48	0.32	A	0.0	5.90	0.01	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:00	09:30	15
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15
D3	2019 Survey Year	AM	ONE HOUR	08:00	09:30	15
D4	2019 Survey Year	PM	ONE HOUR	16:15	17:45	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 10 - The Rise/ Grove Road	T-Junction	Two-way		6.30	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Grove Road		Major
B	The Rise		Minor
C	Grove Road		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Grove Road	6.00			0.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - The Rise	One lane	2.40	25	20

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	466	0.085	0.214	0.135	0.306
1	B-C	598	0.092	0.232	-	-
1	C-B	574	0.222	0.222	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

## Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Grove Road		✓	26	100.000
B - The Rise		✓	46	100.000
C - Grove Road		✓	157	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	15	11
	B - The Rise	36	0	10
	C - Grove Road	36	121	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	0	0
	B - The Rise	0	0	0
	C - Grove Road	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	9.14	0.1	A
C-AB	0.24	7.97	0.3	A
C-A				
A-B				
A-C				

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 10 - The Rise/ Grove Road	T-Junction	Two-way		4.34	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Grove Road		✓	96	100.000
B - The Rise		✓	103	100.000
C - Grove Road		✓	65	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	40	56
	B - The Rise	97	0	6
	C - Grove Road	61	4	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	0	0
	B - The Rise	0	0	0
	C - Grove Road	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.26	10.87	0.3	B
C-AB	0.01	6.14	0.0	A
C-A				
A-B				
A-C				

# 2019 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 10 - The Rise/ Grove Road	T-Junction	Two-way		6.04	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2019 Survey Year	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Grove Road		✓	26	100.000
B - The Rise		✓	21	100.000
C - Grove Road		✓	232	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	6	20
	B - The Rise	14	0	7
	C - Grove Road	75	157	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	0	0
	B - The Rise	0	0	0
	C - Grove Road	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.05	8.53	0.1	A
C-AB	0.32	8.48	0.5	A
C-A				
A-B				
A-C				

# 2019 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 10 - The Rise/ Grove Road	T-Junction	Two-way		1.69	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2019 Survey Year	PM	ONE HOUR	16:15	17:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Grove Road		✓	114	100.000
B - The Rise		✓	48	100.000
C - Grove Road		✓	117	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	46	68
	B - The Rise	41	0	7
	C - Grove Road	113	4	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Grove Road	B - The Rise	C - Grove Road
From	A - Grove Road	0	0	0
	B - The Rise	0	0	0
	C - Grove Road	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	9.20	0.1	A
C-AB	0.01	5.90	0.0	A
C-A				
A-B				
A-C				



**Appendix L      Junction 11 - Grove Road and Church Road  
Junctions 9 Analysis**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
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**Filename:** Junction 11 - Church Road.Grove Road.j9

**Path:** I:\DWGS\222\101-150\222126\3.0 Calculations\1. Civils\222126-PUNCH-XX-XX-CA-C-0008\_Traffic\Junctions 9

**Report generation date:** 27/01/2023 11:13:34

»2023 Survey Year, AM

»2023 Survey Year, PM

»2019 Survey Year, AM

»2019 Survey Year, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023 Survey Year</b>								
Stream B-AC	0.1	11.68	0.11	B	0.9	18.70	0.49	C
Stream C-AB	0.0	5.25	0.01	A	0.0	5.91	0.03	A
<b>2019 Survey Year</b>								
Stream B-AC	0.1	12.10	0.10	B	1.0	18.72	0.51	C
Stream C-AB	0.0	5.07	0.01	A	0.1	6.09	0.04	A

*There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.*

*Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.*

### File summary

#### File Description

Title	
Location	
Site number	
Date	17/01/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MPPNET\RLee
Description	

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15
D2	2023 Survey Year	PM	ONE HOUR	15:30	17:00	15
D3	2019 Survey Year	AM	ONE HOUR	08:15	09:45	15
D4	2019 Survey Year	PM	ONE HOUR	15:30	17:00	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 11 - Church Road/Grove Road	T-Junction	Two-way		0.55	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Church Road		Major
B	Grove Road		Minor
C	Church Road		Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Church Road	6.00			0.0	✓	0.00

*Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.*

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Grove Road	One lane	2.50	20	16

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	467	0.085	0.215	0.135	0.307
1	B-C	602	0.092	0.233	-	-
1	C-B	574	0.222	0.222	-	-

*The slopes and intercepts shown above do NOT include any corrections or adjustments.*

*Streams may be combined, in which case capacity will be adjusted.*

*Values are shown for the first time segment only; they may differ for subsequent time segments.*

## Traffic Demand

## Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Church Road		✓	400	100.000
B - Grove Road		✓	34	100.000
C - Church Road		✓	341	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	19	381
	B - Grove Road	28	0	6
	C - Church Road	338	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	0	0
	B - Grove Road	0	0	0
	C - Church Road	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	11.68	0.1	B
C-AB	0.01	5.25	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	391	0.066	25	0.1	9.850	A
C-AB	4	690	0.005	4	0.0	5.245	A
C-A	253			253			
A-B	14			14			
A-C	287			287			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC							
C-AB							
C-A							
A-B							
A-C							



Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	372	0.082	30	0.1	10.547	B
C-AB	5	714	0.007	5	0.0	5.071	A
C-A	302			302			
A-B	17			17			
A-C	343			343			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	346	0.108	37	0.1	11.672	B
C-AB	7	750	0.009	7	0.0	4.843	A
C-A	369			369			
A-B	21			21			
A-C	419			419			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	346	0.108	37	0.1	11.682	B
C-AB	7	750	0.009	7	0.0	4.845	A
C-A	369			369			
A-B	21			21			
A-C	419			419			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	372	0.082	31	0.1	10.561	B
C-AB	5	714	0.007	5	0.0	5.071	A
C-A	302			302			
A-B	17			17			
A-C	343			343			

**09:30 - 09:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	391	0.066	26	0.1	9.868	A
C-AB	4	690	0.005	4	0.0	5.245	A
C-A	253			253			
A-B	14			14			
A-C	287			287			

# 2023 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 11 - Church Road/Grove Road	T-Junction	Two-way		4.53	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Survey Year	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Church Road		✓	344	100.000
B - Grove Road		✓	169	100.000
C - Church Road		✓	204	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	79	265
	B - Grove Road	149	0	20
	C - Church Road	193	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	0	0
	B - Grove Road	0	0	0
	C - Church Road	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.49	18.70	0.9	C
C-AB	0.03	5.91	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 15:30 - 15:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	127	411	0.310	125	0.4	12.549	B
C-AB	11	620	0.017	11	0.0	5.909	A
C-A	143			143			
A-B	59			59			
A-C	200			200			

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	152	397	0.383	151	0.6	14.600	B
C-AB	14	630	0.022	14	0.0	5.840	A
C-A	170			170			
A-B	71			71			
A-C	238			238			

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	186	378	0.492	185	0.9	18.460	C
C-AB	18	644	0.028	18	0.0	5.747	A
C-A	207			207			
A-B	87			87			
A-C	292			292			

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	186	378	0.492	186	0.9	18.695	C
C-AB	18	644	0.028	18	0.0	5.747	A
C-A	206			206			
A-B	87			87			
A-C	292			292			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	152	397	0.383	153	0.6	14.836	B
C-AB	14	630	0.022	14	0.0	5.841	A
C-A	170			170			
A-B	71			71			
A-C	238			238			

## 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	127	411	0.310	128	0.5	12.766	B
C-AB	11	620	0.017	11	0.0	5.909	A
C-A	143			143			
A-B	59			59			
A-C	200			200			

# 2019 Survey Year, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 11 - Church Road/Grove Road	T-Junction	Two-way		0.52	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2019 Survey Year	AM	ONE HOUR	08:15	09:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Church Road		✓	370	100.000
B - Grove Road		✓	31	100.000
C - Church Road		✓	379	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	9	361
	B - Grove Road	29	0	2
	C - Church Road	376	3	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	0	0
	B - Grove Road	0	0	0
	C - Church Road	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.10	12.10	0.1	B
C-AB	0.01	5.07	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	377	0.062	23	0.1	10.167	B
C-AB	4	715	0.005	4	0.0	5.064	A
C-A	282			282			
A-B	7			7			
A-C	272			272			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	358	0.078	28	0.1	10.901	B
C-AB	5	744	0.007	5	0.0	4.869	A
C-A	336			336			
A-B	8			8			
A-C	325			325			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	332	0.103	34	0.1	12.088	B
C-AB	7	786	0.009	7	0.0	4.619	A
C-A	410			410			
A-B	10			10			
A-C	397			397			

#### 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	332	0.103	34	0.1	12.097	B
C-AB	7	786	0.009	7	0.0	4.619	A
C-A	410			410			
A-B	10			10			
A-C	397			397			

#### 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	358	0.078	28	0.1	10.915	B
C-AB	5	744	0.007	5	0.0	4.871	A
C-A	336			336			
A-B	8			8			
A-C	325			325			

## 09:30 - 09:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	377	0.062	23	0.1	10.187	B
C-AB	4	715	0.005	4	0.0	5.066	A
C-A	282			282			
A-B	7			7			
A-C	272			272			

# 2019 Survey Year, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 11 - Church Road/Grove Road	T-Junction	Two-way		4.74	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2019 Survey Year	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Church Road		✓	363	100.000
B - Grove Road		✓	178	100.000
C - Church Road		✓	192	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	101	262
	B - Grove Road	142	0	36
	C - Church Road	175	17	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A - Church Road	B - Grove Road	C - Church Road
From	A - Church Road	0	0	0
	B - Grove Road	0	0	0
	C - Church Road	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.51	18.72	1.0	C
C-AB	0.04	6.09	0.1	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 15:30 - 15:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	134	420	0.319	132	0.5	12.420	B
C-AB	16	607	0.027	16	0.0	6.090	A
C-A	128			128			
A-B	76			76			
A-C	197			197			

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	160	407	0.393	159	0.6	14.508	B
C-AB	21	615	0.033	21	0.0	6.056	A
C-A	152			152			
A-B	91			91			
A-C	236			236			

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	196	388	0.505	195	1.0	18.475	C
C-AB	27	626	0.043	27	0.1	6.011	A
C-A	184			184			
A-B	111			111			
A-C	288			288			

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	196	388	0.505	196	1.0	18.724	C
C-AB	27	626	0.043	27	0.1	6.015	A
C-A	184			184			
A-B	111			111			
A-C	288			288			

#### 16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	160	407	0.393	161	0.7	14.752	B
C-AB	21	615	0.033	21	0.0	6.058	A
C-A	152			152			
A-B	91			91			
A-C	236			236			

## 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	134	420	0.319	135	0.5	12.646	B
C-AB	16	607	0.027	16	0.0	6.091	A
C-A	128			128			
A-B	76			76			
A-C	197			197			

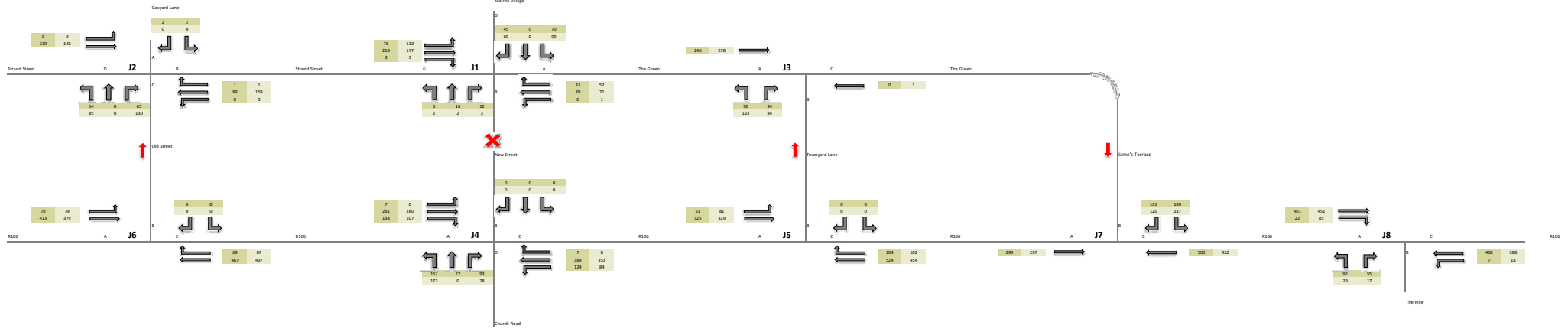


## **Appendix M    Network Flow Diagrams**

**Existing Survey Data 2023**  
 Date: Tuesday 10th January 2023

**LEGEND:**

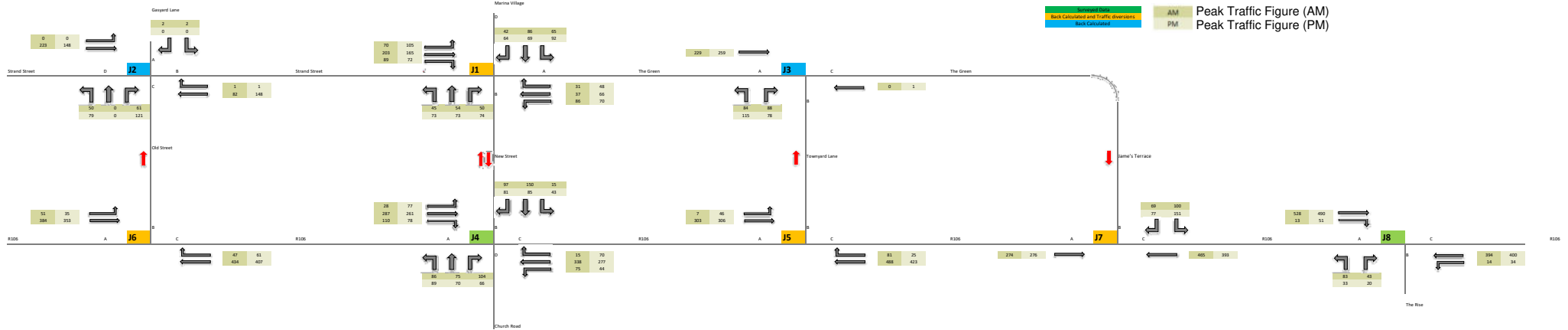
- AM Peak Traffic Figure (AM)
- PM Peak Traffic Figure (PM)



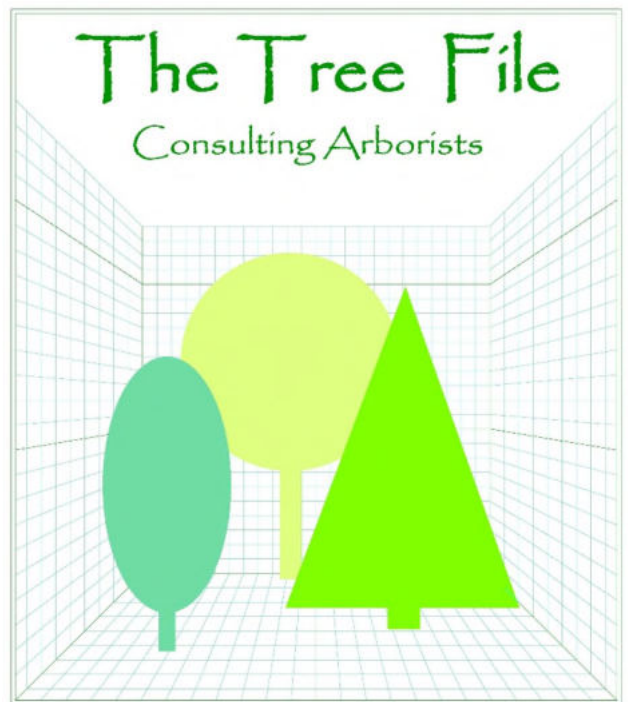
**2019 - Estimated and Actual Data**

**LEGEND:**

- AM Peak Traffic Figure (AM)
- PM Peak Traffic Figure (PM)
- Back Calculated
- Back Calculated and Traffic Observations



**APPENDIX K. Arboricultural Report by the Tree File Consulting.**



**Arboricultural Report**  
**Proposed Public Realm Improvements for a**  
**Pedestrianised New Street**  
**Malahide**  
**Co Dublin**

**February 2023**

**The Tree File Ltd**  
**Consulting Arborists**  
**Ashgrove House**  
**26 Foxrock Court**  
**Dublin 18**  
**D18 R2K1**  
**086-3819011**





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1	Executive Summary
2	Arboricultural Scenario
3	Introduction
4	Site Description
5	Pre-Development Arboricultural Scenario
6	Planning Scenario in Respect of Tree
7	Other Legislative and Legal Constraints
8	Construction Activities and their Effect on Trees
9	Nature of Project Works
10	Development Related Impacts and Concerns
11	Design Iteration and Arboricultural Considerations
12	Identification of Arboricultural Impacts on Trees
13	Tree Retention and Loss
14	Bibliography
A1	<u>Appendix A1 - Tree Survey</u> Table 1 – Tree Survey Data

## Associated Drawings

This report is for reading in conjunction with the drawings noted below:

<u>Drawing Title</u>	<u>Drawing Subject</u>
1) New Street Tree Constraints Plan	<b>Tree Constraints Plan</b> A plan depicting the predevelopment location, size, calculated constraints, and simplified tree quality category system
2) New Street Tree Impacts Plan	<b>Tree Impacts Plan</b> This plan represents the effects of the proposed improvement works on the above tree population and depicts trees to be retained and removed.

## **1.0 Executive Summary**

- 1.1 As outlined below and expanded on within this report, substantial sustainability issues relate to the trees within the current New Street context. Existing and ongoing damage cannot be mitigated or sustainably repaired and these issues, together with continued growth over time, will result in an unavoidable and inevitable need to remove these trees in the future. The trees on New Street are generally young and still small specimens, having attained much less than 20% of their ultimate species mass. As they are existing within a constrained environment, it is advised that they are replaced with new trees. This would allow for species choices better suited to the constrained context and positioning at better ranges from buildings. These trees would benefit from purpose designed planting scenarios, that would better guarantee sustainability without encroachment or growth-related damage issues over time.

## **2.0 Arboricultural Scenario**

- 2.1 Though inarguably urban, much of the current New Street visual context relates to its population of eleven Norway Maple. While the tree survey notes many trees remaining vigorous, some have suffered some mechanical damage. This might suggest the trees potentially offer sustainability. However, due consideration must be given to what tree retention might entail and result in over time. Particularly, attention must be drawn to the fact that the predominant species, Norway Maple, has the potential to become a large tree over time. Many authorities cite heights between 25.00 and 30.00 metres (Mitchell et al.) with potentially similar crown spread. Such trees will stand on immense stems, arguably diameters more than 1.00 m (W.J. Bean, 1980).
- 2.2 Such trees only exist at the sufferance of the ground environment in which they grow. The development of these trees, and particularly their stem bases, buttress regions and zone of structural roots, can only exist within soil, either by its compression or its displacement. The results of this issue are plain to be seen across the site area. Examples are well illustrated by the ground surfaces directly adjoining the tree stems, that are becoming uplifted and by both lateral and rotational displacement of surface structures, most notably the kerb edges and paved surfaces.
- 2.3 Currently, the street functions predominantly as a pedestrian zone, with vehicle access restricted to 7am - 11am daily and two-way vehicular access available to Ross Cottages on the east side at all times. A footpath of varying widths runs the full length of the street between the kerb and buildings lines, with mature trees growing at intervals in the footpath. Notwithstanding this, the context remains one of an urban streetscape. The central road corridor is of typical tarmacadam, exhibiting evidence of numerous intrusions over time, as depicted by the patchwork of various surface repairs and excavation areas. The pavement context is equally hostile, comprising the existing granite kerb stone, but with block pavers as a pedestrian surface together with retained areas of reconstituted rubber carpet near trees. Much of the pedestrian context exhibits evidence of extensive underground infrastructure including what appears to be gas, water, and telecoms. For the much of the western side, the pedestrian surface maintains circa 2.50 to 2.80 m widths, however, the eastern side is often reduced to circa 1.75 m at its northern end, with a limited area, north of the street centre, extending to circa 3.30 m.

- 2.4 In Arboricultural terms, the streetscape would be regarded as a hostile environment. Historical thoroughfares tend to be based on hard, compacted soils resulting from long-term historical use. This issue is often compounded by modern construction requirements for minimum "California Bearing Ratios" (CBR's) required to provide stability, avoid subsidence, and maximise durability of surface structures. In practice, this often results in ground environment that can be inaccessible to tree roots.
- 2.5 Tree root morphology within such urban contexts is difficult to estimate in either depth, range, or form. In practice, streetscape tree rooting systems rarely develop symmetrically or conform to the typical root protection area as might be estimated under the auspices of BS 5837-2012. Most likely, tree roots will proliferate where they can and where they can maintain optimum root function given the poor ground environments. Invariably, this relates to areas of ground where gas exchange and water infiltration can occur notwithstanding the typical covering of ground surfaced by impermeable, watersheds and materials. Therefore, we commonly see tree roots proliferating and following channels of prior disturbance, i.e., trenches created during the installation of infrastructure or at the interfaces between various materials such as buildings and pavements, roads and kerbs or paths and kerbs. Additionally, and only confirmable by additional, exploratory excavations, it is quite likely that a high proportion of tree roots will be shallow. It is often the case that tree roots proliferate directly beneath artificial surfaces, because of moisture build-up. This water tends to relate to daily temperature changes and the condensation of soil moisture about the lower face of the constructed surface.
- 2.6 Appreciating the trees currently reviewed are all relatively young and arguably substantially less than 20% of their ultimate size, then an issue of future growth and unavoidable ground disturbance must be considered. The current scenario provides no capacity to accommodate future growth. Furthermore and otherwise hostile environment within which they are growing then, any future growth is unlikely to be accommodated by way of downward compression and distinctly more likely to be accommodated by upward movement and uplifting of lightly laden surfaces (table A1 – "BS 5837, Trees in Relation to Design, Demolition and Construction – Recommendations") and structures located above any tree roots.
- 2.7 Considering the degree of uplifting and distortion existing at present and relating to still small trees, then the potential to retrofit a new surface without causing substantial damage becomes highly questionable. This issue is compounded by existing threshold levels to adjoining properties and the maintenance of universal access and sustainable, nonintrusive drainage.
- 2.8 Most trees within the west of New Street exist at a range of circa 2.20 – 2.30 m from the adjoining buildings, with trees to the east of the roadway being as little as 1.50 and 1.60 m from the adjoining buildings. These minimal ranges require the consideration of "lightly laden structures", such as paved surfaces, that may be subject to growth-related disturbance over time, in line with "Table A1" of BS 5837-2012. Additionally, and considering the ultimate potential of these trees to grow much larger, there is the potential for maximum stem growth to provide a distinct impingement existing on pedestrian space, and a far greater extent of the existing pavement will be subject to uplifting and distortion. The ultimate size of the trees, considering their small size to date, will be such that the already existing overhanging encroachment on buildings will increase greatly.

2.9 Considering the above, and particularly the ultimate size of the trees, the almost inevitable likelihood of ongoing damage disturbance and encroachment, combined with limited potential for retrofitting sustainable new surfaces and what will prove to be an inevitable and costly ongoing management regime over time would combine to suggest that the best course of action would be, rather than retaining the existing trees, to consider the replacement of the trees with new trees, of more contextually compatible species, within a sustainable, purpose designed underground planting environment and potentially at ranges better selected from the fronts of adjoining buildings.

## **3.0 Introduction**

- 3.1 **Dermot Foley Landscape Architects**  
Argus House,  
Malpas Street,  
Blackpitts,  
D08 DD56
- 3.2 The survey has been prepared by:  
Andy Worsnop Tech Arbor A, NCH Arb (PTI LANTRA)  
**The Tree File Ltd**  
Brookfield House  
Carysfort Avenue  
Blackrock  
Co Dublin

## **Report Brief**

- 3.3 In line with the requirement for Arboricultural information in respect of the proposed New Street project, the intention of the tree survey is to register, describe and evaluate the trees regarding their current health status and current condition within their current context. The survey is based upon and has been compiled considering the recommendations of BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations.

## **Report Context**

- 3.4 In line with the recommendations of "BS5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations", this assessment has been advised by the results and findings of a tree survey, the findings of which are included as "Appendix 1" to this report. This comprises a simple qualitative tree survey describing the material of Arboricultural interest, upon and adjoining the subject site. The survey provided the basic information that assisted in the compilation of the broader report.
- 3.5 This tree report should be read in conjunction with the Tree Constraints Plan "New Street Tree Constraints Plan". This drawing provides a graphic representation of the tree survey depicting the nominally calculated constraints and the spatial retention requirements of the trees, as well as colour coded categorisation their condition and potential value.
- 3.6 In line with the recommendations of "BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations", this report provides an accurate understanding of the Arboricultural implications of the proposed improvement works and to explain the issues at hand.
- 3.7 As the recommended outcome of this report is to replace the existing trees with new trees, within specifically designed and constructed contexts, and that no trees will be retained within the proposed works zone, then this report does not include a Tree Protection Plan or Arboricultural Method Statement,



## **Report Limitations**

- 3.8 This report is based on the Arborists interpretation of information provided to them prior to report compilation and gathered from the site during the undertaking of the site review. The site review data is subject to the limitation as set out under "Inspection and Evaluation Limitations and Disclaimers" in "Appendix 1" to this report. The findings and recommendations made within this report are based upon the knowledge and expertise of the inspecting Arborist.

## **4 Site Description**

- 4.1 Currently, the street functions predominantly as a pedestrian zone, with vehicle access restricted to 7am - 11am daily and two-way vehicular access available to Ross Cottages on the east side at all times. A footpath of varying widths runs the full length of the street between the kerb and buildings lines, with mature trees growing at intervals in the footpath.
- 4.2 The streetscape consists of a central, tarmacadam and roadway currently designed for one-way traffic only. The roadway is adjoined to both the east and west by pedestrian footpaths of varying widths. It is from these footpaths that the review of tree population arises. The footpath configuration typically comprises a block paver scenario with, for the most part, granite kerb edge stones. A clear majority of the trees reviewed arise from position immediately adjoining the kerb edge or within 200 – 300 mm thereof. Note is made that in many instances, the paving surface directly adjoining the tree stems has been swapped from hard block pavers to the use of reconstituted rubber matting.
- 4.3 In many instances, trees exist at ranges in or about 2.00 m from the fronts of buildings including residential and commercial premises. Accordingly, and in line with the age of trees encountered, the streetscape includes a substantial overhang of adjoining properties.

## **5 Pre-Development Arboricultural Scenario**

- 5.1 The species encountered on New Street, Norway Maple, is originally from eastern and central Europe was introduced in the 17th century. Most authorities regard the species as large and fast growing, capable of attaining 20 to 25 metres height and developing stem girths can exceed 3 metres (more than 1 metre diameter) (WJ Bean, 1980). Considering that such tree stems will have (and will continue to develop) significantly greater buttress flairs near ground level, illustrates that their potential to disturb and uplift ground in the New Street contexts is immense.
- 5.2 This report acknowledges that a majority of the subject trees are of fair health and might, under other circumstances, offer substantial sustainability. However, within the context in which the trees exist, any expectation of sustainable retention is undermined. Limited available space and already visible, growth-related disturbance, relating to trees that are still small (see Appendix 2), illustrates a fundamental lack of sustainability. The lack of foresight, poor species selection, poor planting contexts, and the provision of no capacity for future growth, mean that these trees will inevitably cause damage and will raise insurmountable management issues over time.
- 5.3 Future tree growth is inevitable. Tree root development is unlikely to be accommodated by downward compression of soil. However, it is more likely to be accommodated by upward movement and uplifting of lightly laden surfaces and structures located above any tree roots. This issue is highlighted and cautioned against in “Table A1” of “BS 5837, Trees in Relation to Design, Demolition and Construction – Recommendations”.
- 5.4 The retrospective installation of engineered tree pits or suspended pavement is impossible. Equally, issues of future growth space provision and raising pavement levels are complicated by the fixed threshold levels of existing homes and businesses. Equally, tree retention and protection during any redevelopment and construction phase

will prove particularly onerous to works and particularly any necessary excavation, construction or changing of levels near the trees.

- 5.5 Despite the reasonable health of the trees inspected and the benefits of incorporating trees into future landscapes, it is difficult to see how the existing trees can be kept. The young age of the trees, their proximity to existing buildings, and the constraints that tree retention would place on the nature and extent of any work would be highly restrictive on what can be achieved, its durability and how regularly it would be subject to ongoing repair. This suggests that a future "tree-scape" should consist of new, context-appropriate trees, planted in conjunction with a properly designed and engineered ground context. This option offers the best chance of attaining long-term and sustainable arboricultural outcomes.
- 5.6 Some concern relates to the fact that these trees are growing from a highly artificial and restrictive environment, they will not have developed a naturally symmetrical root system. It is more likely that the developed root systems are highly asymmetrical, their patterns being influenced and governed by the availability and location of "hospitable ground" and deflected by many underground obstacles. It is likely that these trees have developed elongated connective root systems, proliferating for absorptive purposes at what may be limited and distant locations. Such physically influenced root systems cannot realistically be "lifted" without extensive works and bespoke engineering. Equally and if replanting is attempted, they will require bespoke stabilisation which, because of a lack of a symmetrical and consolidated root system would likely require aerial guying, thereby diminishing their value within a new landscape. Fundamentally, the lifting and relocation of these trees cannot be justified on the grounds of enormous expense and minimal likelihood of success. Appreciating this and the availability of purpose produced trees at heights of 10 metres and more, then the more sustainable option would be to buy in new trees and to plant them in a sustainable manner, by providing engineered tree pits at suitable locations.

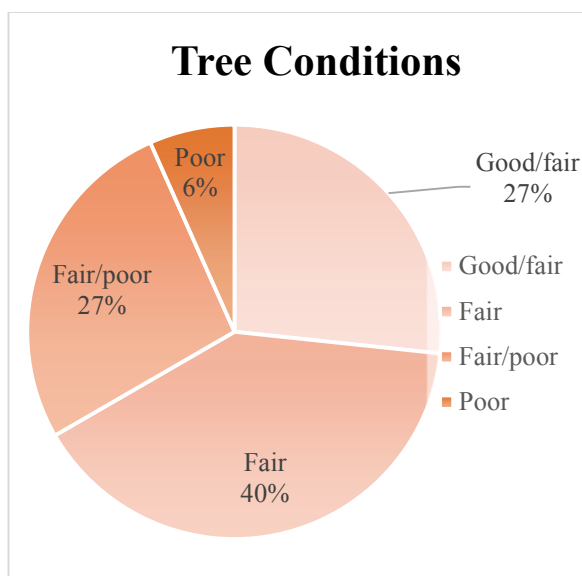


Fig 1

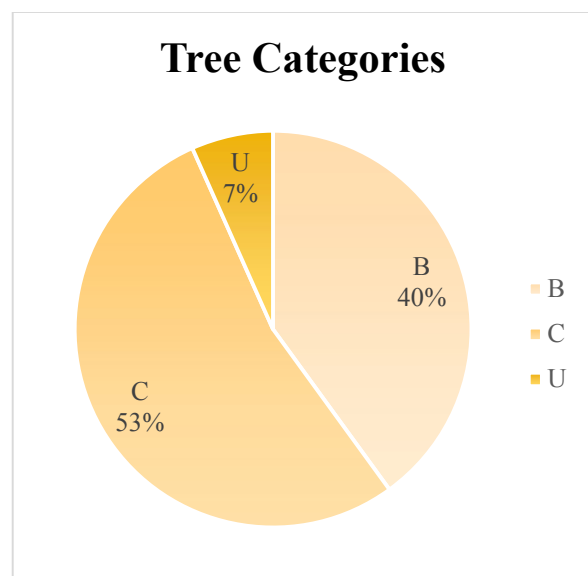


Fig 2

- 5.7 The tree-by-tree review, as illustrated in figures 1 to 4, would appear to illustrate a tree population that offers notable sustainability. The typically younger age profile appears to correlate well with the high proportion of "good-fair" and "fair" quality trees, which

in turn is mirrored in the high proportion of category “B” and “C” trees. An issue is illustrated in respect of “useful life expectancy” in that when reviewed in respect of age, health and condition, they appear to offer substantial sustainability. However, such sustainability must be qualified and in this instance, such sustainability comes with issues and risks of damage and disturbance to adjoining infrastructure.

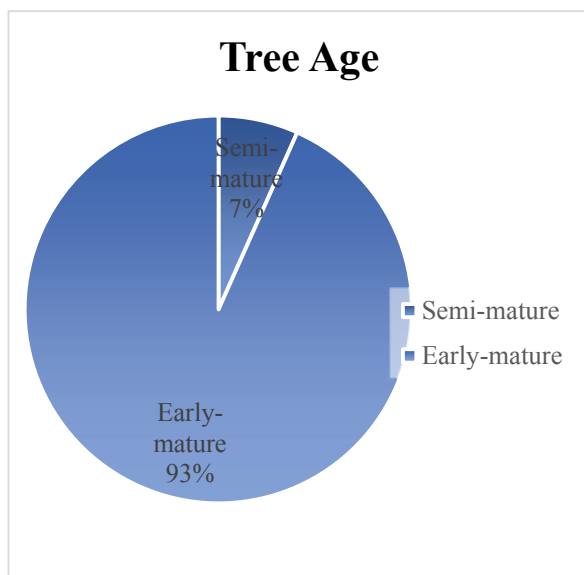


Fig 3

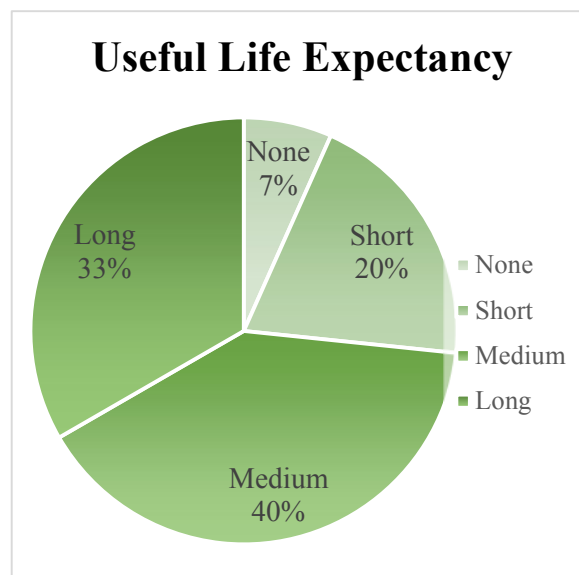


Fig 4

## **6 Pre-Planning Scenario in Respect of Tree**

- 6.1 Throughout their pre-planning considerations, Fingal County Council consider the part played by trees in both the urban and rural landscapes. Note is made of two particular areas of guidance including - **The Forest of Fingal A Tree Strategy for Fingal and Fingal Development Plan 2017-2023.**
- 6.2 **The Forest of Fingal A Tree Strategy for Fingal**, a draft strategy document that outlines various intents and objectives surrounding trees and woodlands within the county area
- 6.3 **Fingal Development Plan 2017-2023**, that sets out both a tree policy, as well as specific tree related objective across 5 different chapters of the plan, including -
- **Chapter 3 – Placemaking** (Objective PM64)
  - **Chapter 5 – Rural Fingal** (Objectives RF24, Objective RF52, Objective RF57 and Objective RF59(b))
  - **Chapter 8 – Green Infrastructure** (Objective GI16 and Objective GI19)
  - **Chapter 9 - Natural Heritage** (Objective NH23, Objective NH27 and Objective NH28)
  - **Chapter 12 - Development Management Standards** (Objective DMS39, Objective DMS78, Objective DMS79, Objective DMS80, Objective DMS81, Objective DMS82, Objective DMS83 and Objective DMS84)

- 6.4 Notwithstanding the notes above, the current development plan shows no specific objectives to protect and preserve trees and woodland on or near the New Street site. Equally, the site area supports no Tree Preservation Orders.

## **7 Other Legislative and Legal Constraints**

- 7.1 Under the Forestry Act 2014, the felling of a tree standing in a county area requires a felling license unless the trees are exempted under Section 19 of the Act. An exemption applies where trees are being felled in line with a specific detail of a grant of planning permission. This derogation may apply should the proposals be granted permission.
- 7.2 Some "Section 19" exemptions are not applicable to the development scenario, for example, those applying to fire control, forest survey or gene pool protection relating to horticultural use or Christmas tree production.
- 7.3 Some exemptions are pertinent to the development scenario, particularly Section 19(1)(M)(ii), where "the removal of which is specified in a grant of planning permission".
- 7.4 Additionally, other non-specific exemptions may apply, including-
- Trees standing in an urban area.
  - Trees within 30 metres of a building (other than a wall or temporary structure), but excluding any building built after the trees were planted.
  - Trees removed by a public authority in the performance of its statutory functions.
  - A tree within 10 metres of a public road and which, in the opinion of the owner (being an opinion formed on reasonable grounds), is dangerous to persons using the public road on account of its age or condition.
- 7.5 The above derogations may not apply where-
- The tree is within the curtilage or attendant grounds of a protected structure under Chapter 1 of Part IV of the Act of 2000.
  - The tree is within an area subject to a special amenity area order
  - The tree is within a landscape conservation area under section 204 of the Act of 2000.
  - The tree is within a monument or place recorded under section 12 of the National Monuments (Amendment) Act 1994, a historic monument or archaeological area entered in the Register of Historic Monuments under section 5 of the National Monuments (Amendment) Act 1987, or a national monument in the ownership or guardianship of the Minister for the Arts, Heritage and the Gaeltacht under the National Monuments Acts 1930 to 1994 or is within a European Site or a natural heritage area within the meaning of Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011)



- 7.6 For further clarification, contact should be made with Forest Service (Department of Agriculture, Fisheries and Food). The Felling Section of the Forest Service is based in Johnstown Castle, Co. Wexford
- 7.7 Other legislation may affect tree cutting and felling. Particular note should be made of the "Wildlife Act 1976 (as amended), as well as the EU Habitats Directive. These offer protection to animals, including Bats that often roost or even breed in trees. The protection afforded by the above legislation means that particular care must be taken in the pruning or felling of trees that may contain Bats. For this reason, specific specialist advice should be sought.

## **8 Construction Activities and their Effect on Trees**

- 8.1 Retaining trees requires space. There is a big difference between physically preserving a tree and ensuring its future survival. Sustainable tree retention often depends on the extent and nature of construction protection.
- 8.2 Like all living things, trees are highly dependent on the environment in which they exist, and particularly on a continuity in supplies of water and nutrients from the soil. Any long-term change in ground conditions can easily affect a tree's metabolism, health, and sustainability.
- 8.3 Particularly, development and construction activities can easily damage the soil environment. Removing, disturbing or denaturing soil can irreparably damage tree roots and can render the soil incapable of supporting plant root function. Most modern construction requires large plants, equipment, and vehicles. Such machinery causes soil profile destruction and compaction that denatures the soil.
- 8.4 The sustainability of a tree's health and safety can be compromised where the above issues occur within the minimum "root protection area" defined by "BS5837-2012", then the affected tree is likely to be regarded as unsustainable and unsuitable for retention.
- 8.5 Sustainable tree retention must accept changing contexts and increased management in the future. Where rates of occupation and use increase, then any retained trees have the potential to cause harm or damage. This issue may be exacerbated where shelter loss and exposure occur regarding the retention of individual trees.
- 8.6 Retained trees should be considered in respect of shadow-cast, light admission, and view-blocking. Wind patterns can affect leaf shedding, causing drifts and accumulations, creating management issues around drains and gullies, or creating slippery surfaces.

## **9 Nature of Project Works**

- 9.1 The proposed works include Public Realm Improvements for a Pedestrianised New Street, Malahide. The development extends to the full length of New Street from Main Street/ The Mall (also known as The Diamond) in the south to Strand Street to the north and including parts of Main Street/ The Mall, Ross Terrace and Strand Street all at Malahide, Co. Dublin. The site is located within Malahide Architectural Conservation Area.
- 9.2 The proposed public realm improvements will comprise: -
- (i) Widening of footpaths and provision of new kerb edges with existing kerbstones retained, realigned and protected within the widened footpaths and public spaces.
  - (ii) Realignment and narrowing of the trafficable section of New Street (c.150m in length, 0.22ha) and insertion of control measures and all necessary signage to provide for a pedestrianised street with associated traffic flow routes and restrictions allowing for time limited one-way access from 7am to 11am each day for deliveries and emergency vehicles from Main Street/ The Mall to New Street and a two-way access from Strand Street to Ross's Terrace via New Street.
  - (iii) Upgrade of all street surfaces.
  - (iv) Provision of 2no. loading bays at the southern and northern ends of New Street and an accessible parking space in front of the HSE building.
  - (v) Installation of cycle stands at 6no. locations on New Street with capacity for 23no. cycle parking spaces.
  - (vi) Removal and replacement of 11no. existing trees with 37no. trees of species appropriate to the location and environment and provision of soft landscaping and green infrastructure with planting zones for seeded, planted and hedging areas and associated bioretention and tree pit areas.
  - (vii) Provision of outdoor dining zones including tables and chairs and other ancillary moveable structures.
  - (viii) Provision of street furniture including seating, benches and litter and recycling bins and a water feature.
  - (ix) New public lighting.
  - (x) Upgrade of the watermain and foul drainage networks and upgrade and relocation of the surface water drainage network including provision of sustainable urban drainage systems (SUDs) features as part of hard and soft landscaping.
  - (xi) Provision of ducting for existing and future utilities and piped infrastructure.
- 9.2.1 Fingal County Council will be providing regulatory traffic signs in accordance with Section 95 of the Road Traffic Act 1961 (as amended).

- 9.3 Many of the issues dealt with at "Construction Works and Trees" above could apply, including-
- a) Direct conflict with proposed structures, thus requiring tree removal.
  - b) A partial conflict where the "Root Protection Area" is encroached upon by works or ground amendments and cannot be preserved/protected in full.
  - c) Environmental damage e.g. compaction, capping, sealing – changing the existing ground environment to one that can no longer support tree root function.
  - d) Construction activity and the use of large plant and machinery that can denature the ground.
  - e) A change in site context or a change in occupation or use which makes a tree unsuitable for retention.

## **10 Development Related Issues and Arboricultural Concerns**

- 10.1 The greatest issues affecting trees relates to the need to repair and replace existing surfaces, particularly pedestrian surfaces when they have already been distorted and uplifted by tree growth. The levels of these new surfaces are fixed and relates to the existing thresholds of adjoining homes and businesses. This requires that the uplifted pavements must be lowered to original levels, a process that will conflict with existing tree roots, and will be affected by any future tree and tree root growth in the future. Additionally, the form and extent of existing pavements will be changed. This includes the realignment of existing kerbs and gullies for drainage purposes. Such work cannot be achieved without damaging the trees.
- 10.2 The trees found within the New Street context are all Norway Maple. The trees are still young and small compared with their species potential but have nonetheless begun to cause damage to pavements. The extent of damage noted to date must be considered as a small fraction of the potential damage as would relate to fully grown specimens. This issue relates both to tree size and the incremental reduction of pedestrian passage space, ongoing encroachment onto the existing building, and most importantly, the substantial uplifting, breakage, and distortion of the existing pavements over time.
- 10.3 It is considered that the existing tree population is contextually incompatible with its existing context and is unsustainable. Attempted retention must accept what will eventually become irreparable damage and issues such as trip hazards.

## **10 Design Iterations and Arboricultural Considerations**

- 11.1 The sustainability issues outlined in this report were brought to the design team's attention at an early stage of the design process. Accordingly, and appreciating that tree sustainability could not be improved within the existing scenario, a design intent was adopted that incorporated the replacement of the existing trees with new tree specimens, in line with the new street layouts.

## **12 Identification of Development Impacts to Trees**

- 12.1 The expected tree impacts have been represented graphically on the tree impacts drawing "**New Street Tree Impacts Plan**" and within the narrative of this report. This drawing combines the tree constraints plan information with the current stage development details, including the architectural and services layouts below, thereby allowing for simple direct comparisons between the existing site context and the development proposals regarding new structures.
- 12.2 In this drawing, trees denoted with "Broken Pink" crown outlines are to be removed, and those denoted with "Continuous Green" crown outlines are to be retained.
- 12.3 Detail of the development proposals where gained from drawings provided by-
- Punch - Consulting Engineers – Drainage and Engineering information overlaid on Masterplan
  - Dermot Foley Landscape Architects – Proposed Landscape Masterplan
- 12.4 The evaluation is primarily based on the likelihood of the proposed works to damage or otherwise interfere with trees within or adjoining the works zone. Any structure, action or apparent need to enter or otherwise disturb/convert the "root protection area" of a site tree has been considered likely to have a negative impact, with the potential to render a tree wholly unsuitable for retention, unsafe or unsustainable. Particularly pertinent to this project is the fact that tree growth uplifting and disturbance of existing ground surfaces means that repairs and replacement surfaces called up in the proposed works cannot be achieved without substantially damaging tree, and furthermore cannot be completed without risk of damage from future tree growth.
- 12.5 Where applicable, this assessment attempts to consider both direct and indirect implications. The assessment is based on perceived construction requirements and how a tree will likely interact with the development. The assessment appreciates issues including growth, hazard development, light blockage and other social concerns regarding the changing context, including its effect on tree amenity value.

## **13 Tree Retention and Loss**

- 13.1 The drawing "New Street Tree Impacts Plan" comprises the tree survey drawings overlaid by the development drawings, thus providing a graphic representation of the relationship between tree constraints and the proposed works extents. In this drawing, the trees that will be removed, are highlighted in "pink dashed" outlines.
- 13.2 In line with the findings of this report, all trees located within the works area of New Street will be removed and replaced in line with the new landscape proposals.
- 13.3 In line with the above, tree numbers 1773, 1774, 1775, 1776, 1777, 1778, 1779, 1780, 1781, 1782 and 1783 will be removed as part of the proposed works.

## **14 Bibliography**

- 14.1 British Standards Institution (2010) BS 3998:2010: Tree Work - Recommendations. London: British Standards Institution.
- 14.2 British Standards Institution (2012) BS 5837:2012: Trees in Relation to Design, Demolition and Construction - Recommendations. London: British Standards Institution.
- 14.3 Jackson, R.B et al (1996) A Global Analysis for Root Distribution in Terrestrial Biomes *Oecologia*, 108 (1996) pp389-411, Springer Verlag
- 14.4 Lonsdale, D. (2005) *Principals of Tree Hazard Assessment and Management*, London, TSO
- 14.5 Mattheck, C. and Breloer, H. (1994) *The Body Language of Trees*, London, TSO
- 14.6 Roberts, J. and Jackson, N. and Smith, M. (2006) *Tree Roots in the Built Environment*, London, TSO
- 14.7 Strouts, R.G. and Winter, T.G. (1994) *Diagnosis of Ill-Health in Trees*, London, HMSO
- 14.8 WJ Bean (1980) *Trees and Shrubs Hardy in the British Isles* (eighth edition), London, John Murray



## **A1 Appendix 1 - Tree Survey**

### **Nature of Survey**

- A1.1 The criteria put forward in "BS5837:2012 – Trees in Relation to Design, Demolition and Construction – Recommendations" have provided a basis for this report.
- A1.2 The data collected has been represented in table form as "Table 1" within "Appendix 1" to this report. This appendix includes a Survey Methodology, Survey Key, Survey Abbreviations, Condition Category Definitions and a brief resume of the typical application of Tree Protection measures as defined within the above standard and as relates to the "RPA" zones defined both within the survey table and on the "TCP" drawing.
- A1.3 The survey, its findings and management recommendations relate to the site and the conditions thereon at the time of the survey. It relates to a "do nothing" or "as is" scenario and intends to provide an impartial representation of the site's tree population, regardless of any possible works. It is likely that changes in site usage, development or other environmental changes will require an amendment of any tree's potential retention status and its preliminary management recommendations, and in some instances, may require the re-classification of a tree's suitability for retention.

### **Drawing References**

- A1.4 The survey must be read with the "Tree Constraints Plan" drawing "New Street Tree Constraints Plan" regarding the representation of tree positions, crown forms, "RPA" extents and colour reference to category systems. Trees omitted from the supplied drawing may be "sketched in" to "New Street Tree Constraints Plan". Any such trees should be located and plotted by professional means to identify the constraints such trees have upon the site.
- A1.5 A green coloured outline represents each tree crown. It is scaled to represent the north, east, south, and west crown radii as denoted in the survey table. Each tree (categories A-green, B-blue, and C-grey only) have been apportioned a "Root Protection Area" (RPA see below) denoted as a dashed orange circle.
- A1.6 The development of a Tree Constraints Plan (TCP) provides a design tool regarding tree retention. Such a plan combines the topographical land survey drawing with additional information as provided by the tree survey. The aspects of the tree's existence recorded on the "TCP" are, firstly, the tree canopies, represented by the four cardinal compass point radii (Sp: R in survey Table 1). Secondly, and following paragraphs 4.6.1, 4.6.2 and 4.6.3 of BS5837: 2012, we represent each tree's "Root Protection Area" (RPA). For design purposes, it approximates the position of the tree protection fencing to be erected before the commencement of any site works, thus excluding all site activities other than those dealt with by way of the "Arboricultural Implication Assessment" and "Arboricultural Method Statement".

A1.7 The "Tree Constraints Plan" (TCP) depicts the extent and location of constraints, placed upon the site by the trees. The "TCP" represents both the true canopy form (north, east, south, and west radii) but also the "RPA" as defined above. These constraints are provided to advise regarding the design and layout of a proposed development.

### **Survey Intent and Context**

A1.8 This document intends to highlight the extent and nature of the material of Arboricultural interest on the site in question.

### **Survey Data Collection and Methodology**

#### **The Survey**

A1.9 This survey was compiled in October of 2022. This survey portion of the overall report is not an Implication Assessment though but provided some of the basic information regarding its compilation. The compilation of this survey was guided by the recommendations of BS 5837: 2012. This survey typically includes trees of stem diameters exceeding 150mm at approximately 1.50 metres from ground level. The survey relates to current site conditions, setting and context.

A1.10 Each tree in the survey has a consecutive number that relates directly to the survey text. Measurements are metric and defined in metres and millimetres. All trees referred to in the survey text have been measured to provide information regarding canopy height and canopy spread (north, east, south, and west radii), level of canopy base and stem diameter at 1.50 meters from ground level. The dimensions provided are intended to provide a reasonable representation of a tree's size and form. While efforts are made to maintain accuracy, visual obstruction, especially regarding trees in groups, requires that some tree dimensions be estimated only.

#### **Inspection and Evaluation Limitations and Disclaimers**

A1.11 The information set out in this report relates to the review of a tree population on the site in question. As such, the information provided is based on a general review of trees and does not constitute a detailed review of any one of the individual specimens. Such an evaluation (tree report) would require the gathering of substantially more information than that dealt with in this survey.

A1.12 The survey is not a safety assessment and the parameters reviewed within this survey context would be substantially deficient in extent to provide for a reliable safety assessment. The survey is intended to provide a general and qualitative review to assist in gauging the suitability of an individual tree for retention within a development context. All trees are subject to impromptu failure and damage. The assessment of risk as may be presented by a tree requires the review of numerous factors more than those

noted herein and as such, remains outside the scope of this document and any attempt to use the information herein for such purposes will render the information invalid.

- A1.13 A competent and experienced Arborist has completed all inspection and tree assessment. The inspection involves visual tree assessment (Mattheck and Breloer 1994) only, which has been carried out from ground level. No below ground, internal, invasive, or aerial (climbing) inspection has been carried out.
- A1.14 Trees are living organisms whose health, condition and safety can change rapidly. All trees should be re-evaluated regarding their condition on an annual basis or after substantial trauma such a storm event, other damage, or injury. The results and recommendations of this survey will require review and reassessment after one year from the date of execution. This survey does not constitute a review of tree or site safety. Attempts to use the contents herein for such purposes will render the contents invalid.
- A1.15 Several factors acted against the tree inspector, contriving to reduce the accuracy of the survey. Particularly, the survey have been completed during specific seasons. Some of the signs, typically symptomatic of ill-health or defect within a tree, may not have been available to view at the time of the survey or may have been obscured by seasonality related factors. Some of the fruiting bodies of various fungi, parasitic upon or causing decay or disease in trees, may have been out of season and unavailable to view. This survey can only comment upon symptoms of ill-health or defects visible at the time of the inspection.

## **Survey Key**

<b>Species</b>	Refers to the specific tree species
<b>Age</b>	Referred to in generalised categories including: -
Y - Young	A young and typically small tree specimen.
S/M - Semi-Mature	A young tree, having attained dimensions that allow it to be regarded independently of its neighbours but typically, would be less than 50% of its ultimate size.
E/M - Early-Mature	A specimen, typically 50% - 100% of ultimate dimensions but with substantial capacity for mass and dimensional increase remaining.
M - Mature	A specimen of dimensions typical of a full-grown specimen of its species. Future growth would tend to be extremely slow with little if any dimensional increase.
O/M - Over-Mature	An old specimen of a species having already attained or exceeded its naturally expected longevity.
V - Veteran	An extremely old, veteran specimen of a species, usually of low vigour and typically subject to rapid decline and deterioration or of very limited future longevity.
<b>Tree Dimensions</b>	All dimensions are in meters. See notes regarding limitation of accuracy.

<b>Ht.</b>	Tree Height
<b>CH</b>	Lowest canopy height
<b>N, E, S, W</b>	Tree Canopy Spread measured by radii at north, east, south, and west
<b>Dia.</b>	Stem diameter at approx. 1.50m from ground level.
<b>RPA</b>	Root Protection Area, as a radius measured from the tree's stem centre.
<b>Con</b>	Physical Condition
G Good	A specimen of generally good form and health
G/F Good/Fair	
F Fair	A specimen with defects or ill health that can be either rectified or managed typically allowing for retention
F/P Fair/Poor	
P Poor	A specimen whom through defect, disease attack or reduced vigour has limited longevity or maybe un-safe
D Dead	A dead tree
<b>Structural Condition</b>	Information on structural form, defects, damage, injury, or disease supported by the tree
<b>PMR – Preliminary Management Recommendations</b>	Recommendation for Arboricultural actions or works considered necessary at the time of the inspection and relating to the existing site context and tree condition. Works considered as urgent will be noted.
<b>Retention Period</b>	
S – Short	Typically, 0 -10 years
M – Medium	Typically, 10 -20 years
L – Long	Typically, 20 – 40 years
L+	Typically, more than 40 years
<b>Category System</b>	The Category System is intended to quantify a tree regarding its Arboricultural value as well as a combination of its structural and physical health.
Category U	Particularly poor quality, dangerous or diseased trees that offer no realistic sustainability
Category A	A typically a good quality specimen, which is considered to make a substantial Arboricultural contribution
Category B	Typically including trees regarded as being of moderate quality
Category C	Typically including generally poor-quality trees that may be of only limited value.
	The above categories are further subdivided regarding the nature of their values or qualities.
Sub-Category 1	Values such as species interest, species context, landscape design or prominent aspect.
Sub-Category 2	Mainly cumulative landscape values such as woods, groups, avenues, lines.
Sub-Category 3	Mainly cultural values such as conservation, commemorative or historical links.

**Table 1 – Tree Data Table**

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
1773	Norway Maple <i>(Acer platanoides)</i>	E/M	F	14.00	3.50	3.50	4.00	5.00	3.50	1	423	5.08	Young and vigorous, arises from area tarmacadam patch within block-paved area. Adjoining kerb edge is distorted and exhibits evidence of prior works and repair. Nonetheless, current kerb alignment is distorted having been pushed to east. Vigour and vitality are good. Lower middle crown has suffered repeated mechanical collisions with wounds at 2.50 and 3.00 m.		L	C2
1774	Norway Maple <i>(Acer platanoides)</i>	M	G/F	12.00	2.50	4.50	5.00	4.50	3.50	1	392	4.70	Young and vigorous, arising from reconstituted rubber mats section within block-paved area. General vigour and vitality are good. Tree stem has suffered extensive wounding at circa 2.50 m. Kerb edge in vicinity of tree shows evidence of minor uplifting and rotation to east. Western crown already over sales and is in contact with adjoining rooms.		M	C2



No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
1775	Norway Maple ( <i>Acer platanoides</i> )	S/M	F	11.00	3.00	3.00	2.00	2.50	3.00	1	248	2.98	A relatively small specimen suggesting installation at date after many of its peers. Vigour and vitality remain good. Tree arises from reconstituted rubber matting area within area of block-paved. Tree stem in contact with and has shifted in easterly direction, adjoining kerb edge. Tree over sales roof of adjoining property.		M	C2
1776	Norway Maple ( <i>Acer platanoides</i> )	E/M	F	12.00	3.25	3.00	3.00	4.00	3.00	1	334	4.01	Young and still vigorous. Arises from area of rubber matting within broader block-paved area. Proximity to kerb edge has seen notable uplifting and shifting to east. Tree greatly over sales adjoining roof to west. Tree stems have suffered damage on eastern side presumably in relation to vehicular damage. Exposed buttress region shows evidence of early life root girdling.		M	B2
1777	Norway Maple ( <i>Acer platanoides</i> )	E/M	G/F	13.00	4.00	4.00	3.50	5.00	4.00	1	395	4.74	A young and vigorous specimen stem has suffered mechanical damage on eastern side at circa 2.25 m. Tree arises from area of rubber matting within broader block-paved area. Trees growth has resulted in substantial lifting of rubber mat as well as uplifting rotate action and shifting of kerb edge in easterly direction.		L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
1778	Norway Maple ( <i>Acer platanoides</i> )	E/M	F/P	14.00	4.00	3.50	4.00	5.00	3.50	1	423	5.08	Large specimen of apparently good vigour and vitality. Tree arises from area of hard tarmacadam infill within broader area of block-paving. Evidence exists to suggest prior repair including cement infill of granite kerb edge. Nonetheless, uplifting and rotation of kerb edge is evident. Tree greatly overhangs roof of adjoining Malahide antiques stems have suffered damage at circa 2.50 – 3.00 m in respect of vehicular collision. Higher crown vigour and vitality is impaired with some twiggy deadwood though because of same is not evident at present.	Review regularly.	M	C2
1779	Norway Maple ( <i>Acer platanoides</i> )	E/M	G/F	11.00	4.00	3.00	2.50	2.50	3.00	1	328	3.93	Young and vigorous arising from area of rubber matting within broader block-paving context. Vitality appears fair with no major damage to tree stem. Kerb edge misalignment is limited to area south-east of stem.		L	B2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
1780	Norway Maple ( <i>Acer platanoides</i> )	E/M	F/P	12.00	4.00	2.00	2.50	2.50	2.50	1	286	3.44	Arises from area of reconstituted rubber matting within broader area of block-paving. Evidence exists to show uplifting of kerb edge immediately to east of stem. General vigour by cavity is particularly poor with crown vigour being heavily variable. Crown exhibit evidence of sectional dieback and deadwood development remaining crown appears to be of good vigour and vitality.	Retention might be afforded by cleaning out works, subject to regular review.	S	C2
1781	Norway Maple ( <i>Acer platanoides</i> )	E/M	F	12.00	4.00	3.00	3.00	4.00	2.50	1	337	4.05	Young and still vigorous. Tree arises from combined area of tarmacadam and rubberised matting. Large section of kerb edge has been replaced immediately east of tree by cement. Large buttress root is in contact with this and adjoining matting resulting in exacerbated fracture and uplifting.		M	C2
1782	Norway Maple ( <i>Acer platanoides</i> )	E/M	P	10.00	4.00	3.00	2.50	3.25	2.00	1	296	3.55	Tree has suffered extensive damage at circa 2.00 – 3.50 m on eastern side of stem with repeated bark wounding together with decay and fracture of underlying timber. Tree is regarded as unsuitable for retention.	Remove.	N/A	U

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
1783	Norway Maple ( <i>Acer platanoides</i> )	E/M	F/P	10.00	4.00	3.00	1.50	3.50	3.50	1	283	3.40	Tree has suffered extensive wounding at circa 2.50 m including area of developing decay at 3.00 m. Tree supports notable imbalance to north-west. Vigour and vitality are fair but variable. Tree arises from area of reconstituted rubber matting adjoining cement kerbing. Cement kerb is fractured and dislodged. Tree is of questionable sustainability.		S	C2
1784	Norway Maple ( <i>Acer platanoides</i> )	E/M	F	9.00	2.50	3.50	4.00	3.50	3.00	1	302	3.63	Young and vigorous. Arises from area of rubber matting within block-paved area. Granite kerb edge has been both uplifted and rotated to west. Stem has suffered minor damage at circa 3.00 m. Tree greatly oversales adjoining shop.		M	B2
1785	Norway Maple ( <i>Acer platanoides</i> )	E/M	F/P	11.00	3.00	2.50	2.50	2.50	2.00	1	334	4.01	Tree arises from small area of which mastic tarmacadam within broader block-paved area. Proximate matting has been heavily uplifted with adjoining kerb stones both uplifted and shifted to west. Tree has suffered extensive wounding between circa 2.00 m and 3.00 m exposing underlying timber to decay and longitudinal fracture. Tree appears to offer limited sustainability.		S	C2

No.	Species	Age	Con	Ht	CH	N	E	S	W	Stm	Dia	RPA	Structural Condition	PMR	Yrs	Cat
1786	London Plane ( <i>Platanus x hispanica</i> )	E/M	G/F	15.00	3.25	4.50	5.00	6.00	3.00	1	576	6.91	Relatively young and vigorous. Tree arises from area of rubberised matting within broader area of block-paved. Granite kerb edges to east exhibit classic signs of shifting and uplifting to east. Tree becomes notably multi stemmed at 2.50 m. Stem has suffered collision damage with circa 1 m long wound to east. Vigour and vitality are good. Tree greatly overhangs adjoining buildings.		L	B2
1787	Norway Maple ( <i>Acer platanoides</i> )	E/M	G/F	12.50	3.00	3.50	3.50	3.50	4.00	1	392	4.70	Young and still vigorous. Arises from area of reconstituted rubber matting within broader area of block-paving. Kerb edge immediately north of stem has been amended and cut to fit. Buttress area real signs of physical root damage. Principal stem shows evidence of vehicular collision and bark damage at circa 2.50 m. Tree partially overhangs adjoining commercial properties.		L	B2



## Appendix 2 – Photographic Information



### Photo 1

This image illustrates the overall context of the streetscape within which the subject trees exist. Note should be made of the limited range between trees and buildings, as well as the current extent of the crown overhang of the buildings



### Photo 2

Tree No. 1773

The ongoing growth of this relatively young tree has already required the adaptation of kerb stones, but still shows evidence of ongoing uplifting and kerb rotation.



**Photo 3**

Tree No. 1774

While the "rubber mat" surface about the tree has absorbed some surface distortion, mat fracturing and uplifting is already apparent.



**Photo 4**

Tree No. 1775

As with 1774, the "rubber mat" surface about the tree has absorbed some surface distortion, mat fracturing and uplifting as well as kerb stone distortion is already apparent.





**Photo 5**

Tree No. 1776

As with 1774 and 1775, the "rubber mat" surface about the tree has absorbed some surface distortion, mat fracturing as well as causing substantial uplifting and distortion of the kerb edge.



**Photo 6**

Tree No. 1777

As with 1774 to 1776, the "rubber mat" surface about the tree has absorbed some surface distortion, mat fracturing and uplifting as well as kerb stone distortion is already apparent.



**Photo 7**

Tree No. 1778

As with 1774 to 1777, the "rubber mat" surface about the tree has absorbed some surface distortion, mat fracturing, and uplifting. The kerb stone has suffered distortion and partial replacement.



**Photo 8**

Tree No. 1781

As with 1774 to 1778, the "rubber mat" surface about the tree has absorbed some surface distortion, mat fracturing and uplifting as well as kerb stone distortion is already apparent. Additionally, much of the original kerb edge has required replacement.





**Photo 9**

Tree No. 1782

As with previous trees, the "rubber mat" surface around the tree has absorbed some surface distortion. The adjoining kerb edge has suffered uplifting and shifting towards the road centre.



**Photo 10**

Tree No. 1783

As with previous trees, the "rubber mat" surface about the tree has absorbed some surface distortion. Additionally, the adjoining kerb edge is showing signs of uplifting and rotation distortion.

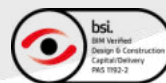


**APPENDIX L. Mechanical and Electrical Services Installations Report by Axis Consulting Engineers.**

Mechanical and Electrical Services Installations  
For the  
Public Realm  
At  
New Street, Malahide  
For  
Fingal County Council

Date of Issue: 21/02/2023

Version: 0



professional projects. [professional engineering.](https://www.axiseng.ie)

## Document History

Version No.	Description	Prepared By	Reviewed By	Date
0	Issued for Pre-planning	JS	RMK	21/02/2023

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## 1.0 Executive Summary

Axiseng were engaged as part of the Design Team commissioned by Fingal County Council (FCC) to develop the design for the Proposed Public Realm Improvements to a Pedestrianised New Street. This report outlines the Mechanical & Electrical (M&E) design for this proposed development.

The design intent includes for a P1 class of public lighting to the proposed development, feature in-ground lighting, in-ground water/power requirements, Wi-Fi & power to public spaces and EV bike chargers for public use. A separate sustainability report is available as part of the M&E submission.

Part of the design intent for the lighting, as per FCC concerns, is to light current areas which are subject to anti-social behaviour whilst maintaining minimal spill into existing residences, i.e., 2lux "post curfew".

## 2.0 Introduction

As AxisEng have been commissioned to engage in the design intent for both street lighting and Mechanical & Electrical Services, this report will outline the precursive requirements as set out by FCC and other lighting guidelines - including ILP Guidance Notes for the Reduction of Obtrusive Light (GN01:2011) in relation to the impact on residences with regards to the lighting design and any light spill elements.

Lighting Reality Software was used to confirm the proposed lighting is compliant with both Fingal County Council and the ILP Guidance Notes. Lighting Reality was used as this was requested by FCC to confirm the P1 Class of lighting is met with the proposed design. The software gives a detailed output in terms of the lux levels and lighting types used. The software provides a detailed summary of all proposed fittings with their locations, heights, and quantities – refer to Appendix A attached.



## 3.0 Lighting Design

### 3.1 Design Parameters

In order to meet the requirements, set-out by Fingal County Council the following parameters were considered:

- According to ILP Guidance Notes
  - Environmental zone of E4 – urban i.e., Town/City centre with high levels of night-time activity
  - The permitted light spill allowance within this zone is:
    - Pre-curfew – 25lux
    - Post-curfew (between 21:00/23:00 to approx. 05:00/07:00) – 5lux
- The Fingal County Council Street Lighting Specification does not outline the parameters for curfew times; therefore, this report includes for a curfew time of 23:00 to 05:00.
- Proposed public lighting shall be controlled via Photo Electric Cell Units (PECUs) via a 7-pin NEMA socket and pre-set to an on/off level of 35/18lux – as per Fingal County Council Public Lighting Specification.
- Lighting levels to disabled access parking space of 30lux average.

#### 3.1.1 Proposed New Street Re-development

The luminaire type proposed for the New Street replacement lighting scheme, the fittings shall be wall mounted at varying heights to align with the building facades available – refer to Appendix A page 2 for referenced heights.

The proposed public lighting luminaire has been selected to maintain a P1 Class throughout the development. The design is modern and simple, in keeping with the concept of decluttering of the streetscape. Fittings have been positioned on commercial businesses to ensure private residences are kept clear of any items and reduce any spill to these buildings.

The existing lighting has been included at both the north and south of the street to accurately confirm lux levels.

#### 3.1.2 Conclusions

Page 3 of the attached Appendix A outlines in tabular form the max, min and average lux levels on the selected grid area. This also denotes the lux contours in graphical form.

The following results can be noted from the Lighting Reality Report (Appendix A):

- The overall average lux level is compliant with the P1 Class for public lighting – 15.08lux (Eav) with the required being 15lux
- The minimum lux level is compliant with the P1 Class for public lighting – 2.24lux (Emin) with the required being 2lux
- The area currently with the lowest lux level is a private residence and avoiding spill into these private residences is part of the overall lighting design strategy

Refer to drawing NSM-X-X-DR-AXE-EE-60101 to view lux level contours and lighting locations in detail.

## 4.0 Mechanical & Electrical Services

There shall be an element of site services design during the detailed design period. This shall include coordination with the Civil Engineer with regards to in ground services. A developed detail design shall be presented which includes new services, relocating of existing and removal of redundant services.

There are existing site services as follows:

- Eir – existing includes ducting/chambers within footpaths on either side of the street
- Gas Networks – existing includes a low pressure routed down the righthand side of the street
- ESB - existing includes ducting/chambers/mini pillars within footpaths on either side of the street
- There is currently no Virgin Media presence noted on this street
- A provision for additional ducting for future telecoms has been included – 2No 110mm ducts for future and 2No 110mm ducts for telecoms services to the street development

The following sections outline the specific Mechanical & Electrical requirements for the design intent and detailed design.

### 4.1 Mechanical Services

An allowance has been made in the current design intent for the inclusion of 2No. in-ground potable water units. These are envisioned to be used by street market vendors and/or during special events on the street.

### 4.2 Electrical Services

Further to the public lighting element of the proposed development, the current design intent includes for the following electrical elements, refer to drawing NSM-X-X-DR-AXE-EE-60101 unless otherwise stated:

- EV Bike charging stations – for public usage
- In-ground power - envisioned to be used by street market vendors and/or during special events on the street
- Feature lighting to landscape planters – LED lighting beneath planters, these shall include access chamber within benches to allow for maintenance
- Automated traffic barriers – these shall include “timeclock” elements for loading and unloading to businesses with an access control element for the residences/businesses on the street
- USB’s within benches – to be coordinated with feature furniture
- Feature lighting – up-lighting of specimen trees
- The existing public Wi-Fi shall be retained in place

## 5.0 Energy Report

With consideration to the EU Energy Performance of Buildings Directive (EPBD), the Building Regulations Technical Guidance Document, for sustainable design and reductions in energy and carbon emissions, the services design strategy for the development is to utilise sustainable design options and energy efficient systems that are technically, environmentally, and economically feasible for a project of this kind.

The strategy targets a low energy and environmentally friendly development. This report will demonstrate that the design philosophy for the proposed development will employ a holistic approach to the construction and integration of the services, and its users. This philosophy is supported using sustainable solutions and energy efficient systems throughout.

This design team recognises the need for the development to be designed and operated in a manner that reduces the environmental impact of the development as a neighbourhood. This objective will be achieved in an economical manner whilst maintaining an environment that is comfortable for occupants and visitors.

While undertaking the analysis on the proposed development, it presented us with an opportunity to develop a design to ensure the development performs with a high energy efficiency and satisfies regulation challenges.

This report schedules a list of different elements considered and the use of active measures designed to reduce energy and costs for the duration of the development's lifecycle.

## 6.0 Sustainability Overview

The sustainability design of the proposed development presents an opportunity to ensure the development performs efficiently and meets any energy challenges. The following design elements will be incorporated to reduce energy and carbon emissions through the proposed development lifecycle.

### 6.1 Active Measures

Active measures have been considered to ensure minimal energy consumption, robust design, optimal operation, and minimal life cycle costs are achieved. The active energy measures considered include the following technologies:

- Automatic daylight control including timeclocks and photocells. Intelligent lighting controls allow for electrical energy savings.
- The majority of luminaires selected will be based LED type (A+ Rated) providing a reduction in electrical energy usage.
- Metering to monitor & optimise substantive energy use, reducing clients' overall energy consumption and carbon footprint, and reducing energy costs.
- Electric bike charging points will be provided with easy-to-use metered supplies, in line with the sustainable design strategy.
- Low flow water demand outlets with inbuilt leak detection and metering. This will provide users with potable or cold-water outlets for use, while ensuring no unnecessary water loss.

## 7.0 Reference Information – Appendices

- NSM-X-X-DR-AXE-EE-60101 – Mechanical & Electrical Services
- NSM-X-X-DR-AXE-EE-60102 – Existing Site Services
- NSM-X-X-DR-AXE-EE-60103 – Proposed Site Services
- Appendix A – Lighting Reality Report



**DATE:** 21 February 2023  
**DESIGNER:** JC  
**PROJECT No:** P22074  
**PROJECT NAME:** New Street Malahide

**LIGHTING  
REALITY**

## Outdoor Lighting Report

**PREPARED BY:** JC - Electrical Engineer  
AxisEng  
e-mail: info@axiseng.ie

## Layout Report

### General Data

Dimensions in Metres Angles in Degrees

### Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	722623.35	746121.12	20.27	129.19	1.45	1.48

### Luminaires

#### Luminaire A Data

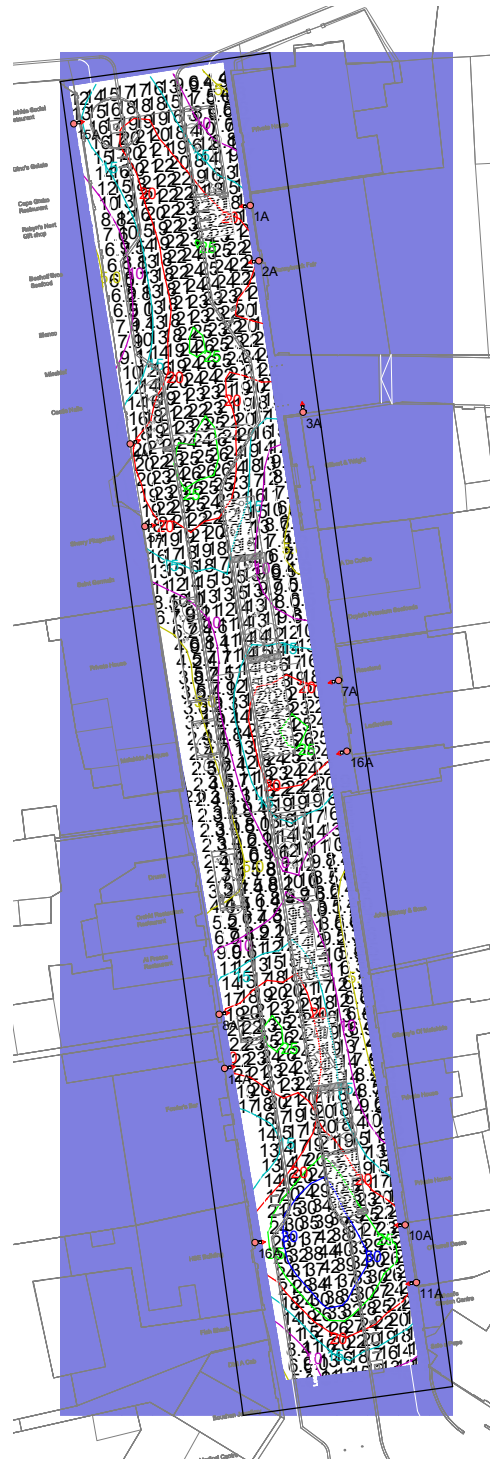
Supplier	
Type	P875_A09J
Lamp(s)	LED Warm White
Lamp Flux (klm)	3.65
File Name	P875_A09J.IES
Maintenance Factor	0.96
Imax70,80,90(cd/klm)	230.0, 53.2, 0.0
No. in Project	16

### Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	722624.02	746237.17	7.50	184.00	15.00	0.00	0.50			
2	A	722624.85	746231.90	6.00	191.00	15.00	0.00	0.50			
3	A	722629.11	746217.38	6.00	97.00	10.00	0.00	0.50			
4	A	722612.52	746214.35	5.80	20.00	15.00	0.00	0.50			
5	A	722613.91	746206.42	5.80	7.00	15.00	0.00	0.50			
7	A	722632.50	746191.63	6.00	194.00	15.00	0.00	0.50			
8	A	722621.04	746159.60	6.30	10.00	15.00	0.00	0.50			
10	A	722638.90	746139.38	6.00	181.00	15.00	0.00	0.50			
11	A	722639.97	746133.88	6.00	190.00	15.00	0.00	0.50			
13	A	722626.39	746112.59	6.00	334.00	10.00	0.00	1.00			
14	A	722648.42	746116.70	6.00	216.00	10.00	0.00	1.00			
15	A	722624.10	746266.07	6.00	282.00	10.00	0.00	1.00			
14	A	722621.57	746154.43	6.30	10.00	15.00	0.00	0.50			
15	A	722607.12	746245.05	6.00	13.00	15.00	0.00	0.50			
16	A	722633.30	746184.85	6.00	198.00	15.00	0.00	0.50			
16	A	722624.48	746137.69	4.75	4.00	15.00	0.00	0.50			

## Horizontal Illuminance (lux)

Grid 1



### Results

Eav	16.49
Emin	2.27
Emax	43.62
Emin/Emax	0.05
Emin/Eav	0.14