

22111-03-002

PROPOSED RESIDENTIAL DEVELOPMENT  
MAYESTON S179A,  
POPPINTREE, DUBLIN 11

## **PUBLIC TRANSPORT CAPACITY ASSESSMENT**

for

**Fingal County Council**

**October 2023**

**ROADPLAN**

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**TABLE OF CONTENTS**

1	INTRODUCTION.....	2
1.1	INTRODUCTION .....	2
1.2	THE DEVELOPMENT.....	2
1.3	STRUCTURE OF REPORT.....	2
1.4	REFERENCES .....	3
2	EXISTING BUS SERVICES .....	4
3	EXISTING BUS CAPACITY .....	6
3.1	FREQUENCY OF THE SERVICES .....	6
3.2	TYPE AND SIZE OF VEHICLES .....	6
3.3	EXISTING BUS CAPACITY.....	7
4	FUTURE PUBLIC TRANSPORT SERVICES.....	8
4.1	BUS .....	8
4.2	RAIL.....	9
5	PREDICTED PUBLIC TRANSPORT DEMAND .....	11
5.1	EXISTING LEVEL OF PUBLIC TRANSPORT DEMAND.....	11
5.2	PROPOSED DEVELOPMENT PUBLIC TRANSPORT DEMAND .....	13
5.3	COMMITTED DEVELOPMENTS PUBLIC TRANSPORT DEMAND .....	14
5.4	IMPACT ON PUBLIC TRANSPORT CAPACITY .....	15
6	CONCLUSIONS.....	16

# 1 Introduction

## 1.1 INTRODUCTION

Roadplan Consulting has been commissioned by O'Briain Beary Architects (OBBA) on behalf of Fingal County Council to prepare a Public Transport Capacity Assessment of a proposed residential development at Mayeston, Poppintree, Dublin 11.

The assessment aims to determine additional demand for public transport services generated by the proposed development and existing bus transport capacity.

## 1.2 THE DEVELOPMENT

The proposed development is located north of the R104 St Margaret's Road and is bound by the M50 motorway to the north, Mayeston Green and Silloge Green to the east, Mayeston Downs to the south, and to the west by public open space. It is accessed off the R104 St Margaret's Road and Mayeston Rise.

The proposed development consists of a creche and apartment blocks, as shown in *Table 1.1 "Development Schedule"*.

Item	Units	Total
Creche	m <sup>2</sup>	<b>387m<sup>2</sup></b>
Apartment blocks:		
– 1 Bed units	39	<b>119</b>
– 2 Bed units	68	
– 3 Bed units	12	

**Table 1.1 - Development Schedule**

The proposed development will include for the provision of 119 no. apartment units consisting of 39 one-bedroom apartments, 68 no. two-bedroom apartments and 12 no. 3-bedroom apartments ranging from 3-6 no. storeys and will also include for car parking, cycle parking, pedestrian and cycle links, storage, services and plant areas. Landscaping will include for high quality private open space, communal amenity areas and public open space provision.

## 1.3 STRUCTURE OF REPORT

Following this introduction, the report is set out as follows:

- Chapter 2 provides details of the current public transport services and identifies the bus stops within an easy walking distance of the subject site.
- Chapter 3 studies and assesses the existing bus capacity based on frequency of service.

- Chapter 4 summarises future public transport proposals and future upgrades that will benefit the subject site.
- Chapter 5 calculates future public demand, based on bed capacity of the proposed development and its impact on the current public transport capacity. This assessment focuses on the peak AM and PM commuter periods for the development. The assessment also considers Committed Developments which will also impact upon current available public transport capacity.
- Chapter 6 presents the conclusions and a summary of the report .

#### **1.4 REFERENCES**

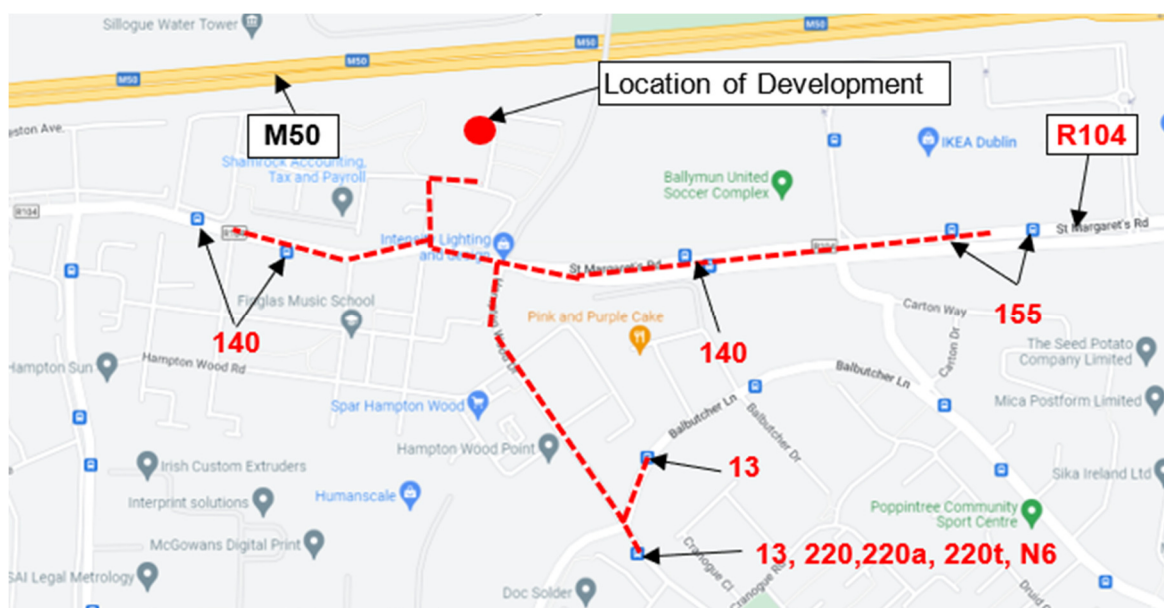
The figures and illustrations in this report have been based or reproduced from a number of sources including:

- Dublin Bus Website operated by Dublin Bus ([dublinbus.ie](http://dublinbus.ie))
- GoAhead Ireland Website [goaheadireland.ie](http://goaheadireland.ie)
- TII Journey Planner

## 2 Existing Bus Services

The proposed development is well served by existing bus services.

There are three number Bus stops located along the R104 St Margaret’s Road, located between 300m and 850m from the development, equivalent to 4 to 10min walking distance. There are also two bus stops on Balbutcher Drive and Belclare Park, located approx. 650m south of the development, which offer good connection to many destinations (as listed in Table below). The location of these bus stops and the bus route numbers serving these stops are shown on *Figure 2.1*. The red lines on that figure indicate the walking routes between the sites and the bus stops.

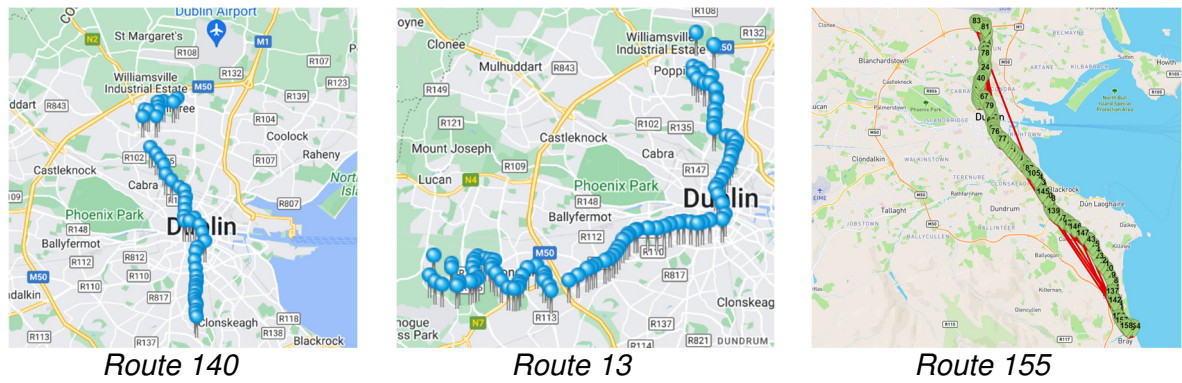


**Figure 2.1** Bus Stops (blue), route numbers (red) and walking route (red dash) in the vicinity of the development

More details on bus routes and destinations can be found in the following *Table 2.1* and *Figure 2.2*.

Bus service	Route number	Route	Mon-Fri	Sat	Sun
Dublin Bus	140	Ballymun (IKEA) - Palmerston Park (Rathmines)	10 – 15 min	20 min	30 min
	13	Harristown - Grange Castle	12 -15 min	15 min	15 min
	155	Ballymun (IKEA) - Bray via City centre	20 min	20 min	20 min
GoAhead Ireland	220 220a	DCU - Lady's Well Road via Blanchardstown Shopping Centre	~60 min	~60 min	90 min
	N6	Finglas Village - Naomh Barróg GAA Kilbarrack (towards Howth)	12 -15 min	15 min	15 min

**Table 2.1** Bus Services and frequencies (min) serving the proposed development



**Figure 2.2** Some of the Bus Routes serving the development

Full details on Dublin Bus services can be found on [www.dublinbus.ie](http://www.dublinbus.ie). For real-time information, or to plan a journey, the website [www.transportforireland.ie](http://www.transportforireland.ie) can be used.

The location of the proposed development is not served by existing rail or tram services.

### 3 Existing Bus Capacity

The existing capacity on the local public transport network has been determined based on:

- frequency of services (i.e. timetabled services) and
- type / size of vehicle.

#### 3.1 FREQUENCY OF THE SERVICES

It is widely accepted in the industry that the periods of maximum demand generated upon the public transport networks on a typical weekday are focused upon the AM (06:00-10:00) and PM (16:00-20:00) periods as these are predominantly influenced by travel to work, school, and college patterns at any given location.

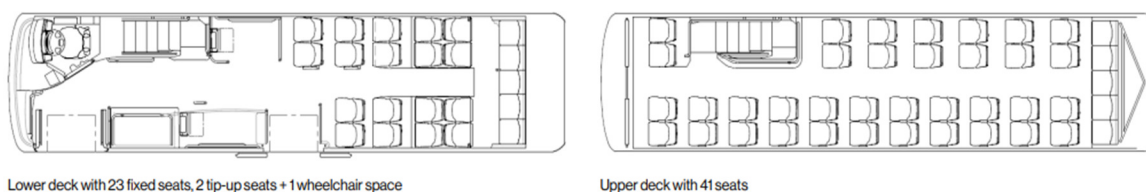
The number of services passing by the stops identified as closest to the proposed development for each route for the AM and PM period is summarised in *Table 3.1* below.

Bus service	Route No.	Route	AM Peak (06:00 – 10:00)	PM Peak (16:00 – 20:00)
Dublin Bus	140	Ballymun (IKEA) - Palmerston Park (Rathmines)	15	24
	13	Harristown - Grange Castle	19	18
	155	Ballymun (IKEA) - Bray via City centre	12	18
GoAhead Ireland	220 (220a)	DCU - Lady's Well Road via Blanchardstown Shopping Centre (via Coolmine)	4	4
	N6	Finglas Village - Naomh Barróg GAA Kilbarrack (towards Howth)	20	30
		TOTAL	<b>70</b>	<b>94</b>

**Table 3.1** Number of Bus Services on each route during peak times

#### 3.2 TYPE AND SIZE OF VEHICLES

Type of buses used on all routes serving the proposed development are Double Deckers. Typical bus layout is shown on *Figure 3.1*.



**Table 3.1** Typical layout of Double Decker bus

The average capacity of a double decker is 67 seats, including one wheelchair space and an estimated 20 - 25 standing spaces. For the purpose of this report, the average capacity of a double decker bus operated by Dublin Bus and GoAhead Ireland has been taken as 90 passengers including those standing.

### 3.3 EXISTING BUS CAPACITY

Table 3.2 below provides a summary of the bus capacity during the identified peak public transport times (AM 06:00-10:00 & PM 16:00-20:00).

Bus service	Route No.	Route	AM Peak (06:00 – 10:00)		PM Peak (16:00 – 20:00)	
			Services	Capacity	Services	Capacity
Dublin Bus	140	Ballymun (IKEA) - Palmerst on Park (Rathmines)	15	1350	24	2160
	13	Harristown - Grange Castle	19	1710	18	1620
	155	Ballymun (IKEA) - Bray via City centre	12	1080	18	1620
GoAhead Ireland	220 220a	DCU - Lady's Well Road via Blanchardstown SC	4	360	4	360
	N6	Finglas Village - Naomh Barróg GAA Kilbarrack	20	1800	30	2700
TOTAL			<b>70</b>	<b>6,300</b>	<b>94</b>	<b>8,460</b>

**Table 3.2** Total Bus Capacity during AM and PM peak

The analysis show that, during peak travel periods, the existing bus services have the capacity to accommodate up to 6,300 passengers in the AM peak and 8,460 passengers in the PM peak period.





Based on the Figure 4.2, the frequency of the proposed E2 service can be estimated for weekday peak times.

Route No.	Route	AM Peak (06:00 – 10:00)		PM Peak (16:00 – 20:00)	
		Services	Capacity	Services	Capacity
E2	Charlestown - City Centre - Dún Laoghaire	27	2,430	27	2,430

**Table 4.1** Estimated number of Bus Services and Capacity on E2 route during peak hours

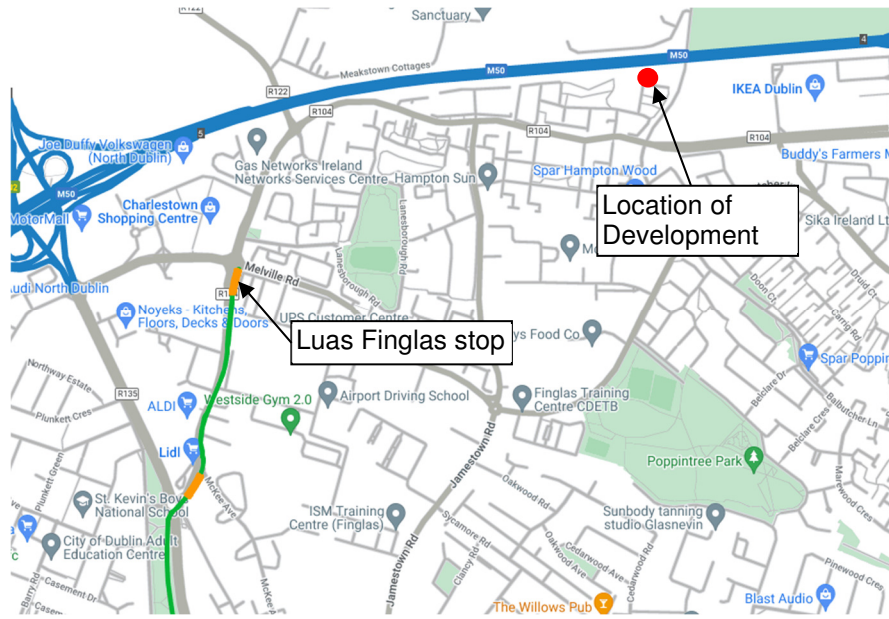
#### 4.2 RAIL

Figure 4.2 below shows the MetroLink - proposed high-frequency rail line running from Swords to Charlemont, linking Dublin, Irish Rail, DART, Dublin Bus and Luas services. The MetroLink stop closest to from the proposed development is Northwood stop, located 1.6km east on R108, which is equivalent to 20min walking distance.



**Figure 4.2** Extent of the proposed Metro Link

Figure 4.3 below shows the proposed Luas Finglas line, extension to existing Luas Green Line. The last Luas Finglas stop is the closest to the proposed development, located 1.6km east on R108, which is equivalent to 20min walking distance.



**Figure 4.3** Extent of the proposed Luas Finglas



## 5 Predicted Public Transport Demand

### 5.1 EXISTING LEVEL OF PUBLIC TRANSPORT DEMAND

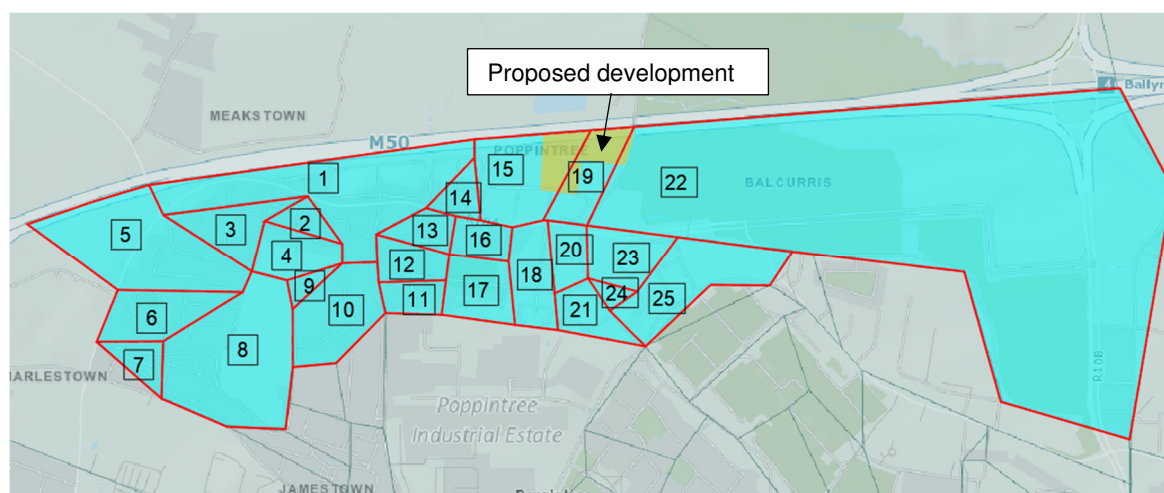
The Central Statistics Office website <http://census.cso.ie/sapmap/> has been used to gather data on existing travel patterns. Data gathered is from the 2022 census.

To determine the travel pattern of the proposed development an assessment was made using data for a number of small areas with similar characteristics close to the subject site.

Areas that are considered to be similar to the proposed development are as shown on the *Figure 5.1* below. Labelled areas are similar to the proposed development; they are considered reflective of the type of development proposed in terms of accessibility to sustainable modes. Therefore, it is appropriate to assume that the mixed development will have similar travel patterns.

*Figure 5.1* below shows the 25 small areas assessed and their codes:

- 1 – SAP Reference 267066011
- 2 – SAP Reference 267066010
- 3 – SAP Reference 267066004
- 4 – SAP Reference 267066005
- 5 – SAP Reference 267066003
- 6 – SAP Reference 267066013
- 7 – SAP Reference 267066014
- 8 – SAP Reference 267066012
- 9 – SAP Reference 267066006
- 10 – SAP Reference 267066007
- 11 – SAP Reference 268015012
- 12 – SAP Reference 268015009
- 13 – SAP Reference 268015010
- 14 – SAP Reference 267066017
- 15 – SAP Reference 267066018
- 16 – SAP Reference 268015017
- 17 – SAP Reference 268015011
- 18 – SAP Reference 268015013
- 19 – SAP Reference A267066009/02
- 20 – SAP Reference 267066009
- 21 – SAP Reference A268015014/02
- 22 – SAP Reference A267066009/01
- 23 – SAP Reference A268015005/03/A268015005/A268015014
- 24 – SAP Reference A268015005/01
- 25 – SAP Reference A268015005/02



**Figure 5.1** - Small size CSO areas

Table 5.1 provides data on the population and the number of commuters of each small area. It shows that an average of 74% of the total population are commuters.

Small Area	Population	Commuters	% Commuters
1	559	459	82.1%
2	229	187	81.7%
3	431	361	83.8%
4	225	185	82.2%
5	345	297	86.1%
6	413	342	82.8%
7	273	218	79.9%
8	419	348	83.1%
9	216	177	81.9%
10	343	288	84.0%
11	225	183	81.3%
12	250	222	88.8%
13	318	272	85.5%
14	396	330	83.3%
15	475	401	84.4%
16	495	386	78.0%
17	275	227	82.5%
18	417	357	85.6%
19	246	196	79.7%
20	296	264	89.2%
21	244	183	75.0%
22	378	274	72.5%
23	272	216	79.4%
24	309	219	70.9%
25	309	235	76.1%
Total	8358	6827	<b>81.7%</b>

**Table 5.1 - Percentage of commuters**

Table 5.2 shows existing travel mode splits for the commuters of the combined areas.

Travel Mode	No. of Commuters	Percentage
On Foot	402	5.9%
Bicycle	269	3.9%
Bus, minibus or coach	<b>1484</b>	<b>21.7%</b>
Train, DART or LUAS	46	0.7%
Motorcycle or scooter	20	0.3%
Car Driver	1729	25.3%
Car passenger	1318	19.3%
Van	121	1.8%
Other (incl. lorry)	13	0.2%
Work mainly at or from home	276	4.0%
Not stated	1149	16.8%
Total	6827	100.0%

**Table 5.2 - Travel mode splits for population aged 5 years and over by means of travel to work, school or college**

Public Transport journeys within the assessed areas represent a modal share of 22.4% (21.7% bus plus 0.7% Train / DART / Luas).

Figure 5.2 below shows the modal split for commuters of the 2022 CSO small areas considered in the analysis.

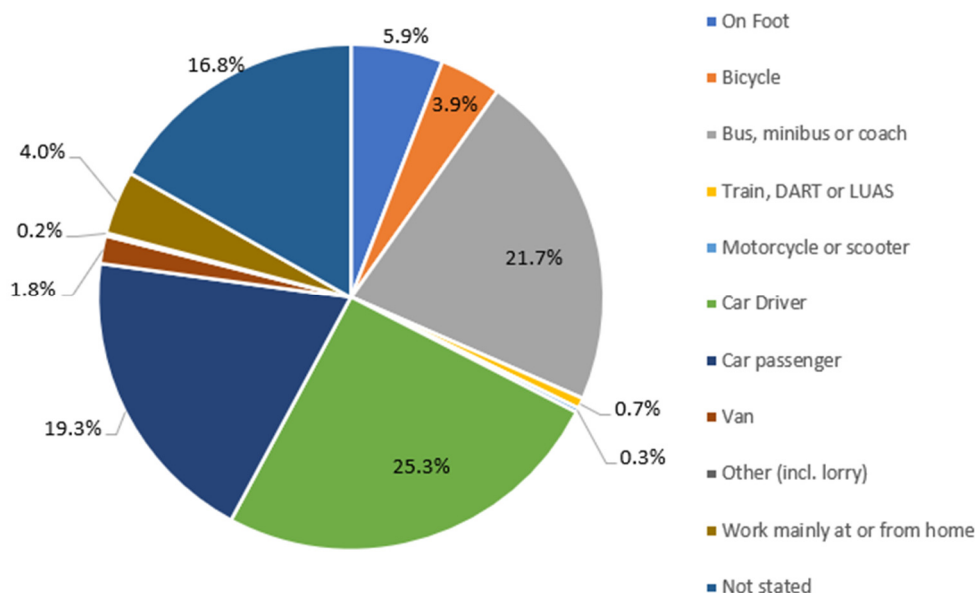


Figure 5.2 – Modal split for comparable sites

## 5.2 PROPOSED DEVELOPMENT PUBLIC TRANSPORT DEMAND

It is assumed that 81.7% of the population of the proposed development will be commuters, as recorded in Table 5.1. The number of residents of the proposed development was determined based on bed capacity: 1-bed units are assumed to have on average 1.5 persons, 2-bed units – 2.5 persons and 3-bed units – 3.5 persons. See Table 5.3 below for details.

Apartment blocks unit size	Number of Units	Total
– 1 Bed units (1.5 person)	39	59
– 2 Bed units (2.5 person)	68	170
– 3 Bed units (3.5 person)	12	42
<b>TOTAL</b>	119	<b>271 persons</b>

Table 5.3 – Estimated Population for proposed Mayeston Estate

For the purpose of this report and based on the figures in Table 5.3, the projected population of the proposed development has been assumed to be 271 persons.

By applying the modal share for the public transport as observed in the assessed Small Areas (22.4%) in Section 5.1 above, a demand for approximately 50 seats on public transport services during the AM and PM peak periods was determined. This is summarised in *Table 5.4* below.

Proposed Development	
No. Residents	271
Commuter Residents – 81.7%	222
% Modal Share for Public Transport	22.4%
Additional Public Transport Commuters	<b>50</b>

**Table 5.4** – Additional commuter numbers arising from the proposed development

### 5.3 COMMITTED DEVELOPMENTS PUBLIC TRANSPORT DEMAND

It is necessary to also consider the demand arising from committed / recently completed developments in the immediate vicinity of the subject development, if any.

The following development have been considered with respect to the additional demand that could be expected on existing public transport services:

- *Hampton Wood SHD, Cell 16* (Status: constructed).

The same methodology was applied to this committed development as that outlined in Section 5.2, whereby the number of residents was determined based on the number of bedspaces within the development. From this, the number of commuters were calculated applying same modal splits as for the Mayeston Estate development. See *Tables 5.5* and *5.6* below.

Apartment blocks unit size	Number of Units	Total
– 1 Bed units (1.5 person)	55	83
– 2 Bed units (2.5 person)	65	163
– 3 Bed units (3.5 person)	9	32
<b>TOTAL</b>	129	<b>278 persons</b>

**Table 5.5** – Estimated Population for constructed Hampton Wood SHD, Cell 16 development

Proposed Development	
No. Residents	278
Commuter Residents – 81.7%	228
% Modal Share for Public Transport	22.4%
Additional Public Transport Commuters	<b>51</b>

**Table 5.6** – Additional commuter numbers arising from the committed development

#### 5.4 IMPACT ON PUBLIC TRANSPORT CAPACITY

The demand for public transport predicted to arise from the existing neighbouring areas (see *Figure 5.1*), the proposed development and committed development is shown in *Table 5.7* below.

Development	Demand generated	
	AM	PM
Existing neighbouring areas (Small Areas)	1,484	1,484
Proposed Mayeston Estate	50	50
Constructed Hempton Wood SHD, Cell 16	51	51
<b>Total</b>	<b>1,585</b>	<b>1,585</b>

**Table 5.7** – Total Public Transport Demand

*Table 5.8* below indicates the residual capacity on bus services after the demand generated by existing developed areas and the proposed Mayeston Estate development.

Impact	AM	PM
Current Capacity	6,300	8,460
Total Demand	1,585	1,585
Residual Capacity	4,715	6,875

**Table 5.8** –Public Transport Residual Capacity

As shown in *Table 5.9* below, the predicted impact of the proposed and committed development on existing services is <2% during peak times. It is considered that impact is minimal.

Impact	AM	PM
Current Capacity (persons)	6,300	8,460
Additional Bus Commuters	101	101
% Impact	<b>1.6%</b>	<b>1.2%</b>

**Table 5.9** – Impact of Proposed Development on Existing Public Transport

In the event of an increased demand for bus travel, arising either from a change in travel mode choice by existing commuters or from an increase in commuter numbers, the supply of buses on the routes can be increased in response.



## 6 Conclusions

The analysis of the existing bus services has been undertaken based on methodology which includes:

- an assessment of trip generation from real data extracted from CSO 2022 Small Area Map Data,
- future public demand based on bed capacity of the proposed and committed development and their impact on the current public transport capacity,
- frequency of service and type of vehicles used.

This report sets out the details of current bus services and bus capacity serving the site and the local area.

- The assessment confirms that the completion and full occupation of the subject development is anticipated to result in an increased demand for bus seats, with a potential additional **50** bus users during the weekday AM (06:00 to 10:00) and PM (16:00 to 20:00) Commuter Peak.
- The neighbouring committed development will result in potential additional **51** bus users during peak hours.
- The additional demand on bus routes created by the proposed and committed development will have an impact on the existing bus capacity of less than **2%**.

Following future public transport improvements will be available to the residents of the proposed development:

- Proposed Bus Connect E-spine route that will run along St. Margarets Road, with estimated peak times capacity of 2,430 during AM and Pm peak times, which would be significant increase to existing capacity of 6,300 during AM peak and 8,460 during PM peak hours.
- Future MetroLink, proposed high-frequency rail line running from Swords to Charlemont,
- Proposed Luas Finglas, extension to existing Luas Green Line.

The site is therefore ideally placed in terms of future high frequency Bus and Luas availability.

In conclusion, the additional demand for bus services as a result of the proposed development can be accommodated on the existing services in the area.