Malahide Community Forum

The collective voice of Malahide Residents' Associations

| Email: | Email: Website: www.malahideforum | |
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| 23 rd July 2019 | AN BORD PLEANÁLA LDG. 217734 - 19 ABP. | |
| The Secretary, An Bord Pleanála, 64 Marlborough Street, Dublin 1. | 24 JUL 2019 Dout Fee: € SO Type: Time: 12:26 By: | |
| Dear Sir / Madam | J. HERV | |

An Bord Pleanála Reference: PL06F.304624 - Broadmeadow Way

Malahide Community Forum is the umbrella organisation for all the area's Residents' Associations and therefore represents a large majority of the residents of Malahide.

We wish to advise that we support the contents of the observation submitted by the residents of O'Hanlon's Lane Residents Association (attached below). We welcome the idea of a cycle and greenway linking Malahide to Donabate. However we object to the proposed plans, specifically the route through O'Hanlon's Lane. This is not a suitable route on the grounds of safety on O'Hanlon's Lane.

We feel that a better route for the Broadmeadow Way would be through the new development at Malahide Casino with direct access from Malahide Train Station. The development at The Casino was not finished when the impact studies for the Broadmeadow Way project were completed and so this route was not considered. This alternative route would have the added advantage of linking in with the train station to accommodate a much better experience for visiting tourists arriving by train. We further estimate that this alternative route would be within the existing budget of the project.

Yours sincerely,

Niall Warren

Hon. Sec.

Committee members:

Chairman:

Gerry Duggan Niall Warren

Vice-Chairman: Hazel Bolton (Castle Terrace) Hon. Treasurer: John Shirey (Millview)

Hon, Secretary: John Burke (Abbott's Hill), Gary Coughlan (Biscayne), Kevin Daly (Seapark), Michael Dangerfield (Seamount), Michael Dowling (Chamley Park), David Greene (The Moorings), Gerry Duggan (Broomfield), Ciara Moclair (St. Margaret's Rd), Michael Giblin (Old Golf Links), Tony Doran (Church Rd), Olan Howell (Dunard), Marian Keane (Chalfont), Marna Law (Marina), Helen Lyons (Gaybrook), Donal McCarthy (O'Hanlon's Lane), Helen McGivern (Old St/Railway Ave), Paul Nevin (Milford), Harry O'Neill (Auburn Grove), Richie McDonald

The Secretary, An Bord Pleanála, 64 Marlborough Street, Dublin 1.

20th July 2019.

Submission of observation Re: Application for approval to An Bord Pleanála by Fingal County Council to carry out a proposed development (Broadmeadow Way), consisting of new greenway (shared footpath and cyclepath), between Malahide Demense and Newbridge Demense.

A Chara,

O'Hanlon's Lane Residents Association submit an observation with respect to the above-mentioned proposed development by Fingal County Council.

O'Hanlon's Lane Residents Association do not object in principal to a cycling/pedestrian public amenity project between Malahide and Donabate. It is recognised by the residents that such an amenity provides a welcome tourist attraction to the Malahide area and will contribute to economic and social development.

However, residents have significant concerns on the route selection, design suitability and safety considerations as set out in Section 3 – R106 Dublin road, Malahide to Bisset's Strand. Residents of O'Hanlon's lane shared their concerns at a meeting of the Residents Association on 20th June 2019. A summary of these principal concerns is listed below:

- 1. Safety of users and residents
- 2. Risks / Hazards to proposed users and residents
- 3. Traffic management planning
- 4. Consideration of Greenway design standards
- 5. Boundaries treatment
- 6. Protection of flora and fauna
- 7. Preservation of the character and aesthetics of the lane
- 8. Parking considerations
- 9. Assessment of alternative routes

These concerns are detailed in sections 1 through 9 hereunder.

| O'Hanion's Lane Residents Association Chairperson | | _ |
|---|-----------------|---|
| | Joe Duddy | |
| O'Hanlon's Lane Residents Association Secretary: | | _ |
| | Donal Mc Carthy | |

Section 1 - Safety of users and residents

O'Hanlon's Lane is a narrow lane with restricted sight lines at its northern end. The lane joins a busy footpath and primary access road to Malahide village at its southern end. The lane can accommodate single car-width traffic only for significant portions of its length.

1.1 Safety Assessment

It is not clear if an appropriate safety sssessment been conducted for Section 3 of this proposal. No assessment materials or associated criteria are referenced in the proposal. Figure 1.1 is an extract from Fingal County Council response to the public consultation process. The response acknowledges that safety concerns were raised as part of the consultation process. However, the response does not adequately outline how these have been addressed. A summary of anomalies (as highlighted in Figure 1) in this response include:

- The details of the technical and safety assessment that resulted in O'Hanlon's lane being deemed the preferred route have not been shared
- O'Hanlon's Lane does not provide the highest quality of service from a road safety point of view as suggested in this document and falls on several road safety requirements and cycleway design standards
- The document suggest alternative routes were not selected due to having on-street parking.
 O'Hanlon's Lane has on-street parking
- The document suggests traffic free routes are an essential part of encouraging users.
 O'Hanlon's Lane is not traffic free
- The document suggests the narrowest point on the lane is 2.75M. A survey of the lane by residents found the narrowest point of the lane to be a width of 2.4M
- There document suggests wider widths can be achieved through "Minor Trimming". The
 hedges on southern end of O'Hanlon's lane have been significantly cut-back in recent
 months given spring and summer growth and the narrowest point of the lane measures a
 width of 2.4M

Figure 1: Source: Fingal County Council Response to the Public Consultation Comment -Highlighted anomalies in Section 3 through recolving cycling praining) then if the read network and driver behaviour is conducing to cycling, they will proceed to use the read for many journeys. We before the amonging preferred rooks for the Secolescobor Trail down O'Norloo's Lane will ye noted the best and select experience for all trail users, especially for less experienced cyclind including young o'Defan and mobility imposed users but will be reviewed as discussed in Section. **3** Response to Public Consultation Comments (Prepared by Clifton Scannell Emerson) a.a. we recovered. This section responds to the quaries and comments received during the public consultation proc. This section responds to the quaries are automatical with a corresponding responds to each of this quaries received. The responds you are discountered in the leave had already been considered or response further. ALLE Proposed Actions As part of the development of the next stage of the scheme and in response to the above observation, Proget County Council will review the Inflorming issues and increase the above observation, Proget County Council will review the Inflorming issues and Inspection in the Buddle for the speciation to An Board (Biggott)s. • The access point as the Dublin Read will include the widerings of the sisting freequent is a 3.7m wider therein surface surface which will locroses the mining difference and software reviews willing O'Nerdon's Lone costs the Cubin Read. • Institution of a videou beze on the Dublin Read opposite O'Nerdon's Lane to allow cars saving O'Nerdon's Lone terre great from the Lane. • The Junction at O'Nerdon's Lane and Essery's Stand will be suppreded in Incorporate a state access for all scens from O'Nerdon's Lane including a pedestrian toucan crossing once Biggetting. • Braind. examination. As need in the Public Consultation Questionnaire Analysis above, the majority of the respondents are in through of the proposed trust. There were a number of similar questions and comments received which we have grouped together and a single response is provided to address these comments in Section 3.3 below. All other queries and comments received are responded to in Section 3.3. 3.2 Grouped Observation // Comments The three main observations/comments are surrenarised as follows: A. The emerging preferred route does not adequately serve the historiand or the main common erous of Multi-lide Village. There is no connectivity between this scheme, the Swords/Multi-lide/Suzzon (SMS) Cycle Scheme and the Multi-lide Public Realm Statingy P31 3.2.4 Grouped Observation/Comment B "Sufery concerns were rissed in relation to the section of the emerging professed route slong O'Hoston's Lond for both units of the test and residents of O'Hoston's lond." Abstractive rootes in this section of the trial wire as sessed as part of the selection of the emerging preferred roots wing agreed risk-of and Chindron's Lace was assessed as the best connecting roots between the Duble Read and Essent's Brand. Review the emerging preferred route applion broshysis for Section 3 of the proposed route, in 3.1.5 Respecto ps Observation/Comment 8 As part of the assistanciar we have confidence all hysioble routs options from a Technical, Service testing non-Compression largest and Environmental perspectors. Of the route option reviewed O'Radean's Lane with the meet preferred routs applied under each of the assistances pitchis. The routs down O'Radean's Laine is identified as part of the event druck ordinates are provided as part of the event cycle and podestrian return to the current Propil County Council Development Paux. the routes through Mahabide Village as part of the detail design J.4 Symmery Fellowing our review of the comments and submissions above, further assessment is required as part of the detail design for the project in a number of areas. This includes the identified scious in supposes to the grouped observator (Section 13.1, 3.1.5.6.8.1.3.1) and the identified scious in response to the individual observations (Folds 13). This further isossement with the curried out as part of the detailed design for the project which will then identify the "Professor Rose Option" for the Evandenation Why this A. B.A. ELA/RS will do not be carried out on the "Professor Rose Option" which will form part of the application to Ag Board (Sepally, for the event) scheme. O'Hanlon's Lane route provides the highest Quality of Service, in particular from a Road Selecy, As O'Hanton's Lane does not allow through vehicular trailfic the volume of trailfic is minimal, serving local residencial houses only. This means that the number of vehicles using the laneway on a regular basis is low and the regionity of easy are familiar with the restrictions on the love. All of the alternative routes are through rouds with much larger staffic volumes (including learny verhötes) and <mark>motivos so-sirent parting,</mark> leading bays and higher average speeds which would noblemed heeting candidinan lor a proposed trait. These "hosting" institic conditions can and do relate self. Trait first arouses for an examental atomatic in accountaging at many people, july this vary young or vary inexperiences, its start cycling. Once cochdence is gained (deably

The Residents Association put forward that section 3 of the proposed route along O'Hanlon's Lane does not comply with road safety regulations and safety guidelines; with respect to passing distances, sightlines and detailed junctions.

Figure 2 below is an extract from Fingal County Council application Section 3 - R106 Dublin road, Malahide to Bisset's Strands. There are several anomalies (as highlighted in Figure 1.2) in this section of the proposed design, namely:

- The Southern end of the lane does not run for 140 Metres at a width of 3.5M
- The hedges on southern end of O'Hanlon's lane have been significantly cut-back in recent
 months given spring and summer growth and the narrowest point of the lane measures a width
 of 2.4M. This strongly suggests that a proposed width of 3.5M is not achievable by hedge
 trimming
- There are no civil infrastructure items proposed to address lighting inadequacies, user safety, traffic management, sight lines, parking, surface water management
- The document suggests the design has taken account of the National Cycle Manual for the purposed of signage and road markings. It does not reference the guidelines and standards outlined in this Manual for safety and user comfort.
- User projection provided by Fingal County Council suggest up to 1600 user per day. The
 documents suggest minor negative impact to residents exiting and entering driveways on this
 lane due to increased user volumes. This observation by Fingal County Council is not a true
 representation of the significant safety risk presented to users and residents by such projections

Section 3 - A105 Dublin Road to Bigggg Frand 2.5 1<u>Cratenionic. Lane</u> as a cul-do-sac with bollards installed mid-way so restrict general through traffic.

There are 14 existing entrances ento this section of O'Hamber's Lane.

Orizon I Line comprise of LIOn of 3 km and a polystrian, cyclin and vehicular strend street, 10m of 7 km wide cyclin and vehicular shared street with floographs on both pides, 100m of 5 km wide polystrian, cyclin and vehicular shared street, driveway entrances to private residencial properties as vehicular school streeting.

Broadmaadow Way Strange 2 Oscheme Description 202.5.2

(hand, of the proposed divelopment will be directed along O'Harlon's Lane as the volume and speed of vehicular traffic at this location is low, due to the residential nature of the road, and narrow road widths.

2.5 There are 1 rumber of sectors where the width avertable to traffic a restricted by heage growth from private properties area the public read, it is proposed to from not needed which is a maximum the syntable which (see Design Drawing 13m160-134 in Appendix 1).

2.5. <u>Authors that</u> road sidens to 7.5m it is proposed to use the sainting focupant for podestions, and cycles would share the carriageousy with valides. <u>Naturalize and institutions of institutions of institutions of institutions of institutions.</u>

2.5.5h is proposed to resurface the narrow northern part of the land as there is some damage to the subting road surface here. It is also proposed to install road markings and signage, in accordance with the language for the part of the language.

2.5 GR is proposed to upgrade and realign the junction of O'Hanlon's Lane and Biggog Strand (see Design Drawing 12-160-256 in Appliedix I).

2.5. The anisting junction beyond is relatively wide have [13m acids let the narrowest location] with no facilities for pedestrians or cycliss. There are a number of private entrances including the entrance to \$1 jpg/, apartments collising this junction.

2.5 6The southern Lark fine is proposed to be realigned to reduce the contegency width to 6.5m ands, about the formetion of a new entrance and provide space to construct new podestrian and rycket facilities, including a controlled cressing (see Design Drawing 12-160-256 in Appandix 1).

2.5 SA new corboiled treating will be installed on Bisset Strand Road to access the green area on the northern side of Equips, brand Road. It is also proposed to extend the existing car part facilities on the northern side of Bisset Strand Road.

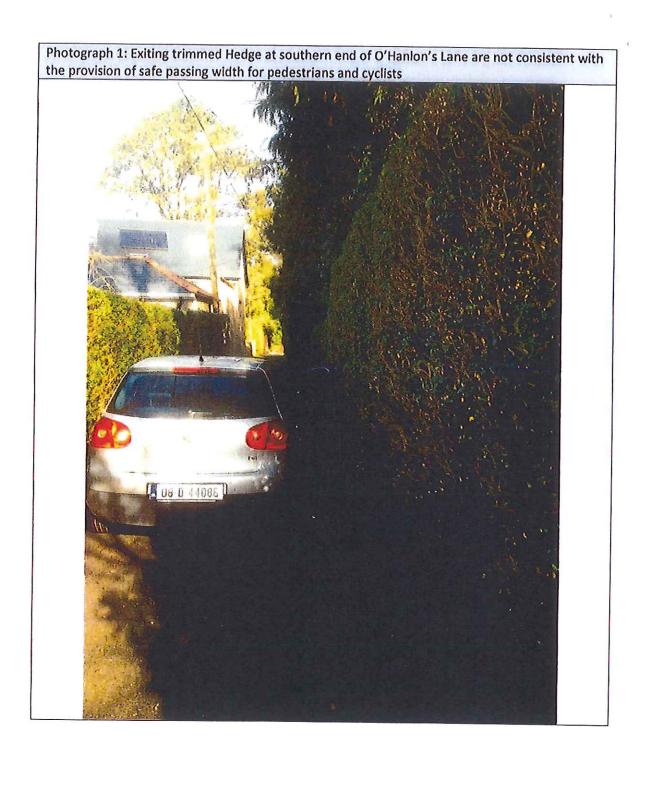
Broadmeadow Way Volume 1: Non-Technical Summary

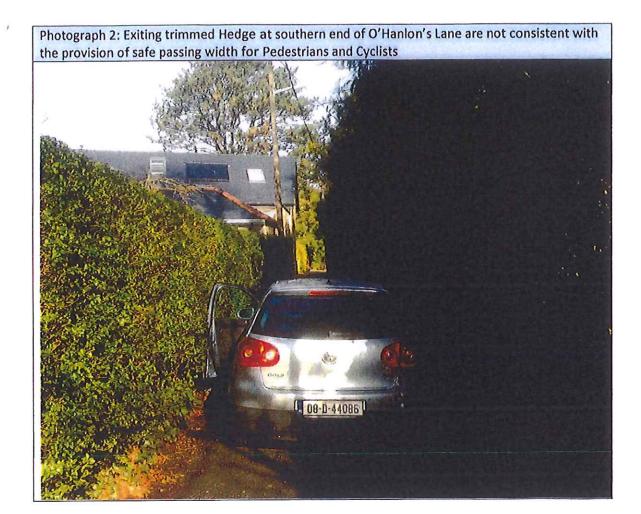
4.2 Residential and Journey Ameniny 4.2.1 The proposed greenvey will be a very significant positive amenity for both residents of Malahide and for users. Even for non- or infrequent users, there will be prospective benefits in terms of sanse of place and place attachmant. Some inconvenience may arise from higher podestries livels in the centre of Matshide, aspecially on summer weekands. However, this can be midgined strough implementation of spects of the Public Resets Strategy which includes proposate for write carrier, some inconvenience will also be placed on local drivers by plansand crossings, namely at the R104 Dublin Road and on Hostrae Road, noting the high level of projected use.

tive Movemen, a proportion of users will arrive via \$55,555 Send Read and so emit the former crossing. The proposed signatised shurds system for the rathery underbridge here is on-demand and so will introduce only slight delays for delivers. Not he transparent will provide a slight positive invade on the contract of the introduce and provide a slight positive invade or delivers, and cycling delivers and intercent slartly, including people cycling generally and not specifically for the proposed greenway. The same error-generals people of Contract Conspany and contract people of the contract provides a modernic positive amening impact for all read users compared with the safety of the training situation.

4.2.1 O'Norion's Lose is a public Leneury. There mid be an increased flow of podestrung and syristic visibility that lenevry. It may be perceived that this sédiment accounty may let also a mode negative impact by may of economistics at habitic account as private preparation in this southern and service impact by may of economistics at habitic account a private preparation in this southern and cerval sections of the read. However, it may also be said that theirs will be an amority bounds by may of direct connection to the proposed greening and its follows. An increased served of peaching investigation will also be introduced by the higher their old use of the lange and changes to the proction with figures, found to improve access and safety. Exprage may also be arricated asking users to respect residents' privacy. Consequency, as a result as everall neutral residual impact is anticipated hote.

Outlined below are Photographs 1 & 2, showing hedgerows at the southern end of the lane where hedge trimming is proposed. The photographs demonstrate that these hedges are already well maintained and trimmed back regularly by residents.





1.2 Compliance with road safety

The Residents Association put forward the design and treatment as set out in the aforementioned Figure 1.2 is not suitable for the proposed use and presents significant safety issues for both residents and proposed users. To address concerns in this regard, the residents conducted a ground survey of O'Hanlon's lane to establish compliance with road safety standards. The survey addresses the following items which require consideration in the proper planning of the proposed Greenway:

- A- Safety at the Southern / Malahide Road End of O'Hanlon's Lane
 - Dimensions of existing junction and current non-compliance with road design recommendations
 - o Inadequacy of road junction for current traffic
 - o Fire tender and ambulance access
- B- Safety at the Northern /Estuary end of O'Hanlon's Lane
 - o Failure of Junction

Summary observations and conclusions of Survey:

- Junction at southern end O'Hanlon's Lane to Malahide Road fails in all design criteria and is not suitable to be designated as the official singular access route to the proposed Broadmeadow way. It could by way of improvement contribute as part of a multi-access point approach.
- Junction at northern end of O'Hanlon's Lane has been underestimated in its complexity. It fails as part of the proposed Broadmeadow Way because it is an integral part of a route planned over O'Hanlon's Lane which as defined in 1 above already fails. It also fails in all design criteria when the additional projected users join with the already increased vehicular traffic and pedestrian and cycle traffic. It fails because it incorporates six different blind spots. A new design is required for this junction.
- 3 Traffic circulation in the lane is currently by way of two cul-de-sacs which allow certain safety features in a very restricted area. The addition of designated cycleway traffic in both directions alters these already necessary safety features and establishes two-way through road traffic. The entire circulation fails when considered in this way.

Further details of the survey analysis and findings are outlined in the sections A and B below. Please note, supporting measurements and drawings for survey are contained in appendix I.

Survey Section A: Safety at the Southern/Malahide Road End of O'Hanlon's Lane:

Preposition A1 - The dimensions of existing junction is not compliant with road design recommendations

Image 1 below is taken from Google Maps to show the existing junction at the Southern/Malahide Road end of O'Hanlon's Lane.

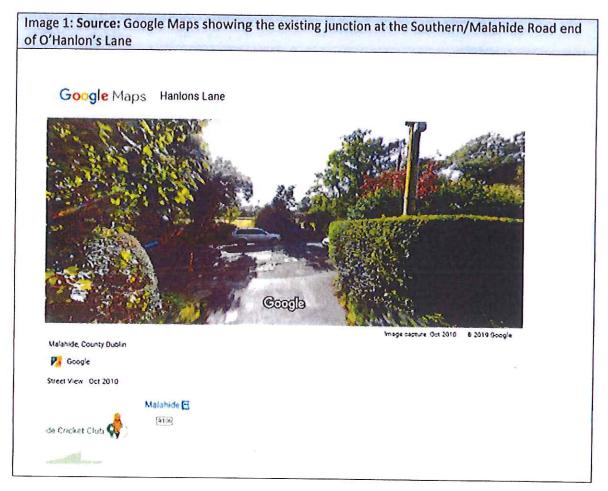


Figure 3 below is taken from the RSA guidelines on road design for junctions where a minor road meets a major road. Also, the extracts give the recommended design sight lines and main road design speeds.

Dimensions of existing junction when considered as minor road to major road in accordance with the IEI design for roads recommendations and the RSA design for geometric junctions recommendations are summarised as:

X = 0

Y = 14

Width of Minor = 2500mm

Figure 3: Source: RSA design for geometric junctions recommendations

5.6 Geometric Design of Priority Junctions on Single and Dual Carriageway Roads

5.6.1 General

This section outlines the geometric design properties and features to be considered in the design of priority junctions and accesses associated with single and dual carriageway roads.

5.6.2 Design Speed

Geometric standards for junctions are related to the traffic speed of the major road, and for new roads this is the design speed as defined in DN-GEO-03031.

5.6.3 Visibility

5.6.3.1 General

Traffic from either a minor road or direct access has to join or cross the major road when there are gaps in the major road traffic streams. It is therefore essential that drivers emerging from a minor road or direct access shall have adequate visibility in each direction to see the oncoming major road traffic in sufficient time to permit them to make their manoeuvres safety. The visibility requirement for drivers emerging from a minor road or direct access is to the high object (1.05m) on the major road as defined in DN-GEO-03031. This concept also applies to major road traffic turning right into the minor road or direct access. For Dual Carriageways, egress out of left in/left out junctions and accesses only requires visibility to the right.

5.6.3.2 Minor road/direct access

The required visibility parameters to be determined by the designer for drivers approaching a junction with a single or dual carriageway road from a minor road or direct access are outlined in Figure 5.15a and b.

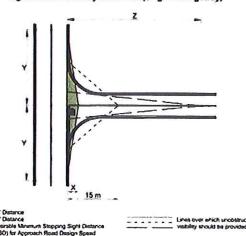


Figure 5.15a: Visibility Standards (single carriageway)

The existing junction at the southern/Malahide Road end of O'Hanlon's Lane does not meet any of the design requirements for width of a minor road, sight lines for traffic from the minor road, traffic sight lines from the major road to the minor road.

Preposition A2 - The junction currently fails in traffic management

Currently it is not feasible for two vehicles to pass over the first 35m of road from the Malahide Road end as it descends on a grade of 12% from the top to a point 38m into the lane. This fails road design criteria as indicated by the IEI and RSA guidelines for design of roads. Therefore, the addition of a combined traffic and cycleway over this part of the road is designing in a feature which fails all design criteria and therefore will fail and is hazardous.

There is an element of common sense required in looking at the fact that O'Hanlon's Lane emerges onto a T-junction with the main Malahide road which is heavily trafficked. There is no way to properly protect cyclists or pedestrians exiting into this traffic with potentially fatal consequences. This junction

is completely unsuitable for the proposed combination cycleway with Malahide Castle as the destination.

There is no gateway to Malahide Castle at the top of O'Hanlon's Lane. Therefore, cycle and pedestrian traffic would have to be diverted either left towards the Hogan's Gate entrance or right towards the smaller Yellow Walls Road entrance. In selecting which way to direct cycle and pedestrian traffic, consideration would have to be given to; corralling the cycle traffic either along the northern footpath and adding some sort of safety railings, or by taking part of the main Malahide road as the corralled area and separating the cycle traffic from the main traffic. Neither option is suitable because either the already heavily used footpath will become compromised and dangerous or the roadway will be narrowed to such an extent to cause passing problems with oncoming traffic.

There would also be a requirement for a lift or drop barrier at the edge of the footpath to the top of O'Hanlon's Lane. This would be a multiple user barrier controlled by a telemetric (and likely expensive) operating system, such that the barrier could be disengaged for residential users, visitors, and all service/utility vehicles. The Residents Association put forward that common sense suggests that the T-junction at the top of O'Hanlon's Lane does not work from a separation design criterion.

Preposition A3 - The Design does not account for Fire Tender, utility, and ambulance access requirements

O'Hanlon's Lane requires access from both ends for fire tender access as the lower end to the Malahide Estuary end regularly floods to the pinch point of the bend at that end. Therefore, any adjustment of O'Hanlon's Lane for combined cycle and pedestrian traffic access must maintain the ability for fire tender and ambulance to access from the southern/Malahide Road end. It also needs to accommodate utility and service vehicles.

When a delivery truck or service truck of any kind enters the laneway in its current state there is not sufficient room for a pedestrian to pass that vehicle. The width survey of lane (outlined in appendix I) shows that over the first 28m the combined width of roadway/footpath is less than the recommended minimum 3m. The addition of a low number of cyclists (example 5 cycle users) along this section of the lane will cause an impasse. If the cyclists have entered the narrow zone from the northern end and a vehicle enters the lane form the southern end, then the cyclists will have to stop reverse out of the way and possibly lean into hedges to allow the vehicle to pass. For cyclists and pedestrians who are not familiar with the lane this could prove to be extremely dangerous and very likely to cause an accident.

Figure 4: Source: EuroVelo - European Certification Standards – Width requirements for Category I and Category routes with Motorized traffic

| > 5m (route components with motorized traffic as well as without) | category I |
|--|--------------|
| 3m - 5m (route components with motorized traffic as well as without) | category II |
| 2 - <3m (usually route components without motorized traffic) | category III |
| <2m (usually route components without motorized traffic) | category IV |

If the route is running on public roads with motorized traffic, the available space will be evaluated in relation to traffic load as well as speed limits.

In designing a suitable management system to cater for current traffic, utilities and deliveries, and the addition of a possible peak flow of cyclists (Example a school tour) consideration should be given to firstly that any such system is a compromise of design criteria because the junction does not work, and secondly in considering the overall economics of the project there may be a better alternative. Suggestion relating to alternative routes are outlined in section 8 of this submission.

Summary of conclusions with respect to safety at the Southern/Malahide Road End of O'Hanlon's Lane are outlined in 1-5 below:

- 1. Junction at O'Hanlon's Lane to Malahide Road is currently sub-standard in its current state.
- 2. The improvement works suggested in the May 2019 study by Fingal County Council will not make the junction functional.
- 3. The study by Fingal County Council of the junction and the control measures for safety as it relates to the future proposals are insufficient and in fact make an already dangerous junction even more dangerous.
- 4.The first 30m of O'Hanlon's lane is less than the width of a single lane carriageway and is therefore unsuitable for the proposed combined cycle pedestrian vehicle. This measurement of this section as defined in the width survey (appendix I) falls below the min design criteria of 3500mm. This section has capacity for managed traffic applications. The addition of the proposed Cycleway to this section of the lane would require advanced traffic management and telemetric installations and there are no such proposals put forward by Fingal County Council.
- 5. There is no realistic or practical design that allows for proper corralling and separation of the cycle traffic to enter and leave Malahide Castle in a safe way, considering the current design criteria from IEI and RSA. The Junction fails in swept path analysis, sight line analysis, width analysis, carriageway separation, cycleway separation and pedestrian separation. The proposed improvements are completely inadequate and fail the criteria as in its current state.

The junction and narrow part of O'Hanlon's Lane being a 35m less than single lane, with its average width as 2760mm section, arriving onto the dual lane Malahide road to a T-junction with no access to the destination, Malahide Castle, is not fit for purpose and is certainly not fit for expanded purpose.

Survey Section B: Safety at the Northern /Estuary end of O'Hanlon's Lane

Preposition B1 – The safety aspects of the northerly junction between O'Hanlon's lane, Bissett's Strand, St. Ives and Bissett's Strand Upper causeway are already failing in the design of this junction.

Image 2 below provides an overview of the northerly junction between O'Hanlon's lane, Bissett's Strand, St. Ives and Bissett's Strand Upper causeway.



The planning of the junction upgrade as referenced in drg 12-160-256 considers only two roadways when in fact there are four. It also considers the combined walkways as insignificant but there are in fact five combined walkways merging at the junction. The planning also considers this junction as part of a scheme which considers O'Hanlon's Lane as part of the Broadmeadow Way but it has been put forward in Section A of this survey, that the southern end of O'Hanlon's Lane will not work and fails all design criteria.

The National Cycle Manual sets out the requirement to identify the potential conflict per Figure 5 below.

Figure 5: Source: National Cycle Manual - 1.3.1 Identify the Potential Conflict

1.3.1 STEP 1 · Identify the Potential Conflict

Review the junction or situation to identify possible conflict areas for all different modes of transport.

Consider in particular:

- What is the "actual" usage pattern of the road as opposed to its Function and Design – especially regarding inappropriate speed, position and direction?
- The individual movements of different modes of transport and how they interact
- Standard hazards such as horizontal and vertical clearances, street furniture etc
- Possible errors of judgement by cyclists and other vulnerable users
- Database of accidents
- Available traffic information (e.g. An Garda Stochana, traffic wardens, control centre operators, etc.)
- Cycleability Audit undertaken jointly with cycle users and stakeholders (e.g. CRISP, Cycle Route Implementation and Stakeholder Plan, from the UK)

Therefore, fundamentally this junction does not work because it is regarded as part of a failed system. It implies that by encouraging the Broadmeadow way traffic into O'Hanlon's Lane then this junction can be made safe. This safety of this junction must be considered as it is, and not part of the proposed Broadmeadow way.

In practical terms O'Hanlon's Lane will be used by cyclists and walkers who are, or get, familiar with its effective short cut to and from the Estuary and Malahide Road. This will have to be accommodated in any event but not by designating the lane as the preferred access route. It is by reason of the obvious

lack of safety standards on the laneway that bollards have been installed in the middle of the laneway to make it two cul-de-sacs rather than a through road and thus mitigate the safety failures.

The current proposal redefines the lane as part of the Broadmeadow Way and comprises the functioning of the cul-de-sac approach, such that it becomes a two-way carriageway. In this way all the design criteria fail.

In examining the junction as part of a strategy whereby O'Hanlon's Lane becomes one of many access routes to and from the proposed Broadmeadow Way, then the following observations as set out in points 1 - 4 below are relevant to the proposed junction.

1.The difference in elevation between the current Bisset's Strand and the upper Bisset's Strand Causeway/pathway is 1.38m measured at the point of the entrance to the junction using a swept analysis design point as the start of the curve. This leads to a blind sight line for motorists approaching in the same direction (i.e. approaching west from Malahide along Bisset's Strand and turning left onto O'Hanlon's Lane or entering St. Ives or turning onto the upper combined pathway/roadway). Residents and regular users have had several near misses in taking this junction.

The problem is further compounded by the height of the hedging at the eastern corner of the junction which rises a further 1.6m. The combined effect of layout, obscuring hedging as the junction becomes busier is a complete failure of the junction using IEI and RSA guidance techniques. The Residents Association put forward that routing high volumes of cycle and pedestrian traffic through this junction will present a very risk of serious accidents.

2. The proposed design locates the Tucan crossing approximately 8m back from the main exit and its position fails to take into account that this junction, despite being small is in fact a five-way junction.

The junction must address each of the five access and egress points and not just the crossing of the Bisset's strand. As the proposal stands the combined roadway cycleway of O'Hanlon's Lane meeting the combined roadways and pathways and entrances make this junction fail in almost all criteria with reference to sight line, swept path particularly from Upper Bissett's Strand Causeway, separation in all directions and creates a new blind spot for emerging cyclists coming eastwards from Bisset's Strand.

- 3.The elevation of O'Hanlon's Lane to the southern end is +4.9m. with an average slope of 12 degrees. Therefore, when considering the junction, a run off effect must be taken into consideration. This has not been addressed in the current proposal of the junction. An average person on a bike travelling from the southern end of the lane to the northern end and not applying brakes will be travelling at almost 20k/h with a further instant acceleration over the last 10 m of the junction bringing their potential speed to 30km/h. The junction design must include the run off and therefore be extended over the full distance of the junction i.e. 26m incorporated in the junction.
- 4. The junction at the Northern end of O'Hanlon's Lane needs a safety management design applied to it quickly, regardless of the Broadmeadow way. The current study of the junction by Clifton Scannell Emerson is inadequate and does not take all the criteria into account. This need to be revisited and redesigned.

The Junction fails in its current state and fails in its proposed state.

RSA guidelines

FAIL

IEI Guidelines

FAIL

User Experience

FAIL.

Section 2 - Risks / Hazards to proposed users and residents

2.1 Sight Line Hazards

The consideration of risks / hazards to proposed users and residents are not referenced or suitably addressed in the proposed design. The Residents Association put forward that sight line hazards are not suitably addressed per the standards in the National Cycle Manual, see figure 6 below:

Figure 6: Source: National Cycle Manual - Section 4.4.1.1 - Designing for the Bicycle Eye Contact

4.4.1.1 Critical Cycling Issues at Junctions

Merging and splitting

Merging and splitting facilities that are located close to junctions increase the junction's complexity. They can generate turbulence within the traffic system, and may increase the risk of accidents. While merges and splits are standard design on primary distributor networks, they should generally be avoided in urban areas intended for bicycles.

Side Swipe

Side swipe can occur with weaving vehicular traffic. Examples include left hand slip lanes, multi-lane one-way systems, merges and splitting, as well as dual entry and dual circulating roundabouts, and can also include poorly designed bus stops and loading facilities.

At low speed, side swipe can result in oblique collisions, generally involving material damage only to the vehicles. However, side swipe may be far more consequential if cyclists are involved in weaving traffic.

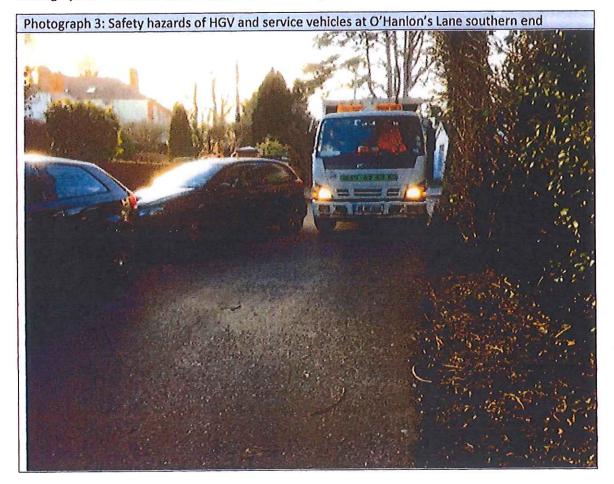
Inherently, the appropriate or expected cycle position may not be clear to cyclists or to drivers, resulting in unpredictable, illegible and potentially hazardous situations.

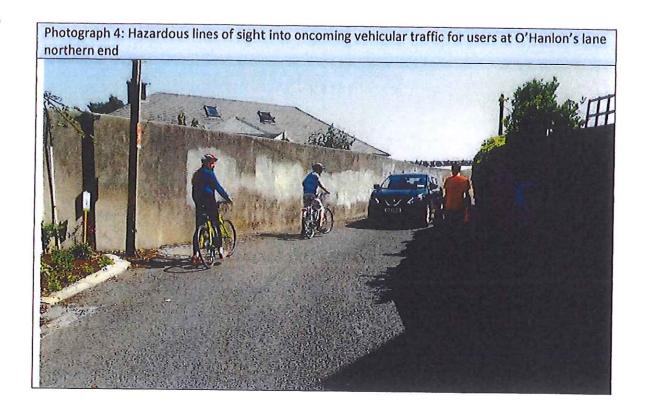
Eye Contact

Eye contact between cyclists and drivers is essential for the safety of cyclists at junctions. Proper eye contact between cyclists and drivers allows them to communicate their intentions to each other.

Junction layout that preclude or reduce the opportunities for proper eye contact should be avoided. The most common failure is at two-lane entry from side road or roundabouts where the desired line of sight is inevitably obstructed by the vehicle in the outer emerging lane. Equally, at oblique or Y-junctions, the oblique angle will make it very difficult for drivers to see the approaching cyclist.

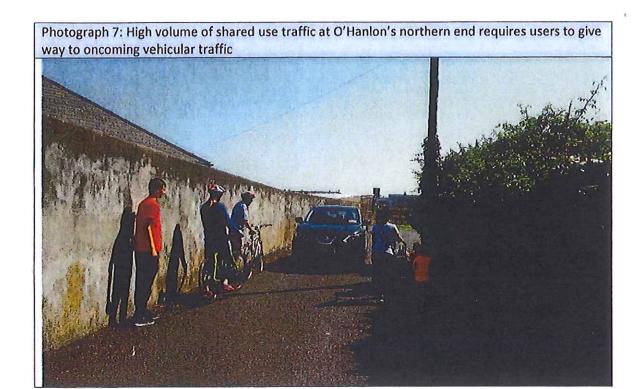
Photographs 3 - 12 below illustrate some potential sight line hazards.





Photograph 5: Hazardous lines of sight into oncoming vehicular traffic for users at O'Hanlon's lane northern end

Photograph 6: High volume of shared use at O'Hanlon's requires users to give way to oncoming vehicular traffic

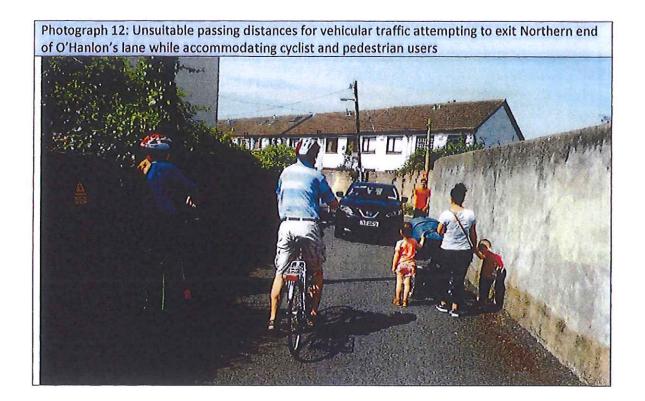


Photograph 8: Narrow blind 5-way junction at Northern end of O'Hanlon's lane — High concentration of users at this point where an apartment complex exits onto pedestrian footpath

Photograph 9: Narrow blind 5-way junction at Northern end of O'Hanlon's lane – High concentration of users at this point where an apartment complex exits onto pedestrian footpath

Photograph 10: Hazardous lines of sight for vehicular traffic attempting to exit Northern end of O'Hanlon's lane while accommodating cyclist and pedestrian users

Photograph 11: Hazardous lines of sight for vehicular traffic attempting to exit Northern end of O'Hanlon's lane while accommodating cyclist and pedestrian users



2.2 Risk of "Popping Out"

O'Hanlon's Lane Southern end is lined with mature hedges right to the point it meets the footpath along the Malahide/Dublin Road. There is no opportunity for the projected high volume of cyclists egressing from this end of O'Hanlon's lane to see / anticipate passing vehicular traffic on the road or pedestrians on the footpath.

This presents a significant risk of "popping out" onto a busy vehicular and pedestrian route. Incorporating such blind spots is not good cycleway design as outlined in per Figure 6 and 7 below

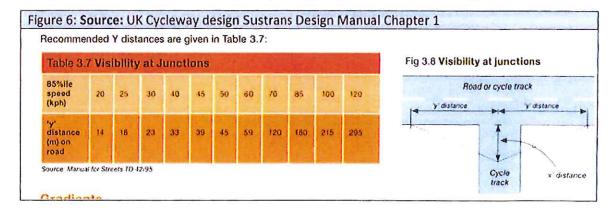


Figure 7: Source: National Cycle Manual - Section 4.10.1 - "Pop out of nowhere"

4.10.1 Principles of Sustainable Safety

Legibility

The design should ensure that the bicycle does not "pop out of nowhere" into the middle of traffic, or a pedestrian environment. Rather, the change in direction of the bicycle through the transition must be designed so that it anticipated and understood by the other road users, as well as the cyclist.

If the transition re-introduces cyclist into a traffic situation, there are two legibility-related requirements:

- physical protection for the cyclist the cyclist must be physically protected until safely established on their new alignment
- zone of re-establishment between the cyclist and the adjacent traffic this is a zone for both the cyclist and the traffic to settle into their relative positions after the transition, before any weaving or turning conflict presents itself. This zone should generally be 20m long

If the transition introduces cyclists into a pedestrian situation, it is important that the transition is well-signed (i.e. no surprises for either cyclist or pedestrian), and that it is clear that the pedestrian has priority within the shared environment.

Similarly, the cycle exit from the shared space should also be obvious, especially to the cyclist.

The transition should serve to ensure that the cycling arrangement (especially speed) is compatible with the receiving environment.

2.3 Gradient risk to users

The southern end of O'Hanlon's lane descends from the Malahide/Dublin Road on a grade of 12% from the top to a point 38M into the lane. This presents an inability of cyclists to stop in a timely manner to avoid hazards such as young child or vehicles egressing from residents' driveways. This has not been addressed in the design and does not consider the proper design for entrances and driveways as set out in the National Cycle Manual, see Figure 8 below. This risk is particularly pronounced on this 38M sections where there are no footpaths; egress from these properties is directly into the path of cyclists travelling downhill.

Figure 8: Source: National Cycle Manual - Section 5.4 - Entrances and Driveways

5.4 ENTRANCES AND DRIVEWAYS

This sections deals with the proper design of cycle facilities past entrances to private properties.

5.4.1 Design Principles

Legibility

The cyclist passing the gate, as with pedestrians, always has priority over access or egress traffic. Specifically, the designer should avoid the use of vehicular aprons.

Functionality

Entrances should be designed in such a way that vehicles can safely enter and exit the property, without comprising the cycling or pedestrian function. Specifically, the cycle and footpath facility should be continuous across the entrance and not 'dipped' at the crossover. This will reinforce the legibility above.

Homogeneity

Due to the inherent conflict in direction, it is essential that vehicular speeds are minimal when turning in or emerging from a driveway.

2.4 HGV, cars and cyclists in theatre

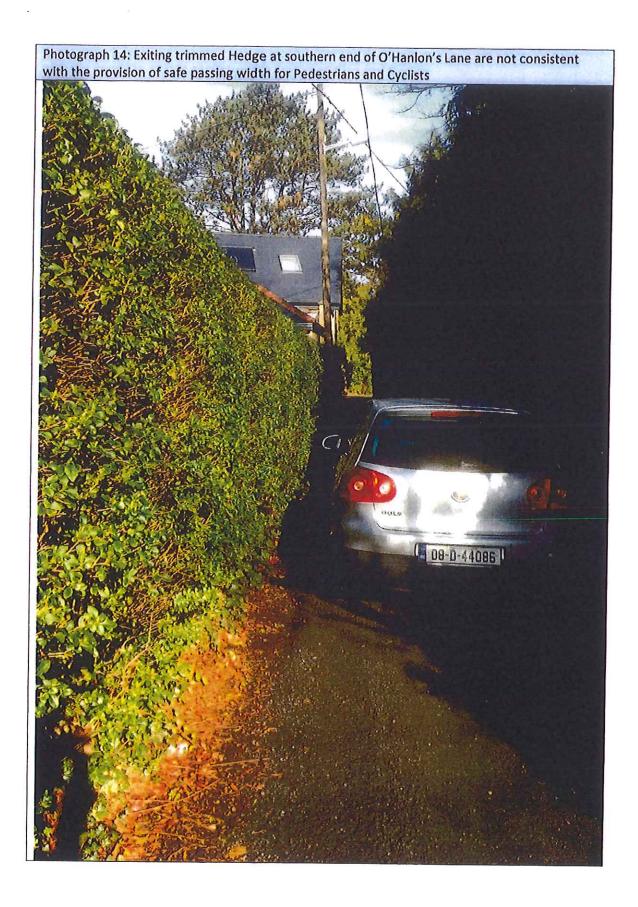
The design proposes a shared section for vehicular traffic (including HGVs), cyclists and pedestrians at both the southern and northern ends of O'Hanlon's lane.

These shared sections present insufficient passing distances resulting in the need for HGVs to reverse through blind corners and vehicular blind spots for cyclists that may be abreast of the HGV. This risk was put forward in the consultative submission by O'Hanlon's residents in 2014 but has not been reasonably addressed in the council's response (refer to Figure 1 above).

Photograph 13 & 14 below illustrates insufficient passing distances. This illustration would be further compounded by oncoming HGV traffic.

Photograph 13: Exiting trimmed Hedge at southern end of O'Hanlon's Lane are not consistent with the provision of safe passing width for Pedestrians and Cyclists

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Section 3 - Traffic Management Planning

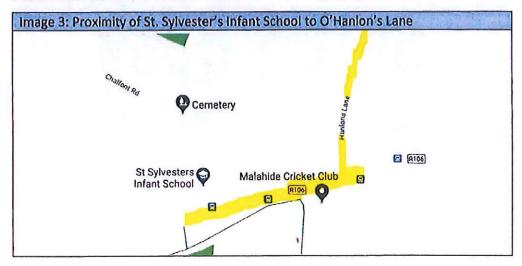
There are projections provided by Fingal Country Council of significant increases in the usage of O'Hanlon Lane by pedestrian and cycle users of up to 1600 users per day.

3.1 Traffic Management Assessment

Scale of projected increase in usage would warrant a comprehensive traffic management assessment and plan. The application does not contain a detailed proposal on how these increased user volumes will be managed in the interest of the safe transit of these users.

3.2 Impact on school children

The application does not reference any consideration given to the impact increased users will have on children attending St Sylvester's infant school. Currently there are several hundred junior school children passing the southern end of the lane each morning and afternoon on schooldays. Image 3 below illustrates the proximity of this School to O'Hanlon's lane.



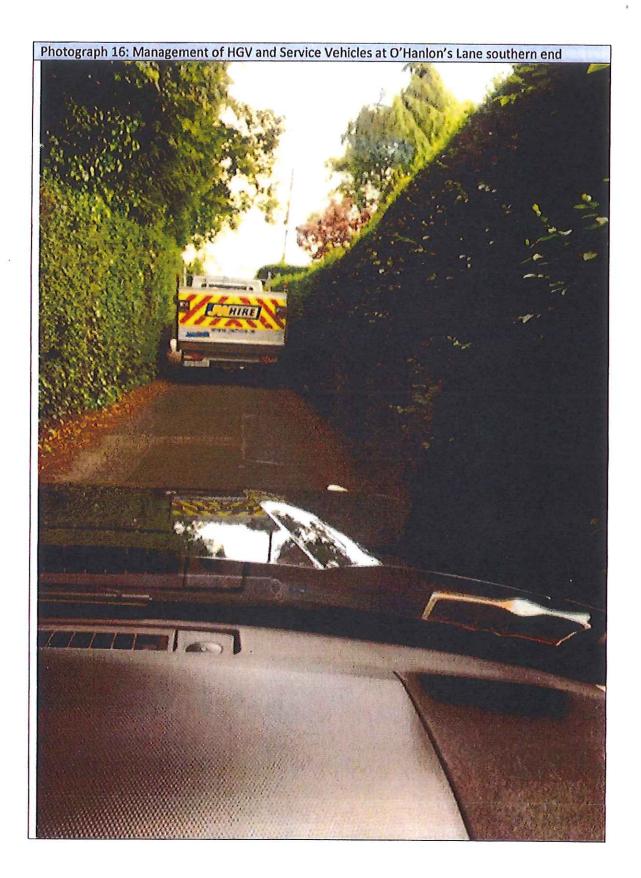
3.3 Impact on service vehicles

Due to the width restrictions, the lane is not accessible by vehicles of a certain size. For example; reduced sized refuse collections vehicles and deliveries vehicles are required to service the lane. The fact that reduced size vehicles are required for this lane indicates that turning large vehicles on the lane is challenging and presents hazards.

Despite the established constricted nature of the lane there is no traffic management consideration in this design that addresses how these vehicles can continue to service the residents of this lane in theatre with a 1000-fold increase in pedestrians/cyclists.

Photographs 15 & 16 below provide illustrative examples of these challenges that have not been addressed in the design.

Photograph 15: Street parking is an established norm for visitors and those working at or delivering to households on the lane.



3.4 Traffic management and planning decisions

The proposed increased volume of users is not consistent with previous decision by Fingal County Council with respect to planning applications. Several planning applications by residents of the lane have been rejected or had conditions placed on them on the grounds that the lane is not suitable for increased traffic volumes.

3.5 Delays/Tailbacks

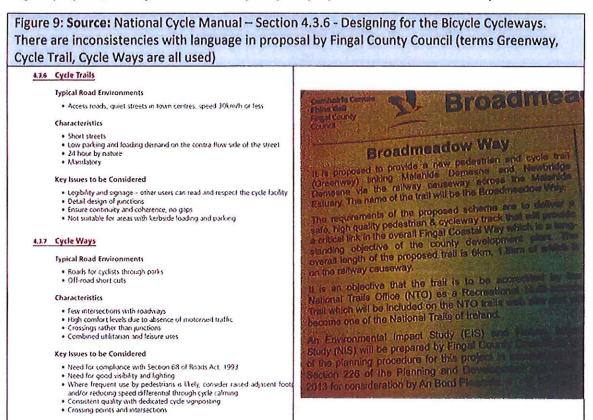
Traffic management (controlled signals) at Bissett's strand and Dublin Road will cause significant delays/tailbacks to commuter traffic accessing Malahide village and will present challenges to residents entering and exiting drives along this section of the proposed route.

4.0 - Consideration of Greenway design standards

The design of the Greenway does not follow the best practice Greenway design principles as laid out in either EuroVelo or Irish Cycle Manual

4.1 Clarity on nature of amenity being proposed

The Residents Association put forward that the categorisation of the Cycle Way/Cycle trail/Greenway being proposed by Fingal County Council is not clear as several of these terms are referenced in the original proposal, See Figure 9 below comparing the proposed text to the National Cycle Manual.



4.2 Definitions of Cycleways

Figures 10 to 12 below provide definitions of Greenway. The design of Section 3 of the proposed Broadmeadow way is not consistent with the requirement set out in these definitions.

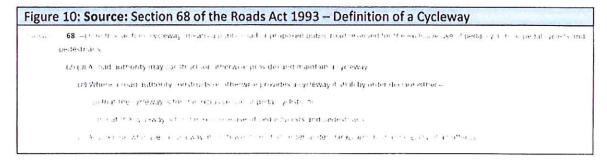


Figure 11: Source: Greenways and Cycle Routes Ancillary Infrastructure Guidelines - Definition of Greenway

The purpose of these guidelines is to

- Support the development and enhancement of Greenways and other cycle Routes by identifying and sharing ancillary infrastructure best practice amongst Route designers;
- Ensure Route designers provide a pleasant, coherent, and consistent Route user experience.





1.1 Definitions

A Greenway is presented at problem to consider to one of a deposition of the constraint of the proof of a problem of a superior of the constraint of the con

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make i flavour grade-flavour Hombie our province a fer to be in the following person in the interarchitecturing years auto-

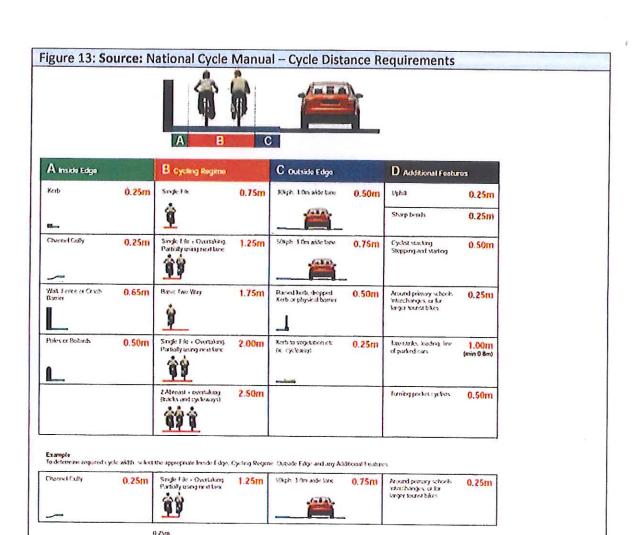
Figure 12: Source: EuroVelo - European Certification Standards - Definition of Greenway

2.2.7 Greenways

Greenways are route sections exclusively dedicated to pedestrians, skaters, cyclists and all other non-motorized traffic with a special legal status in France, Spain, the UK and Belgium. Signalisation indicates to users that the section in question is dedicated exclusively to non-motorists.

4.3 Passing Distances

The design of the proposed Broadmeadow way does not meet to the best practice passing distances standards for each of the following; shared lanes, accommodating HGVs, near schools and uphill, as outlined in Figures 13 to 16 below.



= 2.50m. Note The return mention with for an energy cycle time. Cycle tarks can be wider

Required width

Figure 14: Source: UK Cycleway design Sustrans Design Manual Chapter 1 – A shared lane width of at least 3.3M is suggested. This width distance is not available at the southern end of O'Hanlon's lane.

Figure 2.2, adapted from Manual for Streets, provides an indication of what various carriageway widths can accommodate at low speeds (though not necessarily recommendations) and Figure 2.3, taken from the Cardiff Cycling Design Guide, provides guidance on the size of vehicles that various traffic lane widths can accommodate. Further guidance on traffic lane widths is given in Manual for Streets 2.

Figure 2.2 Indicative carriageway widths for various traffic compositions at low speed (adapted from Manual for Streets)

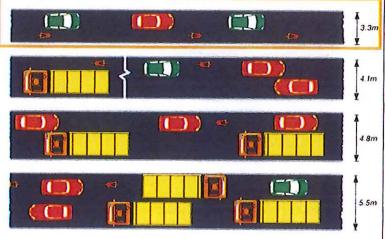


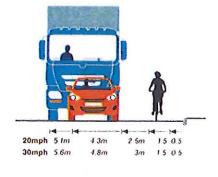
Table 3.2 Overtaking by motor vehicles

Minimum passing distance from cyclist's dynamic envelope

20mph tm

30mph 1.5 m

Fig 3.4 Width required for car/HGV at 20mph/30mph to overtake a cyclist in secondary riding position



 on steep gradients where cyclists travelling uphill may wobble and need to overtake each other and where downhill cycle speeds are high.

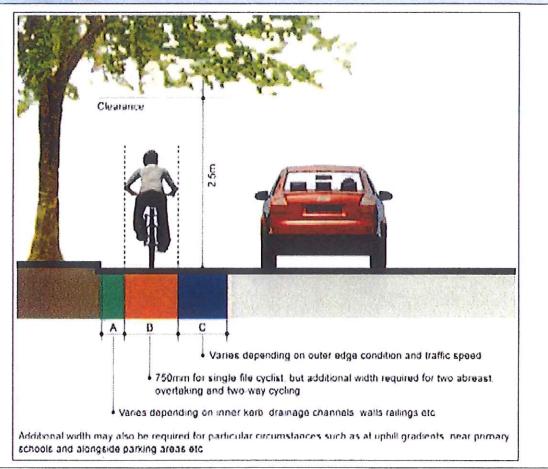
Where a cyclist is overtaken by a motor vehicle drivers often pass more closely than is comfortable. Minimum recommended passing distances are dependent on vehicle speed, as shown in Table 3.2.

To achieve these clearances, the total minimum width required can be calculated as shown in Table 3.3. The widths required for a car or HGV to overtake a cyclist in secondary riding position are shown in Figure 3.4 and Table 3.4

| | ole 3.3 Calculation of minimum width required: naturn width = a+b+c+d |
|---|---|
| a | dynamic width |
| b | minimum passing distance from other users (Table 3.2) |
| c | clearance for edge constraints (Table 3.1) |
| d | additional width for high cycle/pedestrian volumes, steep gradients, curves |

| Table 3.4 Total width required for overtaking | | | |
|---|-------|--|--|
| Car passing at 20 mph | 4.3m | | |
| Car passing at 30 mph | 4.8m | | |
| Bus/HGV passing at 20 mph | 5. tm | | |
| Bus/HGV passing at 30 mph | 5.6m | | |

Figure 16: Source: National Cycle Manual – Additional width recommended in vicinity of schools and uphill. These considerations should be applied for the design of the southern end of O'Hanlon's Lane



4.4 Greenway Branding

"Greenway" is referenced in the proposal by Fingal County Council. The "Greenway" brand carries a standard that encourages tourist to engage with such tourist amenities. However, if the design is not in compliance with Greenway requirements it is not clear if and how Fingal County Council can access this brand.

Figures 17 to 19 below outline the required design standards for use of the "Greenway" brand.

Figure 17: Source: Irish Trails - Design and brand guidelines - Definition of a Greenway

Definition of a Greenway

A Greenway is a recreational or pedestrian coindor exclusively for nonmotorised journeys, developed in an integrated manner which enhances both the environment and quality of life of the surrounding area. These routes should meet satisfactory standards of width, gradient and surface condition to ensure that they are both user friendly and low risk for users of all status.

Figure 18: Source: Irish Trails - Design and brand guidelines — Greenway brand mark may not be permitted as the proposed development does not qualify as a Greenway under the definition set out by Irish Trails.

Greenway brand mark

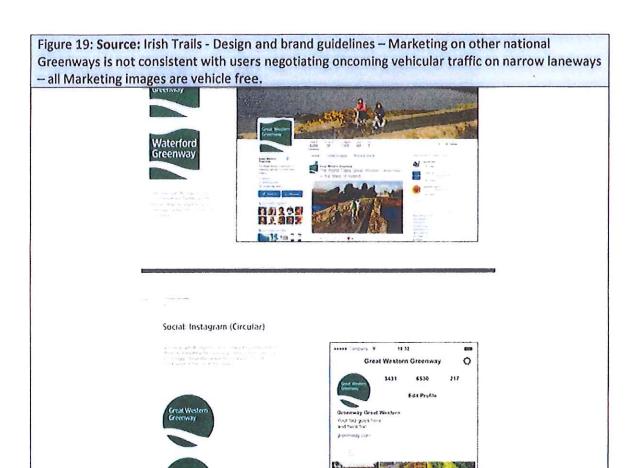
(for use within Ireland)

Greenways Ireland brand mark

(for use internationally)







5.0 - Boundary Treatments

Due the restricted nature of the design at the southern end of the lane, users may inadvertently enter on to the property of residents at narrow sections of shared usage. This may present associated issues of consent, trespass and liability.

Proposed widening of the southern section includes the trimming back of boundary hedges with no prior consultation with households that maintain these boundary hedges with respect to how these boundaries will be affected.

6.0 - Protection of flora and fauna

O'Hanlon's Lane has attractive mature hedge-lining along the southern end and at least one protected pine tree planted by the Talbot family estate. These natural environments have been maintained by residents of O'Hanlon's Lane. Fingal County Council has not played an active role in the maintenance and care for these environmental elements. These trees and hedges are rich with native bird, animal and insect life.

The Heritage Council sets out that local authorities are committed to the conservation of hedgerows per Figure 20 below.



6.1 Removal of habitat

The design proposes that hedges will be trimmed at the southern end of the lane. The hedges in this section of the lane are already trimmed and are well maintained by residents.

There is a concern by the Residents Association that more aggressive cutting back of these hedges may take place. Any aggressive cutting back of these hedges would upset the natural urban habitat and biodiversity of birds, foxes, squirrels, Bees and insects.

There is further concern that the projected volume of users entering the lane will cause noise and significant encroachment into these natural urban habitats and upset the natural biodiversity currently present.

In a recent submission to the houses of the Oireachtas Birdwatch Ireland advocated strongly against inappropriate hedge-cutting, see figure 21 below.

Figure 21: Source: Birdwatch Ireland - Extract from Oireachtas Committee Statement July 2019

Other activities including inappropriate hedge-cutting and the burning of scrub and upland habitats

are detrimental to our native wildlife and impact our carbon stores. The changes to the Wildlife Act

contained in the Heritage Act have sadly weakened the protections afforded to breeding birds of

uplands and hedgerows and must be repealed. Water quality in lakes and rivers affected by nutrient

The northern end of the lane has a designated pollination site for bees and other pollinators. This is a Malahide community initiative. This habitat is at risk by the prospect of significant encroachment from 1600 users passing this site in any one day.

6.2 Conservation

The design for this section of the Broadmeadow way is not consistent with Fingal County Council's heritage development plan or biodiversity programmes as outlined in Figures 22 to 24 below.

Figure 22: Source: Fingal County Council Development Plan 2017 - 2023 - Heritage Chapter - Statement of Policy

Statement of Policy

- · Conserve and enhance the County's biodiversity
- Conserve and enhance the County's geological heritage
- Promote a unified approach to landscape planning and management, provide an understanding of Fingal's landscape in terms of its inherent and unique character and ensure that Fingal's landscape is appropriately protected, managed and planned
- Protect, enhance and sustainably manage the coastline and its natural resources

Figure 23: Source: Fingal County Council Development Plan 2017 - 2023 - Heritage Chapter - Objectives 7 and 8

Objective NH07

Support the National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, in the maintenance and, as appropriate, the achievement of favourable conservation status for the habitats and species in Fingal to which the Habitats Directive applies.

Objective NH08

Ensure that the Council takes full account of the requirements of the Habitats and Birds Directives, as they apply both within and without European Sites in the performance of its functions.

Figure 24: Source: Fingal Biodiversity Programme - Outlines the local authority's commitment to the enhancement and protection of natural habitats. What is FINGAL BEODIVERSETY **Biodiversity?** PROGRAMME WHAT IS BIODIVERSITY? PROJECTS GET INVOLVED NATURE NEAR YOU RESOURCES NEWS & EVENTS WHAT ARE THE THREATS TO BIODIVERSITY IN FINGAL? While we all welcome a thriving economy, we must acknowledge the pressure that increased construction, transportation and changing What is Biodiversity? agricultural practices have put on Fingal's natural environment. Habitat Loss From Rio to Fingal Habilat loss is the single biggest threat to habilats and its associated plant and animal species in County Fingat. The last decade has seen a major increase in the population in Fingal. The required houses roads and sewage infrastructure have lead to a major loss and degradation of habitats. Streams The Fingel Biodiversity Programme CTIONFOR The Fingel Biodiversity Action Plan were straightened and culverted trees and hedgerows removed and widflower meadows dug up. In the countryside, many hedgerows, wellands and diches have also been removed to improve the land for agniculture. All these developments have lead to a net loss of good-quality habitats and a decline of plant and animal species. Invasive Species

Another more recent threat is the spread of Invasive species in Fingal. These are plants and animals that "escape" from your garden, or are brought in from foreign countries and are out-competing native little species. Plants such as Cherry Lauret. Rhododendrons, Sea-Buckthor, Japanse Knohveed and Hottentof. Fig. can be found at several sites Fingal where they completely dominate the area. Red squirrets are only found in Howth these days, as their American cousin the Grey Squirret has taken over most other woodlands in the Country. the County The Fingal Biodiversity Programme aims to restore, protect and enhance the natural habitats and its species in the County and address problems such

7.0 - Preservation of the character and aesthetics of the lane

O'Hanlon's Lane is a quaint laneway that joins a busy access road for Malahide Village with the recreation of the estuary. It is the only remaining road in the central environs of Malahide with no road markings or significant parking restrictions. It has sparse road lighting. It has attractive mature hedge lining to its southern boundary.

The proposed use as set out in Fingal County Council's submission does not adequately consider the negative impact of

- Increased noise levels for existing users
- The erosion of the character of the lane by the imposition of markings/lining on the street and introduction of new road signage
- Enhanced lighting for the safety of users will impact on the current rural character which is a remnant of this traditional Fingal fishing village

The Resident Association put forward that these are character elements to the village of Malahide that should be preserved. To lose these environmental aspects in the interest of transiting tourists between Malahide Castle and Newbridge Demesne defeats the purpose of providing a characterful and enjoyable cycle-way.

8.0 - Parking considerations

Several of the properties along O'Hanlon's lane do not have driveways to cater for visitor parking or trades / delivery vehicles. Street parking is an established norm for visitors and those working at or delivering to households on the lane.

The design does not cater for the parking needs of the residents with respect to visitor parking or parking for trades / delivery vehicles.



9.0 - Assessment of alternative routes

The Residents Association put forward that the proposed route fails on the following points:

- Does not arrive directly into Malahide Castle
- It takes trader traffic away from Malahide village
- Best practice principles of segregating cycle/pedestrians from vehicular traffic
- Does not incorporate users alighting from Malahide train station that wish to access the trail

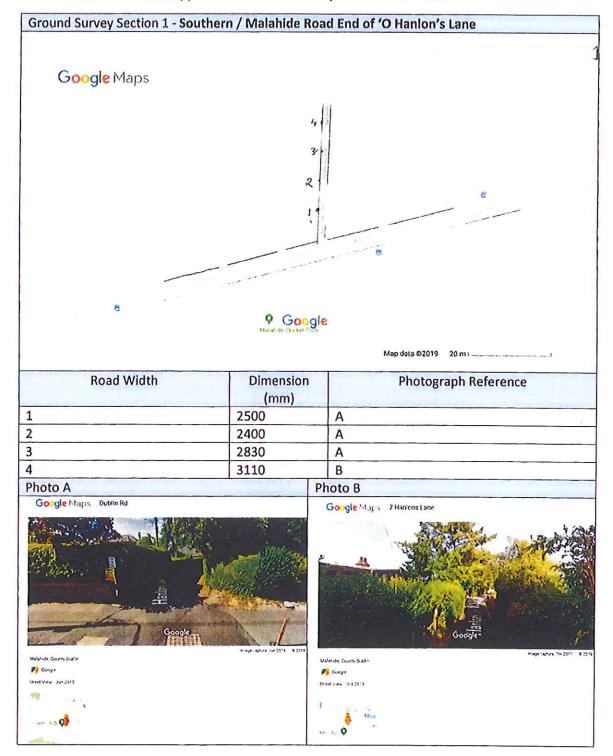
The Residents Association put forward that the Broadmeadow Way should be considered as part of a comprehensive town plan for the whole of the Malahide area and should not be considered in isolation. The impact of all the current tourist attractions and the future attractions should be considered together for proper town planning.

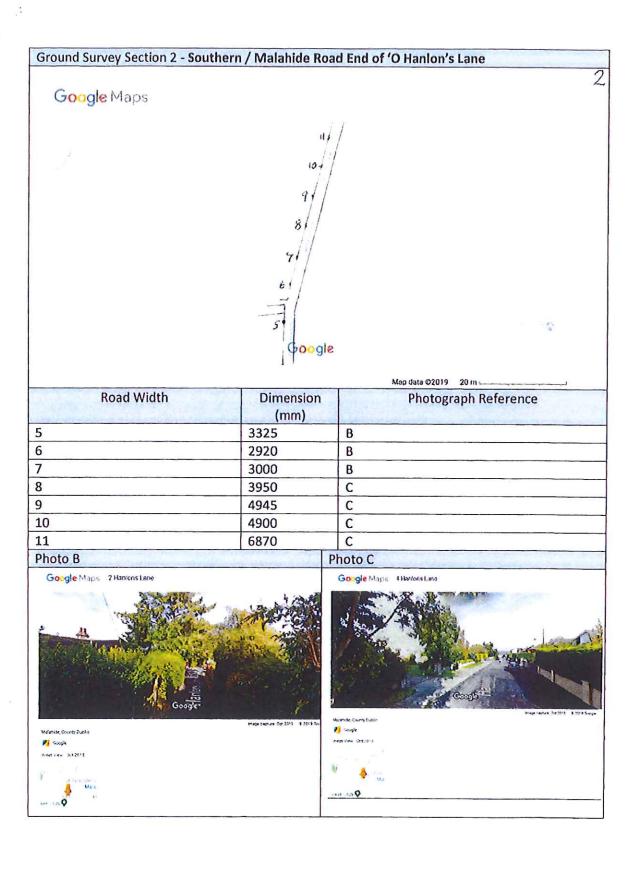
The new Broadmeadow Way is intended to link the three great stately homes of Malahide Castle, Newbridge House and Ardgillan Castle. This is a world class tourism idea and should be treated as such. Outlined below is a set of design suggestions put forward for consideration:

- The Broadmeadow way should arrive directly into Malahide Castle. This could be achieved by combining some of the other needs of Malahide into the plan.
- The current Bridgefield carpark could be excavated down two levels to form a car/coach park.
 Bridgefield pitches could be fully restored.
- Over the lower levels a smaller footprint multi storey carpark could be built to give two level
 of car park and most importantly at the third level a designated staging point for the new
 Broadmeadow Way with facilities such as a bike lock-up, repair area, bike hire facility and
 additional tourist facilities.
- This could all be designed in a modern building, complimenting the village and the new Fry Model Railway.
- From this third level position a new pedestrian/cycle bridge could be designed to span over the Malahide road over parts of the current railway station yard, over the space that exists along the side of the railway and eventually down to the lower level of the proposed cycleway approximately 100m out into the existing estuary.
- People arriving on the greenway could then leave their bikes and walk to access the village or the castle of the fry railway.
- This eliminates the need for all of the work on junctions that do not work and provides the
 basis of a true world class facility. It would become an actual destination tourist attraction in
 line with the already superb attractions of Malahide.
- Coaches bringing school tours and weekend travellers with their cars could be easily accommodated.
- The economic and social value and the elimination of potentially fatal safety risks at under designed junctions far outweighs any cost outlay arguments.
- A new underpass could be easily constructed under the existing railway approximately 200m out into the estuary to utilise the existing roadway through the council yard at Bisset's Strand as a secondary access to Malahide village. This eliminates the need for an elaborate timed junction at the current low railway bridge.
- Traffic from Swords direction could continue to use Estuary Road onto Strand Road to access the village.
- Traffic from the Portmarnock direction could continue to use Townyard Lane and New Street to access the village

- Traffic from Church Road could continue down New Street to access the village
- Traffic from Dublin could approach on the Malahide road and use a combination of all of the available routes to access the village
- All of the routes including O'Hanlon's Lane could adjust to the additional use of the combined cycleway
- All of the routes could be restricted to residential parking and thus improve the safety and all
 of them with simple signage and road markings could collectively share the increased traffic
 burden without any of them being designated.

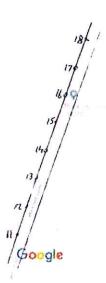
Appendix I - Ground Survey of O'Hanlon's Lane





Ground Survey Section 3 – Southern / Malahide Road End of 'O Hanlon's Lane

Google Maps



Mag data 02019 20 m

3

| Road Width | Dimension (mm) | Photograph Reference |
|------------|----------------|----------------------|
| 12 | 6520 | С |
| 13 | 6410 | С |
| 14 | 6710 | С |
| 15 | 7120 | С |
| 16 | 7460 | С |
| 17 | 7520 | С |
| 18 | 7780 | С |

Photo C

Google Mans 4 Hanlons Lane



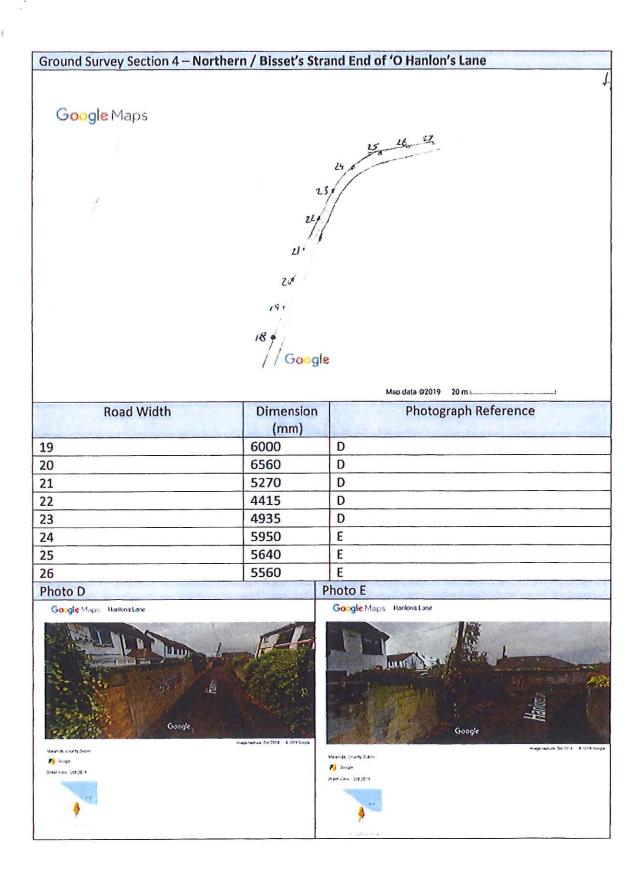
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Malande Courty Dublin

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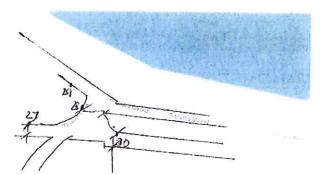


cont. na



Ground Survey Section 5 - Northern / Bisset's Strand End of 'O Hanlon's Lane

Google Maps



Google

Map data @2019 20 m i

| | | The same of the sa | |
|------------|----------------|--|--|
| Road Width | Dimension (mm) | Photograph Reference | |
| 27 | 5150 | F | |
| 28 | 11240 | F | |
| 29 | | F | |
| 30 | 5750 | F | |

Photo F

Google Maps Hanlons Lane



Image capture Oct 2014 - 8 2019 Google

Malahide County Dublin

🛂 Google

Street View Oct 2014



5