



REPORT

SCREENING FOR EIAR

Screening for Environmental Impact Assessment Report Naas to Kill Cycle Scheme

Submitted to:

Kildare County Council

Devoy Park

Naas

County Kildare

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Table of Contents

1.0 INTRODUCTION.....1

1.1 Terms of Reference1

1.2 The Proposed Development.....2

1.3 Screening Considerations4

1.4 Potential Future Adjustments.....12

1.5 Conclusion.....12

TABLES

Table 1: Annex I Considerations for Roads5

Table 2: Annex 1 Infrastructure Projects.....7

Table 3: Schedule 7 Criteria.....9

FIGURES

Figure 1: Project Location3

Figure 2: Map of Sections along Proposed Route.....4

APPENDICES

APPENDIX A

Drawings

APPENDIX B

Arboricultural Assessment Report

SCREENING FOR ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

The following Sections test the characteristics of the proposed development against the criteria set out in the *Planning and Development Regulations, 2001*, ('the *Regulations*') including *European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018* (S.I.296/2018) to determine if an Environmental Impact Assessment Report (EIAR) should be carried out. An Appropriate Assessment Screening Statement has been prepared separately.

1.0 INTRODUCTION

WSP Ireland Consulting Ltd (trading as Golder) have been appointed by Kildare County Council to prepare this Environmental Impact Assessment (EIA) screening report for the new segregated cycle infrastructure and upgrades to the existing cycle infrastructure enroute from Naas to Kill Village. A more detailed description of proposed project can be found below.

1.1 Terms of Reference

Article 93 and Schedule 5 of the *Regulations* prescribe the type of development that requires an EIAR. A distinction is made in the EIA Directive (85/337/EEC as amended by Directives 97/11/EC, 2003/35/EC, 2009/31/EC and 2014/52/EU (now codified in Directive 2011/92/EU)) between Annex I¹ and Annex II² projects and these distinctions have been transposed into the relevant Schedule of the *Regulations*. Annex I¹ Projects requiring a mandatory EIAR are also included under Section 50 of the Roads Act 1993. The proposed development is assessed under these criteria below.

Articles 103, 109 and 120 and Schedule 7 of the *Regulations* present the criteria for determining whether a development would or would not be likely to have significant effects on the environment for developments that are considered sub-threshold for the purposes of preparing an EIAR. The proposed development is assessed under these criteria at Section 1.2 below.

The EIA screening covers:

- i) Legislative basis for EIA.
- ii) Description of the proposed development.
- iii) Screening considerations.
- iv) Conclusions.

In undertaking this screening assessment, regard has been had to the following guidance documents:

- The Roads Act 1993 (as amended by, inter alia, the Road Regulations 1994, (S.I 119/1994) and European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations, 2019 (S.I.279/2019)

¹ Annex I: an EIA is mandatory on the basis that their project classes will always have significant environmental effects. This has been transposed in Schedule 5, Part 1 of the *Regulations*.

² Annex II: represent developments of a type which may or may not have environmental effects. The decision as to whether or not an EIA is required must be made on a case-by-case basis. To this end Member States may establish criteria and / or thresholds in order to determine which of the projects of the classes listed in Annex 2 are to be subject to an EIA. This has been transposed in Schedule 5 Part 2 of the *Regulations*.

- 'Guidelines on the Information to be contained in Environmental Impact Assessments Report- Draft' Environmental Protection Agency, August 2017;
- Guidance for Consent Authorities regarding Sub-Threshold Development, Department of Housing, Local Government and Heritage, 2020; and
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, Department of Housing, Local Government and Heritage, 2018.

1.2 The Proposed Development

The National Transport Agency (NTA) have developed a Greater Dublin Area (GDA) Cycle Network plan and as part of this Kildare County Council proposes to deliver a high-quality upgraded cycle route from Naas to Kill Village (see Figure 1 below). The proposed project comprises of a total length of c.4.5km, starting at "The Ball" roundabout located off Junction 9, the N7 and ending at the Slí na Naomh Junction, Kill Village.

The project comprises of the following sections: (as seen in Figure 2):

Section 1: "The Ball" to Johnstown

'The Ball' Naas to Johnstown Village. It consists of c.850m in length, with a 4.0m wide shared use pedestrian-cycle path and grassy verge. The 1m grassy verge will be reduced/removed to widen cycle path.

Section 2: Johnstown Village

It consists of c.530m in length, with modifications to car parking spaces, bus stops and bus lay-bys.

Section 3: Johnstown Village to Kill Village

Exiting Johnstown to Kill. It consists of c.1.6km in length, with a 4.0m wide shared use pedestrian-cycle path and grassy verge. The 1m grassy verge will be removed to widen cycle path.

Section 4: Kill Village

It consists of c.1.53km in length, with modifications to car parking spaces, roundabout and bus stops.

Project design has been carefully considered to ensure retention of Class A trees.

A full set of design drawings accompany this Screening, please refer to Appendix A.

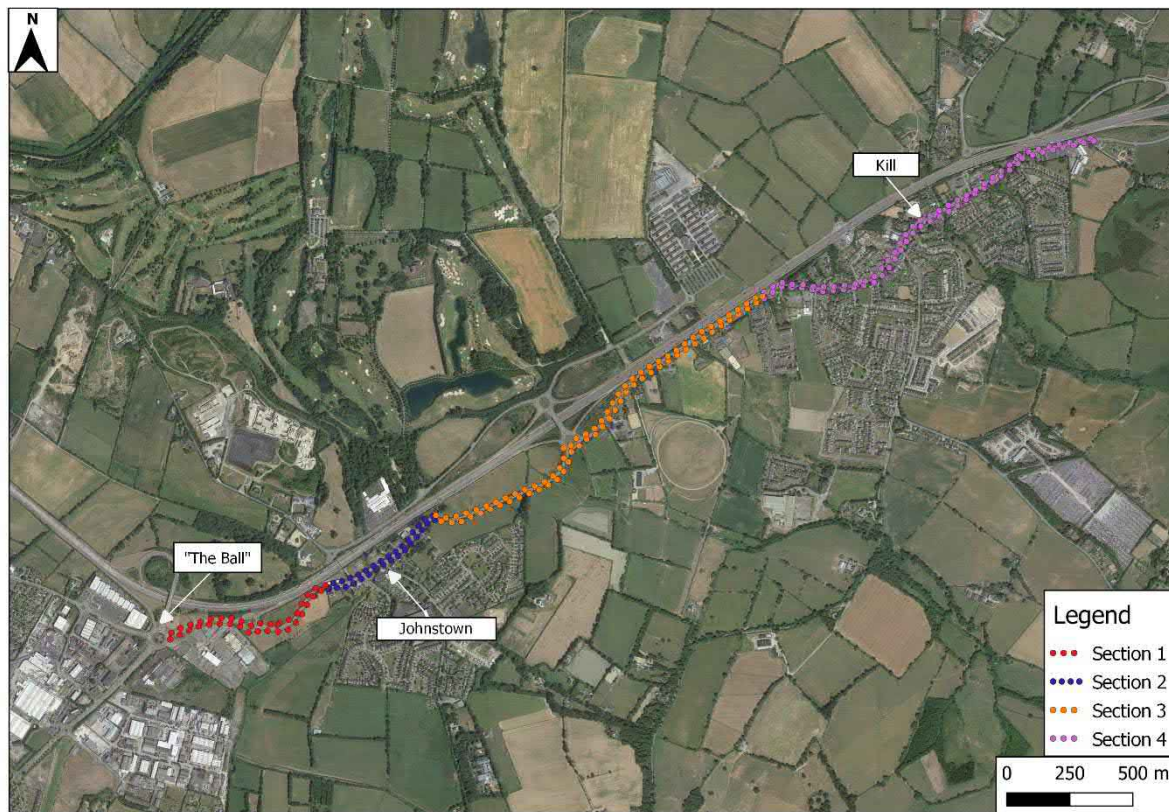


Figure 2: Map of Sections along Proposed Route

1.3 Screening Considerations

Review under Schedule 50, Roads Act Regulations

In order to determine whether the project is of a type which requires an EIAR, it is necessary to consider the project types under the Roads legislation (see Table 1 below). The Roads Act ³(1993) defines “road” to include:

- (a) any street, lane, footpath, square, court, alley or passage;
- (b) any bridge, viaduct, underpass, subway, tunnel, overpass, overbridge, flyover, carriageway (whether single or multiple), pavement or footway;
- (c) any weighbridge or other facility for the weighing or inspection of vehicles, toll plaza or other facility for the collection of tolls, service area, emergency telephone, first aid post, culvert, arch, gully, railing, fence, wall, barrier, guardrail, margin, kerb, lay-by, hard shoulder, island, pedestrian refuge, median, central reserve, channelliser, roundabout, gantry, pole, ramp, bollard, pipe, wire, cable, sign, signal or lighting forming part of the road;
- (d) any other structure or thing forming part of the road; and
- (e) necessary for the safety, convenience or amenity of road users or for the construction, maintenance, operation or management of the road or for the protection of the environment; or
- (f) prescribed by the Minister.

³ Section 2 of The Roads Act (1993), Classification of Roads and Assignment of Functions

Table 1: Annex I Considerations for Roads

Project type/Criteria	Regulatory Reference	Comment	Is an EIAR required on this basis?
1. Construction of a motorway	S.50(1)(a) of the Roads Act, 1993, as substituted by S.9(1)(d)(i) of the Roads Act, 2007	The proposed project does not provide for construction of a motorway.	No
2. Construction of a busway	S.50(1)(a) of the Roads Act, 1993, as substituted by S.9(1)(d)(i) of the Roads Act, 2007	The proposed project does not provide for construction of a busway.	No
3. Construction of a service area	S.50(1)(a) of the Roads Act, 1993, as substituted by S.9(1)(d)(i) of the Roads Act, 2007	The proposed project does not provide for construction of a service area.	No
4. Any prescribed type of proposed development consisting of a proposed public road or the improvement of an existing public road, namely: The construction of a new road of four or more lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length in a rural area, or 500 metres or more in length in an urban area. The construction of a new bridge or tunnel which would be 100 metres or more in length.	Article 8 of the Roads Regulations, 1994 (Road development prescribed for the purposes of S.50(1)(a) of the Roads Act, 1993).	The proposed scheme does not include construction, realignment or widening of a road to provide for four or more lanes. The proposed scheme does not include construction of any new bridge or tunnel.	No No
5. Where An Bord Pleanála considers that a proposed road development would be likely to have significant effects on the environment it shall direct the road authority to prepare an EIS.	S.50(1)(b) of the Roads Act, 1993.	The measures included in the project are restricted to existing road surfaces and kerbing. It is considered unlikely to have significant effects on the environment, within the meaning of the EIA Directive. The nearest designated Special Area of Conservation (SAC) or Special Protected Area (SPA) is c.7km south-east of the proposed scheme and has no habitat or species synergies or aquatic receptors.	No

Project type/Criteria	Regulatory Reference	Comment	Is an EIAR required on this basis?
		The potential for effects on SACs and SPAs, which are both European (Natura 2000) sites, is considered in detail in the separate Appropriate Assessment (AA) screening report. That report finds that the scheme is unlikely to have significant effects on those sites.	
6. Where a road authority considers that a proposed road development would be likely to have significant effects on the environment it shall inform ABP in writing and where ABP concurs it shall direct the road authority to prepare an EIS.	S.50(1)(b) of the Roads Act, 1993.	Refer above to 5.	No
Where a proposed road development would be located on certain environmental sites the road authority shall decide whether the proposed road development would be likely to have significant effects on the environment. "The sites concerned are": Special Area of Conservation (SAC) A site notified in accordance with Regulation 4 of the European Communities (Natural Habitats) Regulations, 1997 (S.I No.94 of 1997) Special Protection Area (SPA) A site where consultation has been initiated in accordance with Article 5 of Council Directive 92/43/EC of 21 May, 1992, on the conservation of natural habitats and of wild flora and fauna. A Nature Reserve within the meaning of sections 15 or 16 of the Wildlife Act, 1976. Refuge for Fauna under section 17 of the Wildlife Act, 1976.	S.50(1)(b) of the Roads Act, 1993, as inserted by Art. 14(a) of the EIA (Amendment) Regulations, 1999.	Refer above to 5.	No

As such, there is no requirement for an EIAR with reference to the above.

Review under Part 2, Planning and Development Regulations

The proposed project has been assessed with respect to Planning and Development legislation S.I 600/2001, Schedule 5, Pt 2 Project type 10. Infrastructure projects (b) (iv) (see Table 2 below).

Table 2: Annex 1 Infrastructure Projects

Project Type/Criteria	Regulatory Reference	Comment	Is an EIA required on this basis?
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.)	S.I. 600/2001, Schedule 5, Pt 2 project type 10. Infrastructure projects (b) (iv)	Commission guidance ⁴ lists a range of projects, stating that these or other projects with similar characteristics can be considered to be 'urban development'. These include: <ul style="list-style-type: none"> ■ • Shopping centres ■ • Bus garages ■ • Train depots ■ • Hospitals ■ • Universities ■ • Sports stadiums ■ • Cinemas ■ • Theatres ■ • Concert halls ■ • Other cultural centres ■ • Sewerage or water supply networks The proposed scheme may be considered as a type of urban development but does not meet the definition as described above. It does not correspond to or have similar characteristics to any of these types of projects.	No
Changes, extensions, development and testing (a) Any change or extension of development which would: (i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of	S.I. 600/2001, Schedule 5, Pt 2 Project Type 13	The changes covered by the proposed scheme will not result in the affected area being of a listed class. Also, the cumulative upgrades to the extensions are mainly modifications and do not result in a size increase of greater than 25% or	No

⁴ Interpretation of definitions of project categories of annex I and II of the EIA Directive, 2015, EU

Project Type/Criteria	Regulatory Reference	Comment	Is an EIA required on this basis?
Part 2 of this Schedule, and (ii) result in an increase in size greater than- - 25 per cent, or - an amount equal to 50 per cent of the appropriate threshold, whichever is the greater.		an amount equal to 50 per cent of the appropriate threshold. Thus, the proposed project meets neither of the prescribed criteria for Project Type 13.	
(b) Projects in Part 1 undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than 2 years. (In this paragraph, an increase in size is calculated in terms of the unit of measure of the appropriate threshold.)	S.I. 600/2001, Schedule 5, Pt 2 Project Type 13	Not applicable	No
(c) Any change or extension of development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, which would result in the demolition of structures, the demolition of which had not previously been authorised, and where such demolition would be likely to have significant effects on the environment, having regard to the criteria set out under Schedule 7.	S.I. 600/2001, Schedule 5, Pt 2 Project Type 13	Proposed project has been screened out as a listed class in Part 1 and from paragraphs 1 to 12 of Part 2 of Schedule 5.	No

As such, there is no requirement for an EIAR with reference to the above.

Review under Schedule 7 of the Planning and Development Regulations

As the project does not correspond to any project type in the Roads or Planning and Development regulations, as listed above, it is not considered to be a 'sub-threshold development'.

Notwithstanding, given the wide ranging requirement of 50 (1) (b) to (d) of the Roads Act (as above) that any road development or road improvement project which would be likely to have significant effects on the environment should be subject to EIA, for the avoidance of any doubt, the next section of this report provides a review of the project against prescribed criteria for determining whether or not a sub-threshold development is required to be subject to EIA.

The consideration of potential impacts covers all significant direct, indirect and secondary impacts as relevant, with reference to the guidance and in compliance with the legislation, including the specified criteria for determining whether certain development types should be subject to EIA.

The criteria⁵ are listed in Table 3 below and cover:

- 1) Characteristics of the proposal.
- 2) Location of the proposal.
- 3) Types and characteristics of potential impacts.

Table 3: Schedule 7 Criteria

1.Characteristics of Proposed Development	Relevance	Commentary
The size and design of the whole of the proposed development.	No	The proposed Project is c.5.8 hectares in area and c.4.5 km in length. The proposed development is minor in scale.
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.	No	The proposed project will be part of and will interact with the wider transportation network. This network is subject to ongoing management including monitoring, review, and interventions by Kildare County Council. The infrastructure will encourage more safe active travel along the Naas to Kill route.
The nature of any associated demolition works.	No	No demolition works are required.
The use of natural resources, in particular land, soil, water and biodiversity.	No	The proposed Project does not significantly impact upon natural resources.
The production of wastes	No	Waste produced during the construction process are anticipated to be minor and not likely to cause significant effects.
Pollution and nuisances	No	The impacts including noise and dust during construction works are

⁵ Schedule 7: 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	Relevance	Commentary
		anticipated to be within acceptable standards. In the long term, the proposed Scheme is likely to reduce air pollution and noise along the length of the Project.
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.	No	The proposal is likely to have a calming effect on traffic in the scheme area and will provide improved and separated facilities for cyclists and reduce the risk of major accidents, and/or disasters in the area.
the risks to human health (for example, due to water contamination or air pollution).	No	No potential risks to human health are anticipated.

2.Location of Proposed Development <i>The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to:</i>	Relevance	Commentary
The existing and approved land use.	No	There is no change in existing land use associated with the proposed Project. The Scheme provides safe pedestrian and cycle paths.
The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground.	No	The impacts are anticipated to be negligible given the nature and scale of the proposed development.
The absorption capacity of the natural environment, paying particular attention to the following areas:	No	The impacts are anticipated to be negligible given the nature and scale of the proposed development.
Wetlands, riparian areas, river mouths		N/A
Coastal zones and the marine environment	No	N/A
Mountain and forest areas	No	N/A
Nature reserves and parks	No	N/A
Areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and	No	The Appropriate Assessment Screening Report submitted with the Part VIII application concludes that the proposed development is not foreseen to give rise to any significant adverse effects on designated European sites.

2.Location of Proposed Development <i>The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to:</i>	Relevance	Commentary
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;	No	N/A
Densely populated areas;	No	N/A
Landscapes and sites of historical, cultural or archaeological significance.	No	N/A

3.Characteristics of Potential Impacts	Relevance	Comments
The magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected)	No	The impacts are considered and anticipated as minor given the nature and scale of the proposed Project.
The nature of the impact	No	The nature of impacts are considered to be localised and not to impact a wider area where environmental sensitivities are present.
The transboundary nature of the impact	No	N/A
The intensity and complexity of the impact	No	The impacts are anticipated to be minor given the nature and scale of the proposed development.
The probability of the impact	No	The probability of impact is considered negligible as there are no significant environmental effects anticipated.
The expected onset, duration, frequency and reversibility of the impact.	No	There are no significant environmental effects anticipated.
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.	No	There are no significant environmental effects anticipated. As stated previously, the proposed project will be part of and will interact with the wider transportation network. This network is subject to ongoing management including monitoring, review, and interventions by Kildare County Council.
h) the possibility of effectively reducing the impact.	No	There are no significant environmental effects anticipated.

3.Characteristics of Potential Impacts	Relevance	Comments
		<p>As stated previously, the proposed project will be part of and will interact with the wider transportation network.</p> <p>This network is subject to ongoing management including monitoring, review, and interventions by Kildare County Council.</p>

1.4 Potential Future Adjustments

Any adjustments to the proposed Project will be subject to review to ascertain whether or not the changes or their likely environmental effects affect the EIA screening outcome.

1.5 Conclusion

The scheme does not correspond to any project type in the relevant Roads or Planning and Development legislation. It can be considered not to comprise 'sub-threshold development' and it can be 'screened out' for Environmental Impact Assessment purposes on this basis.

For the avoidance of doubt, the scheme has nonetheless been reviewed against prescribed criteria for determining whether or not a sub-threshold development is required to be subject to EIA. The screening consideration against all of the criteria, as set out above and taking account of measures to avoid or prevent what might otherwise have been significant adverse effects on the environment, finds that the environmental effects of the scheme will be temporary and are not likely to be significant within the meaning of the Directive. It is therefore concluded that there is no real likelihood of significant effects on the environment arising from the proposed scheme. It is considered that the proposed Cycle Route does not need to be subject to Environmental Impact Assessment and no Environmental Impact Assessment Report is required for it. This conclusion is based on an objective review of the Scheme, including its characteristics, location and the likelihood of it causing significant environmental impacts. The screening has followed the relevant legislation and has had regard to the relevant guidance.

Signature Page

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Date: 9 June 2022

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APPENDIX A
Drawings

MAUDLINGS

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Millimetres
DO NOT SCALE



EXISTING SHARED USE PATH WIDENED INTO THE OUTSIDE VERGE. EXISTING KERB LINE WILL REMAIN UNCHANGED.

LAYOUT COMPRISES OF THE FOLLOWING:
 • 4m SHARED SURFACE;
 • 0.5m VERGE; AND
 • 13m CARRIAGEWAY.

TIE INTO EXISTING INFRASTRUCTURE

N7 Junction 9

ERECTION OF PART 8 PLANNING NOTICE IN THIS VICINITY

Information contained in this drawing is indicative only. Details to be confirmed during site survey.

LEGEND:

	PART 8 PLANNING BOUNDARY
	CARRIAGEWAY
	FOOTPATH
	CYCLE TRACK
	SHARED CYCLE AND PEDESTRIAN AREA
	BUFF CARRIAGEWAY - SCHOOL ZONE
	GRASSED AREA
	TACTILE PAVING FOR UNCONTROLLED CROSSING
	TACTILE PAVING FOR CONTROLLED CROSSING
	CORDUROY TACTILE PAVING
	RAISED SURFACE
	EXISTING TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED
	PROPOSED TREE
	PENCIL BOLLARDS
	PUBLIC REALM ENHANCEMENT



LAYOUT COMPRISES OF THE FOLLOWING:
 • 4m SHARED SURFACE; AND
 • 8m CARRIAGEWAY.

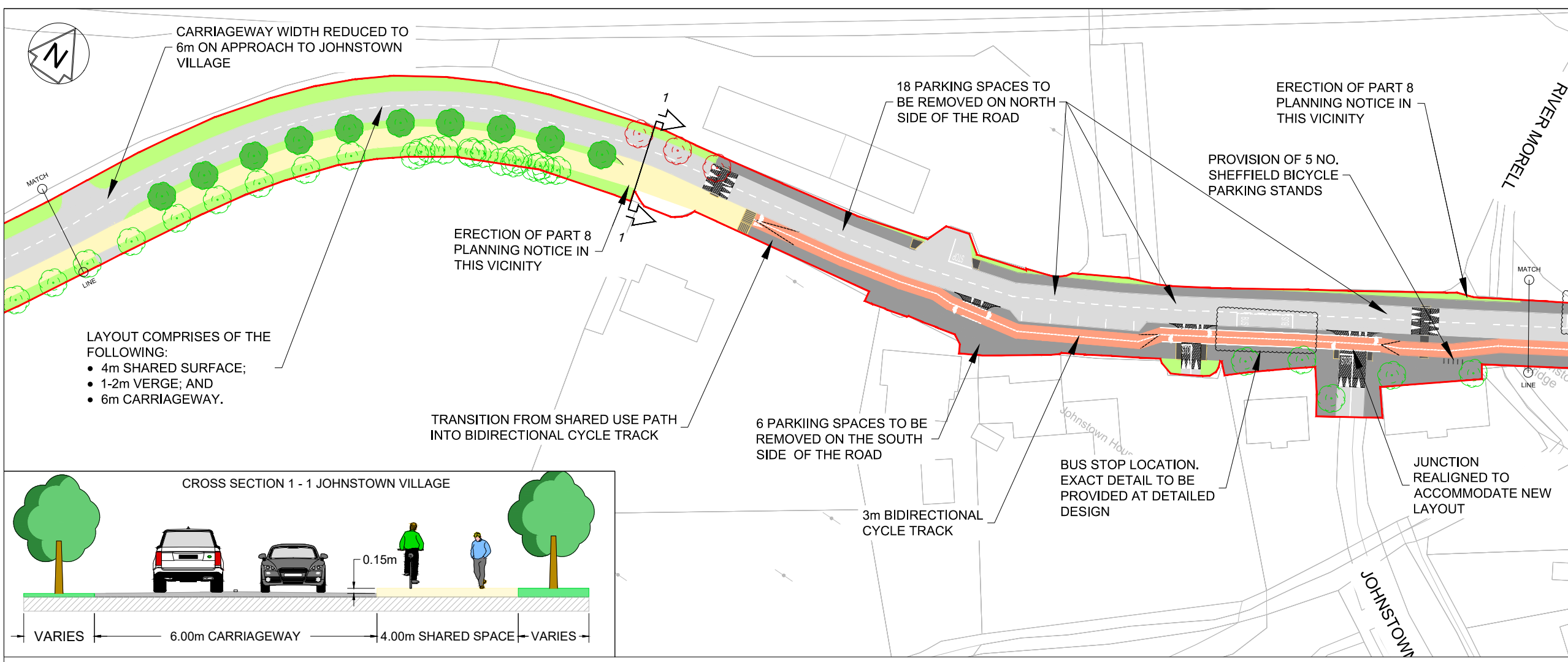
N7 Junction 9

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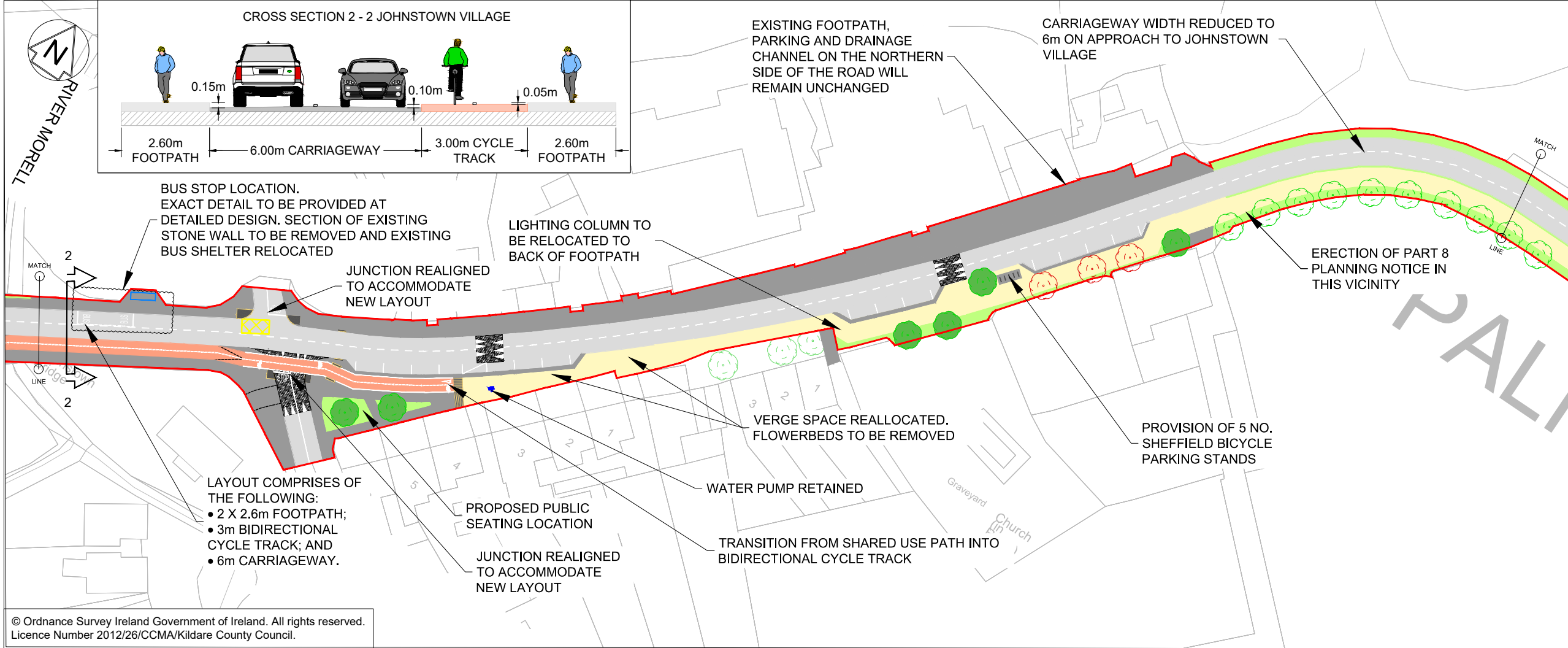
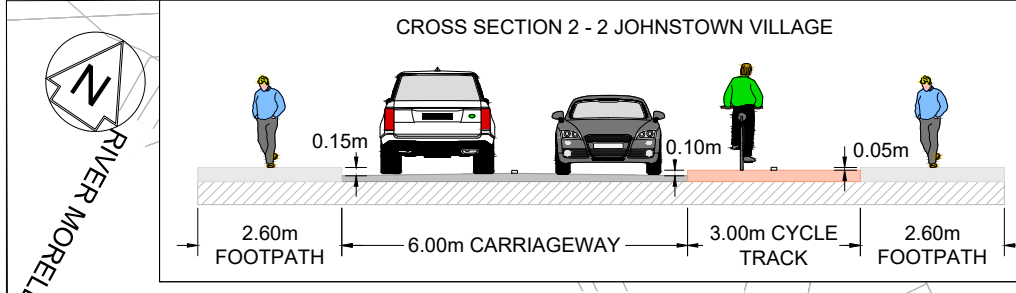
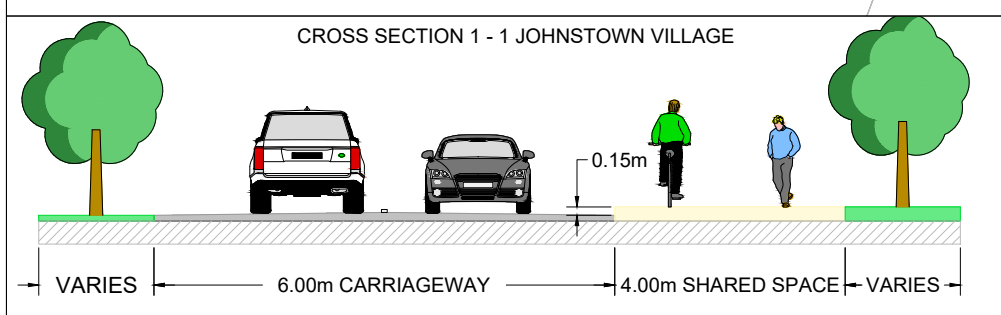
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B	J. SCOTT	D.KEANE	D. KEANE	21/07/2022
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
PART 8 PLANNING ISSUE				S0
Client				
 Kildare County Council				
 Údarás Náisiúnta Iompair National Transport Authority				
 WSP				
Drawing Title				
P82022.17 PROPOSED NAAS TO KILL CYCLE SCHEME PART 8 PLANNING SHEET 1 OF 8				
Scale	Designed / Drawn	Checked	Approved	Authorised
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Original Size	Date	Date	Date	Date
A1	14/07/2022	20/07/2022	20/07/2022	20/07/2022
Drawing Number	Project	Originator	Volume	Revision
40000089-WSP-DG-HW-0106-01				C
Location	Type	Role	Number	

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Millimetres
DO NOT SCALE



LAYOUT COMPRISES OF THE FOLLOWING:

- 4m SHARED SURFACE;
- 1-2m VERGE; AND
- 6m CARRIAGEWAY.



Information contained in this drawing is indicative only. Details to be confirmed during site survey.

LEGEND:

- PART 8 PLANNING BOUNDARY
- CARRIAGEWAY
- FOOTPATH
- CYCLE TRACK
- SHARED CYCLE AND PEDESTRIAN AREA
- BUFF CARRIAGEWAY - SCHOOL ZONE
- GRASSED AREA
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- PROPOSED TREE
- PENCIL BOLLARDS
- PUBLIC REALM ENHANCEMENT

C	J.FERGUSON	D.KEANE	D.KEANE	17/08/2022
B	J. SCOTT	D.KEANE	D. KEANE	21/07/2022

Rev	Drawn / Des	Checked	Approved	Date

Description	Suitability
PART 8 PLANNING ISSUE	S0

Client	Kildare County Council
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Drawing Title
P82022.17 PROPOSED NAAS TO KILL CYCLE SCHEME
PART 8 PLANNING
SHEET 2 OF 8

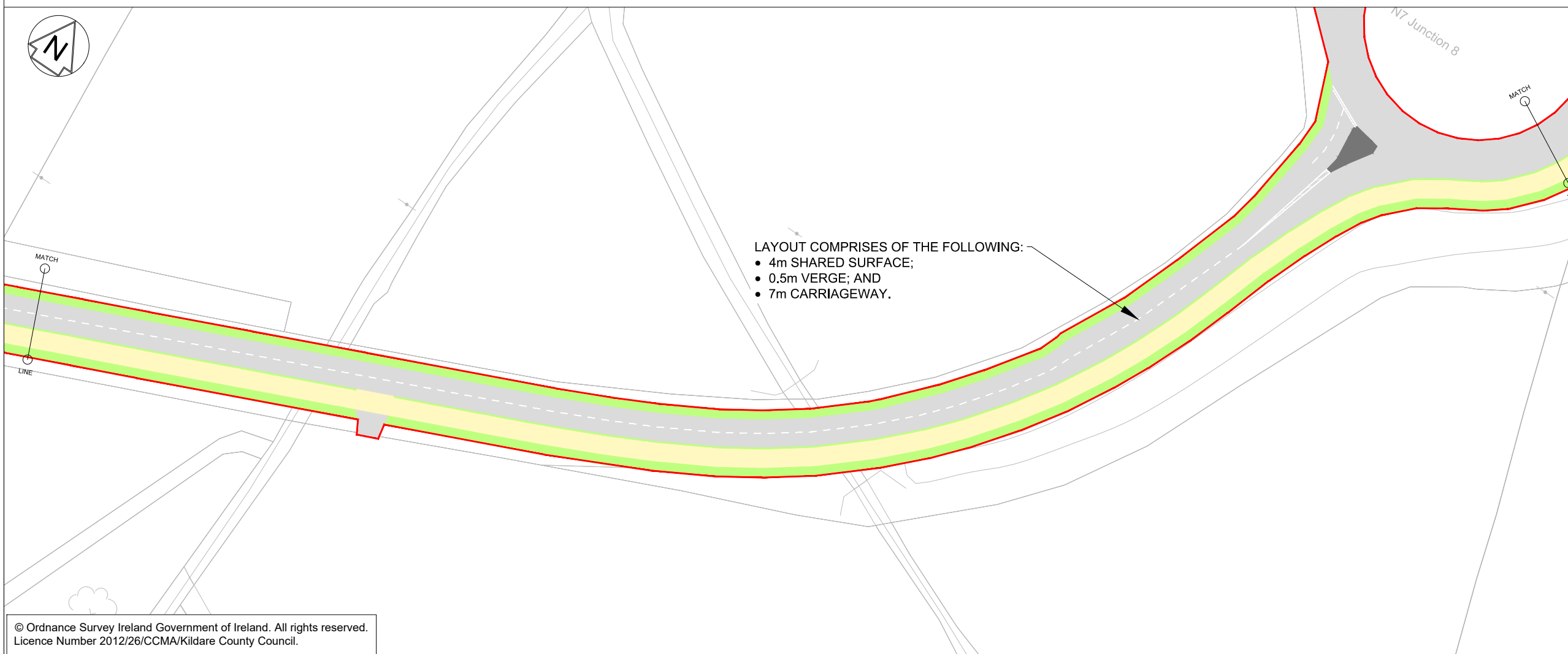
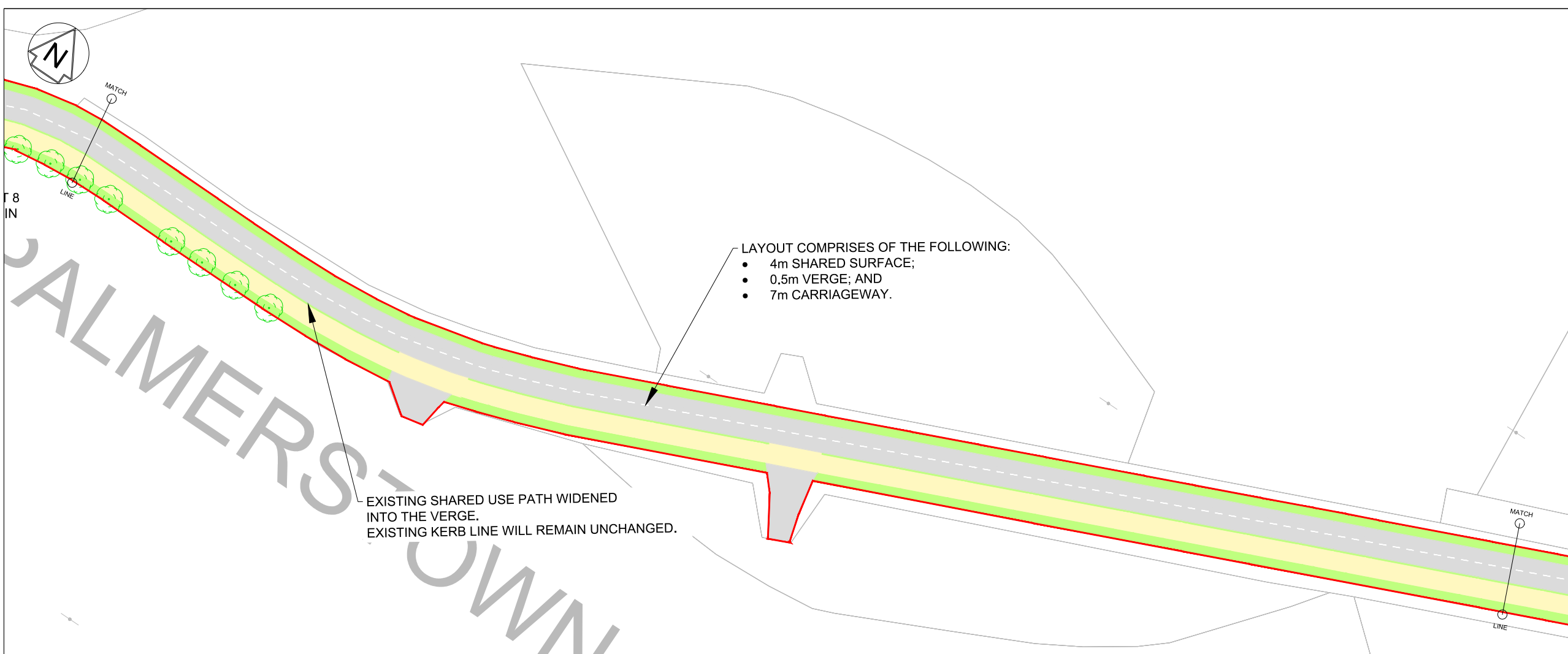
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C	J.FERGUSON	D.KEANE	D.KEANE	17/08/2022
B	J. SCOTT	D.KEANE	D. KEANE	21/07/2022

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Description	Suitability
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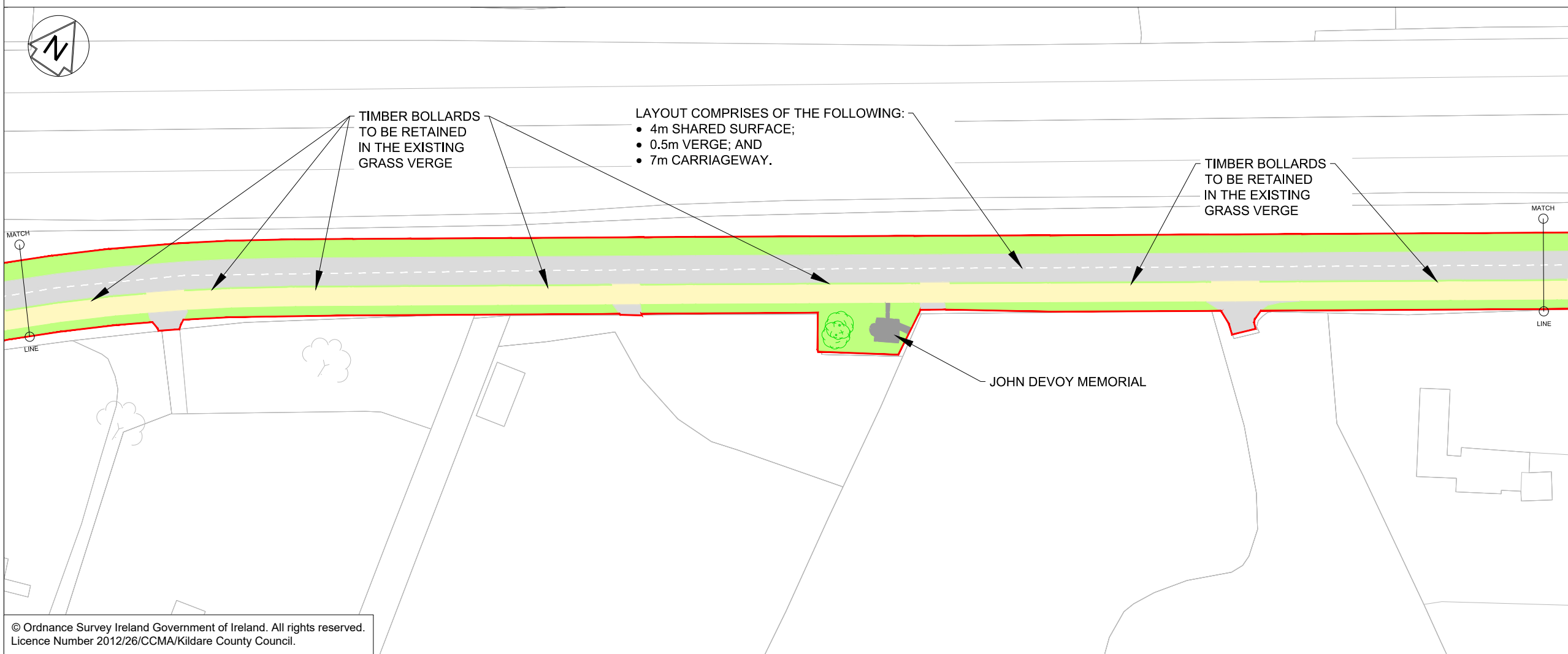
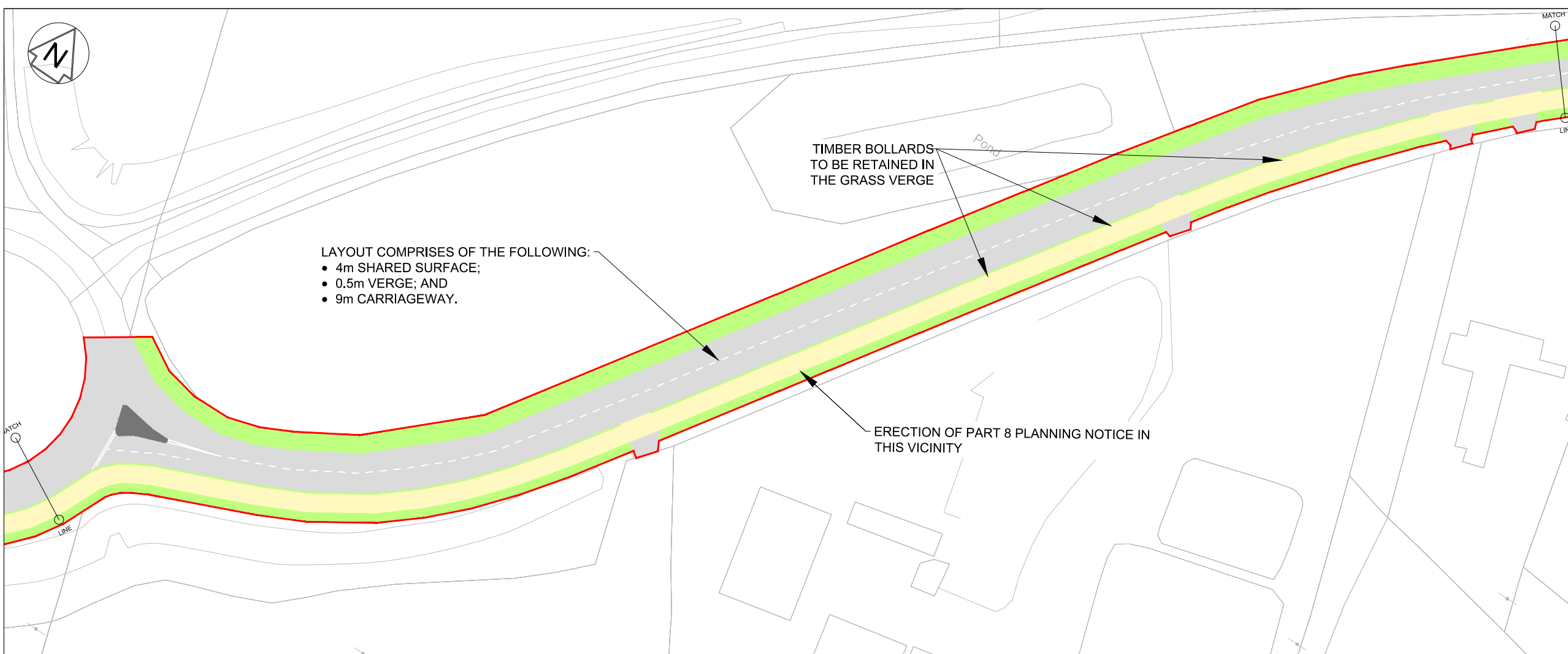
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PART 8 PLANNING
SHEET 3 OF 8

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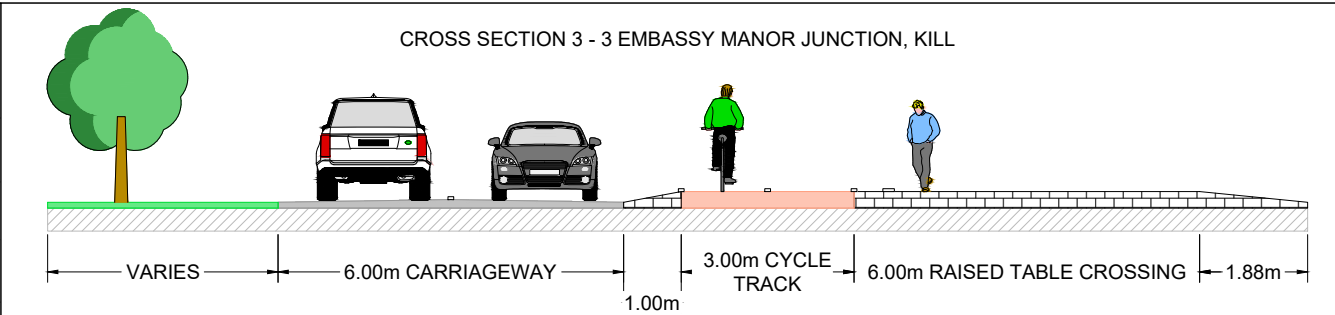
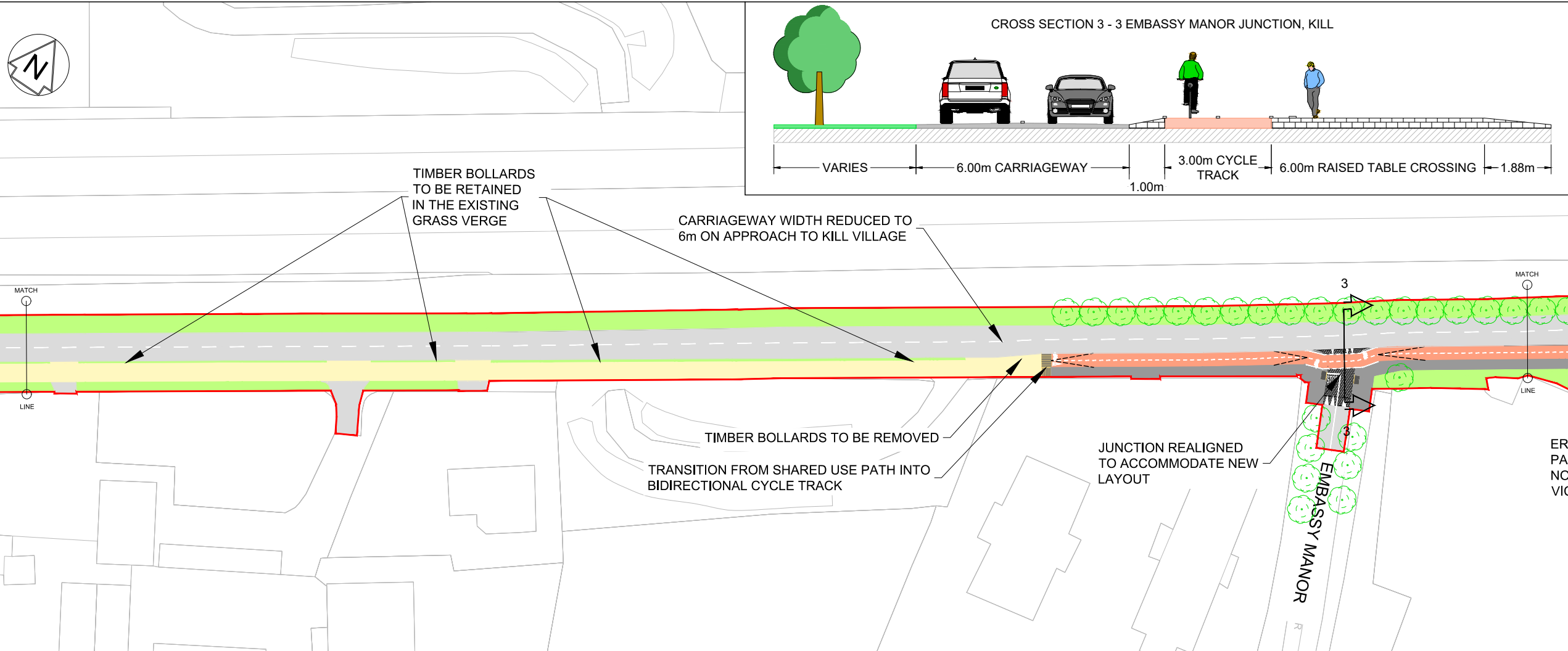
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- SHARED CYCLE AND PEDESTRIAN AREA
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- GRASSED AREA
- TACTILE PAVING FOR UNCONTROLLED CROSSING
- TACTILE PAVING FOR CONTROLLED CROSSING
- CORDUROY TACTILE PAVING
- RAISED SURFACE
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- PROPOSED TREE
- PENCIL BOLLARDS
- PUBLIC REALM ENHANCEMENT

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B	J. SCOTT	D.KEANE	D. KEANE	21/07/2022
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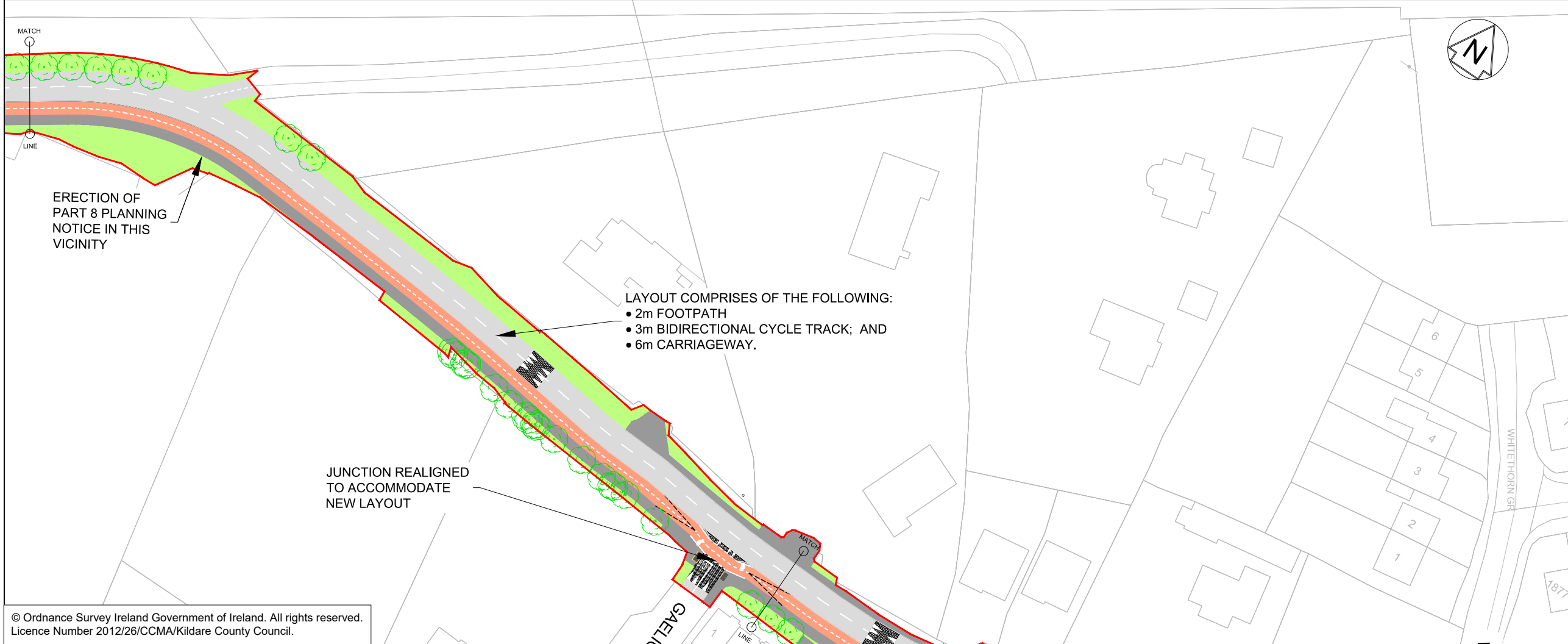
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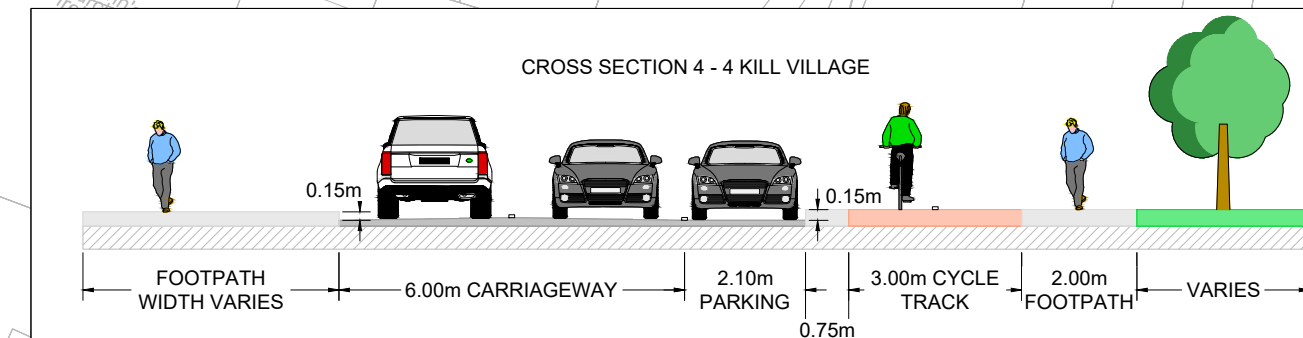
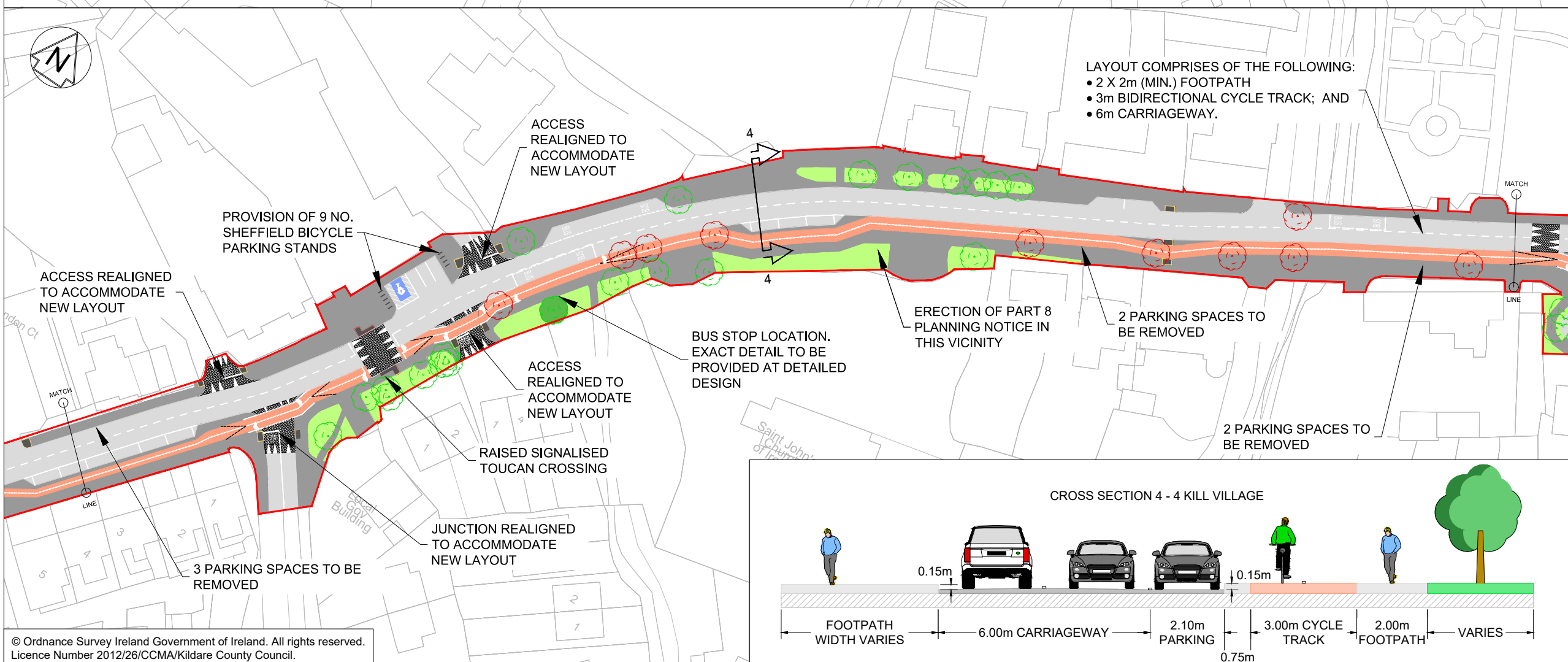
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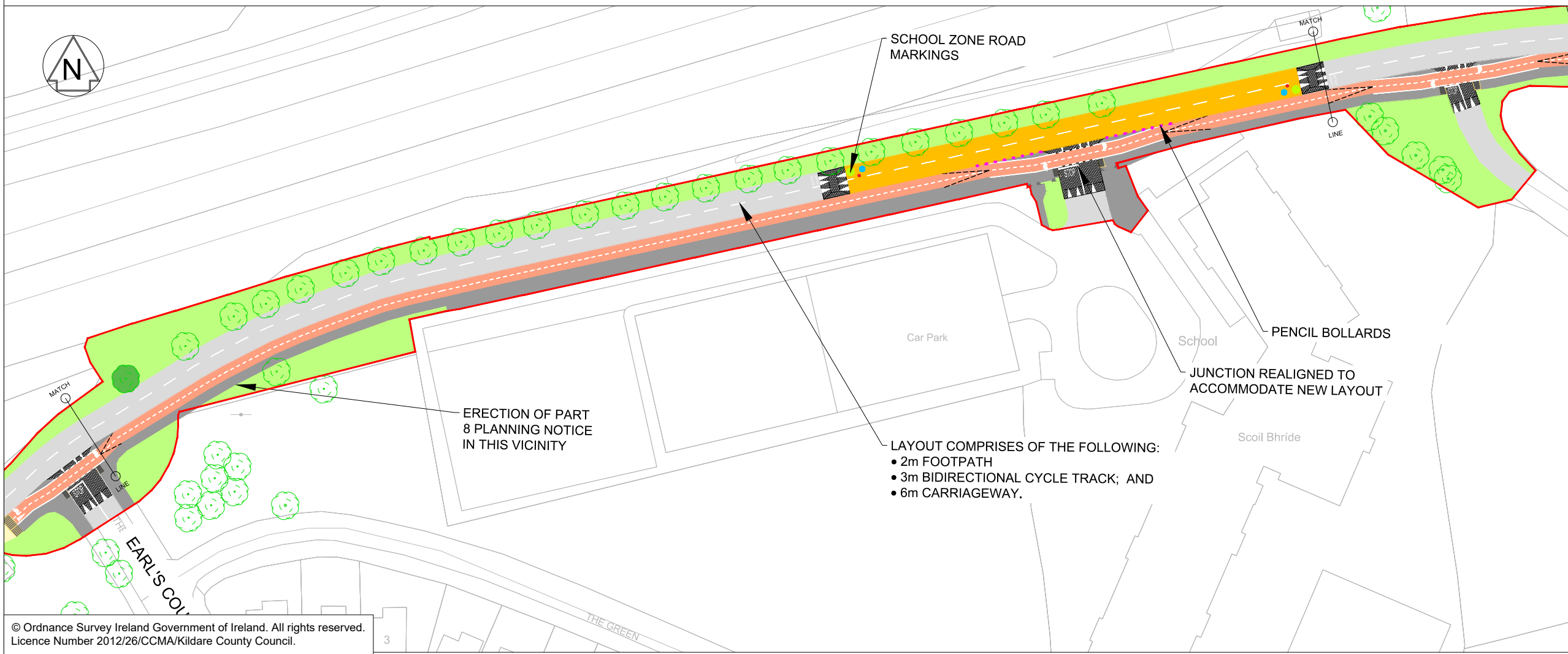
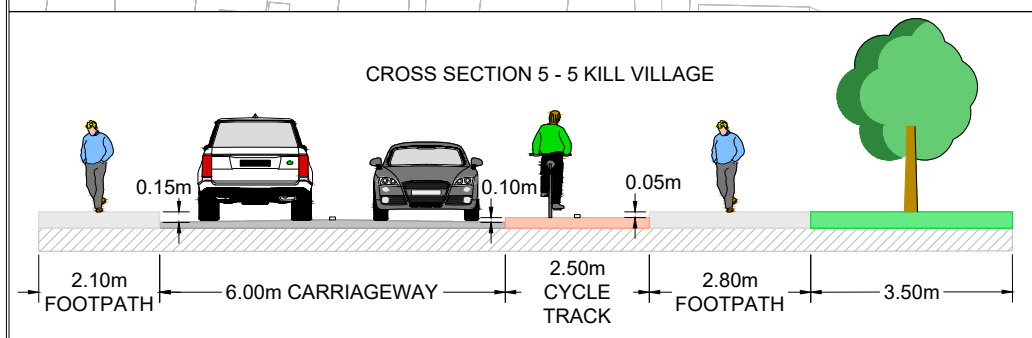
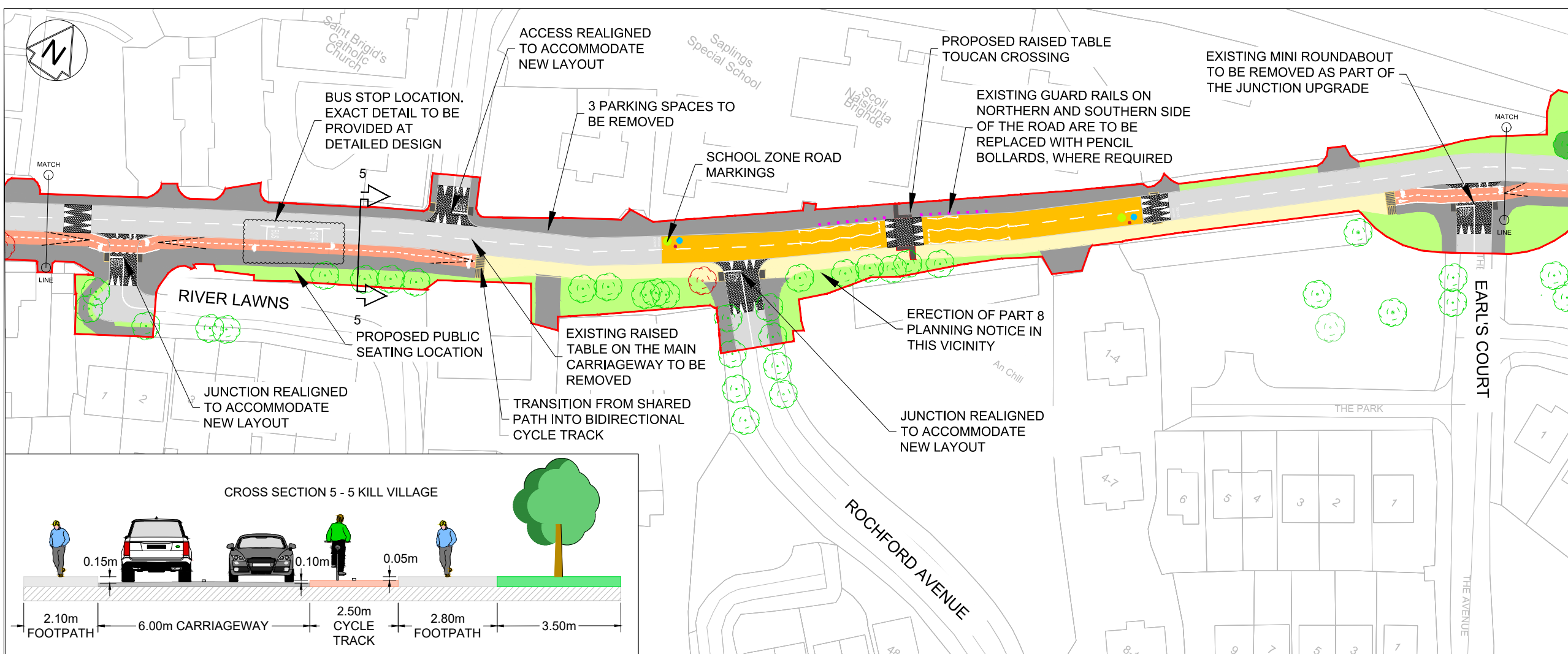
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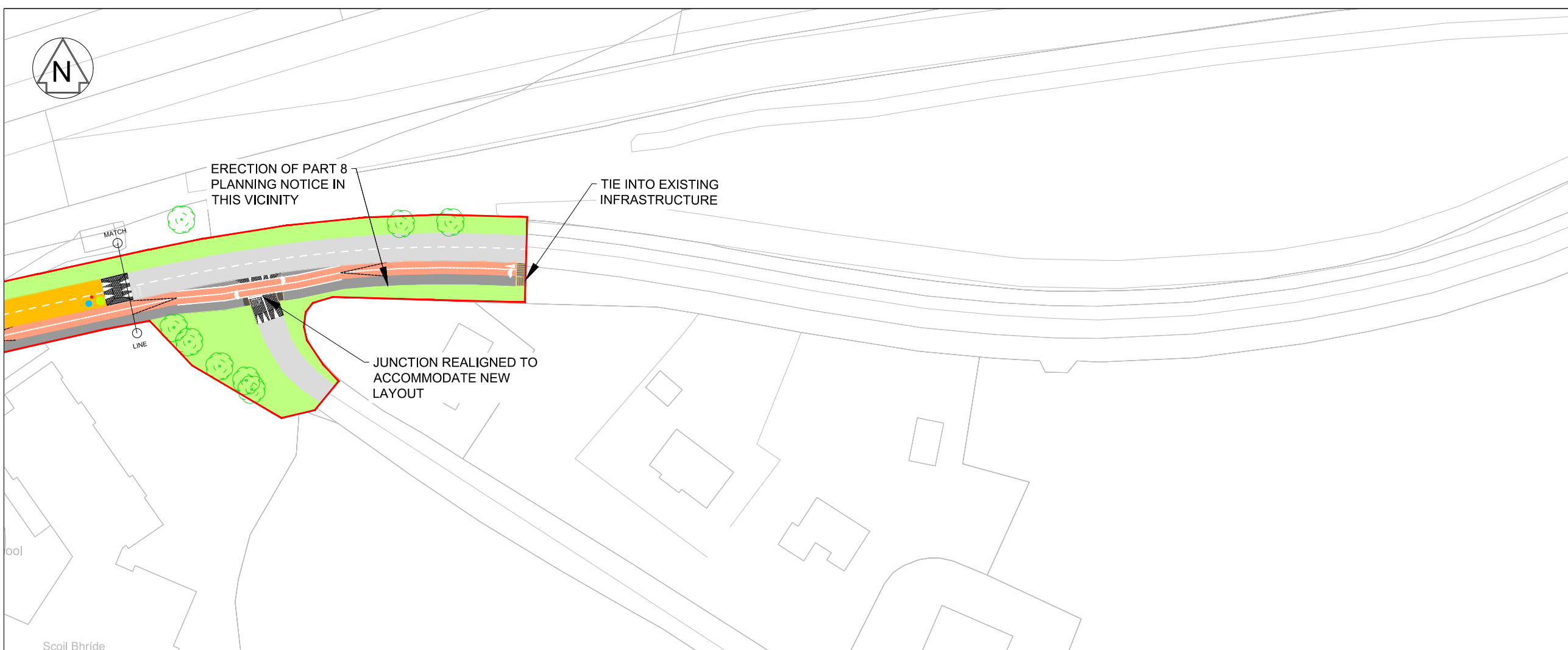
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 - FOOTPATH
 - CYCLE TRACK
 - SHARED CYCLE AND PEDESTRIAN AREA
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 - PUBLIC REALM ENHANCEMENT

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B	J. SCOTT	D.KEANE	D. KEANE	21/07/2022

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Kildare County Council

Údarás
Náisiúnta Iompair
 National Transport Authority

Drawing Title
P82022.17 PROPOSED NAAS TO KILL CYCLE SCHEME
 PART 8 PLANNING
 SHEET 8 OF 8

Scale	Designed / Drawn	Checked	Approved	Authorised
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Drawing Number	Project	Originator	Volume	Revision
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Location	Type	Role	Number	

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APPENDIX B

Arboricultural Assessment Report

Arboricultural Assessment Report

Naas to Kill Cycle Scheme
Co. Kildare

February 2022



TREESPACE

Trees • Woodland • Urban Forestry

DOCUMENT CONTROL SHEET

PROJECT NAME: Arboricultural Assessment – *an assessment of trees in relation to development.*

PROJECT REFERENCE: Naas to Kill Cycle Scheme

PROJECT LOCATION: Johnstown – Kill, Co Kildare

PREPARED FOR: Kildare County Council

PREPARED BY: Conor O Callaghan

POSITION HELD: Arborist

WORK DESCRIPTION: Field Assessor/Author

QUALIFICATIONS: MSc Arboriculture & Urban Forestry, BSc Forestry Management

CONTACT: info@treespace.ie

Contents

1. INTRODUCTION.....	1
1.1. Instructions and Brief	1
1.2. Aims and Approach.....	1
1.3. The Limitations of the Report	3
2. THE SCHEME	3
2.1. Description of the Scheme.....	3
2.2. Spatial Scope	3
3. THE TREES	5
3.1. General Description of the Trees	5
3.2. Tree Population Analysis Tables	6
4. ARBORICULTURAL IMPACT ASSESSMENT	7
4.1. Tree Loss to Facilitate Development.....	7
4.2. Additional Tree Loss	9
4.3. Tree Pruning to Facilitate Development	9
4.4. Construction Activities & The Retained Trees.....	9
4.5. Replacement Tree Planting.....	10
5. CONCLUSIONS.....	10
Appendix 1: Arboricultural Method Statement.....	
Appendix 2: Tree Survey Schedule & Tree Categorization Table	
Appendix 3: Tree Survey Schedule	
Appendix 4: Tree Works Schedule.....	
Appendix 5: Photographic Summary	

LIST OF TABLES

Table 1: List of drawings to inform the tree survey and report..... 1

Table 2: Arboricultural Impact Assessment Process..... 2

Table 3: Tree species list. 6

Table 4: Life stage. 7

Table 5: Remaining contribution in years..... 7

Table 6: Number of trees in each retention category. 7

Table 7: Direct Loss of Trees and Tree Groups. 8

LIST OF FIGURES

Figure 1: Aerial image of Johnstown village. 4

Figure 2: Aerial image of Kill village..... 5

1. INTRODUCTION

1.1. Instructions and Brief

1.1.1. Tree-space has been instructed to undertake a tree survey and arboricultural impact assessment for a proposed new cycle route between the villages of Kill and Johnstown in Co Kildare. The proposed cycle route is to provide new segregated cycle infrastructure and upgrade the existing infrastructure along the L2014 between Kill and Johnstown.

1.1.2. The report addresses the scope of works set out in the tree survey brief (Document Ref: 40000089-WSP-HW-0002) provided to Tree-space by WSP Ireland Consulting Limited. The field assessment was completed between the 13th and 16th of December 2021. The following documents were provided to Tree-space to inform the tree survey and report:

Table 1: List of drawings to inform the tree survey and report

Document Title	Document/Drawing Number	Originator
Extent of the tree survey	40000089-WSP-DG-HW-0001 (Rev-L02)	WSP
Topographical Survey	MSL12557_3DM1-ING (1,2 & 3)	MS
Proposed Route Layout	Not known	WSP

1.1.3. The report should be read in conjunction with the following Tree-space plans:

- Tree Constraints Plans: TS_TCP_20_12_21 (sheets 1 – 5).
- Tree Assessment Plans: TS_TAP_31_12_21 (sheets 1 – 5).
- Tree Removal & Protection Plans: TS_TPP_16_02_22 (sheets 1 – 5).

1.2. Aims and Approach

1.2.1. The purpose of this assessment is to quantify and categorise the arboricultural features on the site and assess the potential constraints to development. Trees are a material consideration for local authorities and tree owners. Whether they have statutory protection or not the potential impacts of construction must be considered. Construction activities often exert pressures on pre-existing trees and in some cases trees that have taken decades to mature can be damaged irreparably. The assessment and implementation of protection measures is therefore critical to mitigate against any potential negative impacts.

1.2.2. The arboricultural impact assessment was carried out in accordance with the British Standard *BS 5837:2012 Trees in relation to design, demolition, and construction – Recommendations*¹. The British Standard sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures. The assessment process undertaken for this report is described in table two below.

Table 2: Arboricultural Impact Assessment Process

TASK	DESCRIPTION
Topographical survey	Record the position of all trees within the site with a stem diameter of 75mm or more, measured at 1.5m above highest adjacent ground level.
Tree survey	Collect relevant information on all trees included in the topographical survey, as well as any that might have been missed. The parameters of the tree survey are set out in BS5837:2012 section 4.4 and are described in more detail in appendix 2 of this report.
Tree categorization	Identify the quality and value of the existing tree population. The categorization method set out in table 1, BS5837:2012 allows informed decisions to be made concerning which trees should be removed or retained in the event of a development occurring. The tree quality assessment table is included in appendix 2 of this report.
Impact assessment	Identify the requirements for the successful retention of the retained trees and detail the measures necessary for protection during the development process. Root protection areas (RPA's) are calculated in accordance with section 4.6, BS5837:2012. The RPA is the minimum area around a tree that needs to remain undisturbed to maintain the tree's viability. The RPAs of each categorised tree will be plotted on relevant scaled drawings.
Tree protection plan	The tree protection plan indicates the precise location of the protective barriers to be erected to form a construction exclusion zone around the retained trees. The plan will be superimposed on the layout plan, based on the topographical survey.
Arboricultural method statement	Address some or all of the following: Pre-development tree works, site supervision, protective fencing, ground protection, boundary treatments, services and drainage, and monitoring.

¹ The British Standards Institution (2012) *Trees in relation to design, demolition, and construction – Recommendations*. BSI Standards Limited.

1.3. The Limitations of the Report

- 1.3.1. Only those trees specified in the scope of work were assessed. The observations that were made are limited to the requirements of planning and development. The survey is not a tree risk assessment.
- 1.3.2. The trees were visually assessed from ground level only. No climbing inspections were carried out. No invasive or other detailed internal decay detection devices were used.
- 1.3.3. Where trees were not recorded on the topographical survey, their positions have been plotted manually on the drawings and cross referenced using aerial imagery. The positions of these trees should be treated as approximate only.
- 1.3.4. The conclusions relate to the conditions found at the time of survey. Trees are living organisms that are subject to the stresses of climatic extremes, decay fungi and injurious diseases. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in question may not arise in the future.

2. THE SCHEME

2.1. Description of the Scheme

- 2.1.1. The cycle scheme comprises of new bidirectional cycle track and shared paths along an approximately 4.4 km route between Kill and Johnstown villages. The bidirectional cycle path will run along the southern edge of the existing road carriageway. The path will transition into shared use areas on the existing footpaths along the route.

2.2. Spatial Scope

- 2.2.1. The tree survey targeted the trees within the red line area defined on the Tree Survey Boundary drawing (drawing ref: 40000089-WSP-DG-HW-0001). Where trees were established on adjacent lands outside the red line boundary but had the potential to be impacted upon, these trees were included in the survey.
- 2.2.2. The areas that were assessed are divided into two sections in Johnstown village and Kill village. The Johnstown section begins in the west of the village close to the roundabout on the R445. The section continues for approximately 800m to the east of the village where the land use changes to agricultural grazing.



Figure 1: Aerial image of Johnstown village with the approximate boundary of the tree survey area outlined in red. The survey for this section began at the edge of the red line in the far left of the image. The tree numbering begins at this point on T615 and finishes in the east of the village on T681.

- 2.2.3. The Kill section of the survey begins west of the village at the entrance to Embassy Manor. The survey area continues to the east through the Main Street in Kill for approximately 1200m. The survey area finishes in the eastern end of the village close to the entrance to Earls Court.

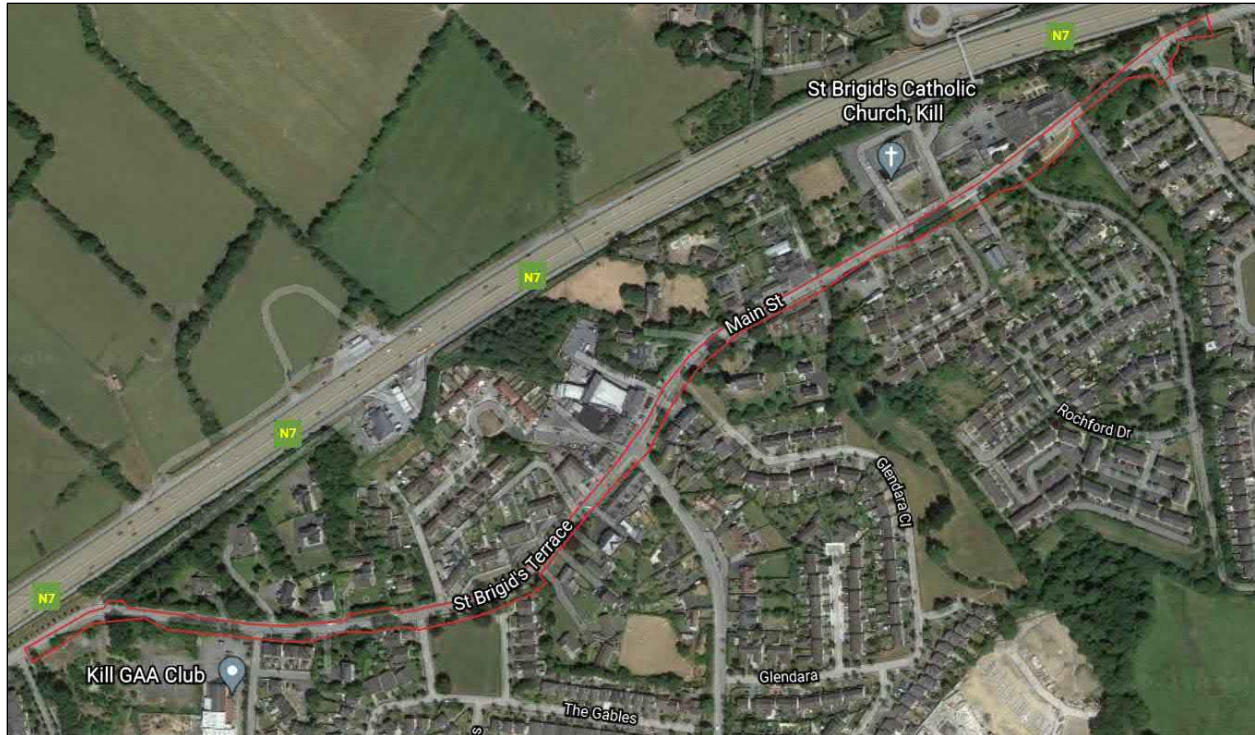


Figure 2: Aerial image of Kill village with the approximate boundary of the tree survey area outlined in red. The tree survey for this section began at the edge of the redline in the far left of the image. The tree numbering begins on TG682 at this point and finishes in the east of the village on T803.

3. THE TREES

3.1. General Description of the Trees

- 3.1.1. In total 188 individual trees and 5 tree groups were assessed for the project. The total number of trees including all the individuals in the tree groups is 238. The trees are established in narrow grass verges alongside the pavements and road edges. The canopies of the trees often extend over the pavement and road well above head height.
- 3.1.2. Twenty-six different tree species were identified along the route. The two most common species are ash and hornbeam, together accounting for 38% of the surveyed population. Eighty percent of the surveyed trees were in the young to early mature life stage. There is a very high proportion of the trees (91%) with good physiological condition. This is directly related to the high number of trees in the early stages of their life cycle.
- 3.1.3. Four trees were classified as being in the late mature stages of their life cycle. Two of these trees are old beech trees. One is established in the graveyard in Johnstown

village and the other in the churchyard on the Main Street in Kill. Using the method of White² the estimated age of the beech tree in Johnstown graveyard (tree number T640) is 160 years old and approximately 280 years old for the beech tree in the churchyard in Kill (tree number T761). Both trees are very prominent in the landscape, they have high amenity value and historic cultural significance. An image of each tree is included in the photographic summary in appendix 5 of this report.

3.1.4. Fifty percent of the surveyed population were classified as category A (see tree categorization table, appendix 2). The other fifty percent were classified as category B or category C with the highest proportion in B. The structural condition of the trees was good to fair with only four percent being in poor condition.

3.2. Tree Population Analysis Tables

3.2.1. The following tables present an analysis of the surveyed tree population. The analysis includes all the individual trees and the individual trees within the tree groups.

Species	Count	Percentage
Ash	46	19%
Hornbeam	45	19%
Silver Birch	36	15%
Large-leaved Lime	23	10%
Common Beech	20	8%
Leyland cypress	11	5%
Norway maple	10	4%
Rowan	7	3%
Sycamore	7	3%
Himalayan Birch	5	2%
Lawson cypress	4	2%
Whitebeam	4	2%
Cherry	3	1%
Copper plum	2	1%
Tree Cotoneaster	2	1%
Chusan Palm	2	1%
Cedar	2	1%
London Plane	2	1%
Hawthorn	1	0%
Grey willow	1	0%
Wych Elm	1	0%
Plum	1	0%
Monterey Cypress	1	0%
Apple	1	0%
Horse chestnut	1	0%
Grand Total	238	100.00%

Table 3: Tree species list with count of individual trees per species and percentage of the total.

² White, John (1998). *Estimating the age of large and veteran trees in Britain*. Forestry commission.

Life-Stage	Count	Percentage
Young	36	15%
Semi-mature	98	41%
Early mature	57	24%
Mature	43	18%
Late mature	4	2%
Total	238	100%

Table 4: *Count of life stage with percentage of the total.*

Remaining contribution (in years)	Count	Percentage
<10	0	0%
10-20	35	15%
20-40	75	32%
40+	128	54%
Total	238	100%

Table 5: *Count of remaining contribution in years with percentage of the total.*

Retention category (BS 5837)	Count	Percentage
A	119	50%
B	84	35%
C	35	15%
Total	238	100%

Table 6: *Count of the number of trees in each retention category with the percentage of the total.*

4. ARBORICULTURAL IMPACT ASSESSMENT

4.1. Tree Loss to Facilitate Development

- 4.1.1. The table below describes the trees that will be directly affected by the proposed cycle scheme. The impact for each individual tree is described in the Johnstown section and Kill section of the cycle route.

Table 7: Direct Loss of Trees and Tree Groups.

Tree No	Tree Species	CAT BS5837	Description of Impact
Johnstown Section			
T629	<i>Fagus sylvatica</i> Common Beech	C2	Direct conflict with carriageway widening for new raised crossing.
T630	<i>Fagus sylvatica</i> Common Beech	B2	Direct conflict with carriageway widening for new raised crossing.
T631	<i>Fagus sylvatica</i> Common Beech	A2	Direct conflict with carriageway widening and new raised crossing.
T641	<i>Sorbus aucuparia</i> Rowan	A2	Direct conflict with new alignment of the shared path and reallocated grass verge.
T642	<i>Sorbus aucuparia</i> Rowan	A2	Direct conflict with new alignment of the shared path and reallocated grass verge.
T643	<i>Sorbus aucuparia</i> Rowan	C2	Direct conflict with new alignment of the shared path and reallocated grass verge.
Kill Section			
T753	<i>Carpinus betulus</i> Hornbeam	A2	Direct conflict with alignment of new bidirectional cycle path.
T755 – T757	<i>Carpinus betulus</i> Hornbeam (x 3)	A2	Three trees in direct conflict with alignment of new bidirectional cycle path.
T767 – T769	<i>Carpinus betulus</i> Hornbeam (x 3)	A2	Three trees in direct conflict with alignment of new bidirectional cycle path.
T770	<i>Carpinus betulus</i> Hornbeam	A2	Direct conflict with alignment of new bidirectional cycle path.
T771	<i>Carpinus betulus</i> Hornbeam	A2	Direct conflict with alignment of new carriageway.
T772	<i>Carpinus betulus</i> Hornbeam	A2	Direct conflict with alignment of new bidirectional cycle path.
T785	<i>Acer pseudoplatanus</i> Sycamore	B2	Direct conflict with new shared path alignment.
Summary of Direct Loss of Trees			
<ul style="list-style-type: none"> In total 17 trees or 7% of the total surveyed tree population will be lost to facilitate the construction of the proposed cycle scheme. 			

-
- **9 category A trees (8% of the total CAT A) will be removed, 2 category B (2% of the total CAT B) and 2 category C tree (6% of the total CAT C).**
-

4.2. Additional Tree Loss

4.2.1. In the eastern end of Johnstown village there is a line of lime and ash trees. The trees are established in a narrow grass verge alongside where the land use changes to improved agricultural grazing. The lime trees are good quality and have the potential to mature and enhance the landscape. The ash trees are generally of a lower quality and their crowns are competing with the lime trees, suppressing their canopy development. It is recommended that ten of the ash trees are removed to allow the lime trees to develop freely. Out of the ten ash trees suggested for removal eight are category C and two are category B. Their tree numbers are specified in the tree works schedule in appendix 4 of this report.

4.3. Tree Pruning to Facilitate Development

4.3.1. Preconstruction phase tree pruning is not essential, however prior to the opening of the cycle scheme for public usage some tree safety issues will need to be addressed. Outside of the Kill GAA Club there are seven mature trees which have over extended limbs and deadwood accumulating in their crowns. It is recommended that the overextended limbs are shortened to reduce end weight and reduce the risk of failure. The crowns will also need to be cleaned of deadwood to prevent any potential conflicts with the new cycle path.

4.3.2. The cycle path will be constructed in close proximity to established trees along the route. It is recommended that a pre public usage tree inspection is carried out to assess headroom along the route and any post construction damage that may have introduced new defects to the retained trees.

4.4. Construction Activities & The Retained Trees

4.4.1. In total two hundred and twenty-two trees will be retained along the cycle route. The majority of these trees have the potential to be negatively impacted upon during the construction phase. To mitigate against any potential negative impacts the retained trees will be protected by barrier fencing during the construction phase. It is acknowledged that the fencing specification detailed in BS 5837 will not be practical to install along the route. The restricted space between the existing pavements and grass verges will limit the use of 2 m weld mesh fencing panels. An alternative fencing specification has been suggested in the arboricultural method statement in appendix 1 of this report.

4.4.2. There are twelve mature/late mature trees established in the grass verge outside of the Kill GAA club. The new proposed footpath alignment will encroach on the RPAs of the retained trees. It is suggested that a no-dig cellular confinement system with

porous asphalt is installed along this section to mitigate against any potential root severance from digging operations. The specific area is detailed with hatch on the tree removal and protection plan (TS_TPP_16_2_22, sheet 3). Some ground preparations are expected in the area. The ground preparations should ideally be carried out with an air spade/lance to prevent damage to the tree root systems.

4.5. Replacement Tree Planting

- 4.5.1. Seventeen trees will be lost to facilitate the development of the cycle scheme. It is suggested that seventeen new trees are established in suitable locations along the route post construction.
- 4.5.2. If the ten ash trees described in paragraph 4.2.1 of this report are removed the recommendation is that they are not replaced.

5. CONCLUSIONS

- The tree loss to facilitate the construction of the proposed scheme is not considered significant. Ninety three percent of the surveyed population will be retained.
- Significant effort has been made by the scheme designers to design a route that will retain as many trees as possible.
- The retained trees will be protected by barrier fencing during the construction phase.
- There is adequate space to compensate for the tree loss and establish new trees post construction.
- The arboricultural method statement in appendix 1 of this report addresses the following: preconstruction tree works, tree protective fencing, root management and construction phase monitoring and compliance.

Appendix 1

Arboricultural Method Statement

The following arboricultural method statement outlines the order of works and tree protection measures for the Naas to Kill Cycle Scheme. The method statement should be read in conjunction with the Tree Removal & Protection Plans (TS_TPP_16_2_22, sheets 1-5).

Pre-Construction Site Briefing

- Prior to the construction phase of the development a briefing should be arranged between the principal contractor and the retained consulting arborist. The objectives of the briefing will be to clarify the following:
 - Confirm the tree works to be undertaken.
 - Confirm the location of the tree protection fencing.
 - Review and raise awareness of sensitive areas on the site where mature trees and hedges are being retained.
 - Confirm the requirements for arboricultural monitoring for the duration of the construction phase.

Pre-Construction Tree Works

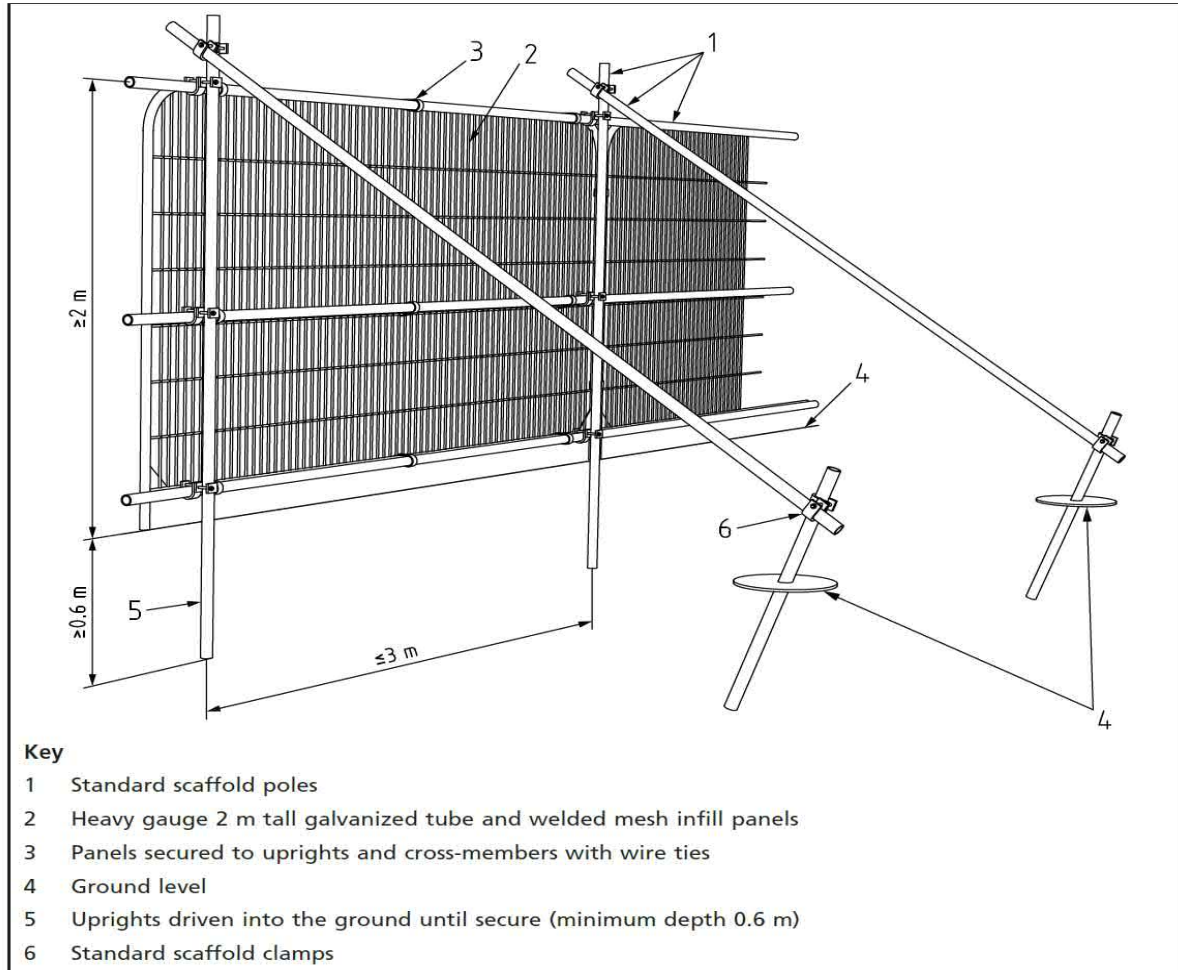
- The necessary tree works to facilitate the proposed development are described in the tree works schedule (appendix 4 of this report).
- The tree works schedule should be presented to the tree owner prior to any work being carried out. The tree owner must agree to the proposed works.
- All tree works will be carried out in accordance with the recommendations given in BS 3998 (2010).
- Prior to the commencement of any tree works, the trees and their surroundings should be assessed for the presence of any seasonal nesting sites, potential roost features or protected species.

Protective Fencing

- The tree protection fencing is designed to create a construction exclusion zone around the retained trees to protect the critical root mass from negative impacts.
- The alignment of the tree protection fencing largely follows the perimeter of the existing grass verges in sections along the route. The layout of the fencing should resemble what is detailed in the tree protection plans (TS_TPP_16_2_22, sheets 1-5)
- The tree protection fencing should be fit for purpose and well braced to resist impacts. It is acknowledged that the fencing configuration detailed in the British Standard (see image on the following page) would be impractical to install along the route. Two alternative fencing types have been provided.
- Signs will be erected on the fences stating 'CONSTRUCTION EXCLUSION ZONE – NO ACCESS'.

- The main contractor will inform the client that the tree protection fencing, and signage is in place before construction activities commence.

BS 5837 British Standard Tree Protection Fencing:



ALTERNATIVE FENCING



Roots & Root Pruning

- It is possible that tree roots may be encountered when ground works begin along the route. It is recommended that rolls of hessian/jute are stored on site so that any exposed roots can be protected from drying out and desiccation occurring.
- Where tree roots are encountered in the working areas and cannot be moved out of the construction profile root pruning may be required. If root pruning is necessary, it should be carried out by a qualified arborist. The roots should be target pruned with a sharp secateurs or handsaw. Once pruning is complete the cut ends should be recovered with topsoil or hessian.

Monitoring & Compliance

- It is recommended that a qualified consulting arborist is assigned to the project for the duration of the construction phase.
- The responsibilities of the assigned arborist will include:
 - Bi-weekly checks on the tree protective fencing.
 - Monitoring the health and vitality of the retained trees.
 - Monitoring soil disturbance and root disturbance in the working areas.
 - Carry out any potential root pruning operations if necessary.

Appendix 2

Tree Schedule Key

Tree/Group number	Reference number for individual trees or groups of trees, prefixed by T (Tree), TG (Tree Group), W (Woodland), H (Hedge) or S (Shrub) to indicate the type of feature
Tree Count	Number of trees of a particular species recorded within a group feature, with the default value of 1 for single trees.
Species	Scientific name followed by common name
Height (m)	Tree height to the nearest metre, measured with a Haglofs Clinometer or estimated.
Stem Count	Number of stems. Stem count indicates whether the tree is single-stemmed or multi-stemmed and informs the RPA calculation.
Stem Diameter	Stem diameter measured at 1.5m above ground level in accordance with Annex C of BS5837:2012.
Crown Spread	Distance from the stem position to the crown periphery in the four cardinal directions.
First Significant Branch Height (m) – Direction of growth	Distance between the ground and lowest significant branch and the direction of growth.
Canopy Clearance Height (m)	Distance between the ground and the lowest point of the crown periphery, estimated to the nearest half metre.
Life-stage	Young, Semi-mature, Early-mature, Mature, Late Mature, Ancient or Veteran
Physiological Condition	Good, Normal, Fair, Poor, Dead
Observations	General description of the tree or tree group, including basic features and morphology, structural and physiological condition, growing conditions and surroundings.
Recommendations	Management recommendations for tree works to address immediate unacceptable risks, or to facilitate development proposals.
Estimated Remaining Contribution (years)	Estimated number of years for which the tree will continue to make a positive contribution to the site, banded as <10yrs, 10-20yrs, 20-40yrs, 40+.
Retention Category	Quality and value category as defined in table 1 of BS5837:2012 (see following page for full description)
Retention Sub-category	One or more sub-categories as defined in table 1 of BS5837:2012 (see following page for full description)

RPR (m) Radius of the RPA, in metres, when this is plotted as a circle around the tree stem

RPA (m³) Root protection area calculated from the stem diameter according to the formula in BS5837:2012. The RPA is the minimum area required to maintain tree viability.

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Appendix 3

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T615	1	<i>Fagus sylvatica</i> Common Beech	4.5	1	120	1		1		1		1		2	Young	Poor	Poor	Large wounds on the trunk, large volume of deadwood in the crown for the life stage. The wounds are occluding, but there appears to be a bark necrosis.	1.4	7	10-20	C	2
T616	1	<i>Fagus sylvatica</i> Common Beech	4.5	1	100	1		1		1		1		1.5	Young	Good	Fair	Large wound @ base of the trunk, possibly from grass cutting operations. Wound is occluding, minor deadwood in the crown.	1.2	5	20-40	B	2
T617	1	<i>Fagus sylvatica</i> Common Beech	4	1	80	1		1		1		1		1.5	Young	Poor	Poor	Large wound @ base of the trunk, possibly from grass cutting operations. Wound is occluding, minor deadwood in the crown.	1	3	10-20	C	2
T618	1	<i>Fagus sylvatica</i> Common Beech	6	1	120	1		1		1		1		1.5	Young	Good	Good	Minor codominance in the crown, minor bark inclusion.	1.4	7	40+	A	2
T619	1	<i>Fagus sylvatica</i> Common Beech	4	1	90	1		1		1		1		1.5	Young	Good	Good	None required	1.1	4	40+	A	2
T620	1	<i>Fagus sylvatica</i> Common Beech	4.5	1	75	1		1		1		1		1.5	Young	Good	Good	Large wound @ base of the trunk, possibly from grass cutting operations. Wound is occluding, but decay is progressing into the central portion of the stem.	0.9	3	10-20	C	2
T621	1	<i>Fagus sylvatica</i> Common Beech	3	1	85	1		1		1		1		1.5	Young	Fair	Fair	Minor deadwood in the crown, leader appears to have died. The tree is established underneath an MV electricity network. Conflict is likely throughout the life cycle of the tree.	1	3	10-20	C	2
T622	1	<i>Fagus sylvatica</i> Common Beech	4.5	1	90	1		1		1		1		1.5	Young	Fair	Fair	Large wound @ base of the trunk, possibly from grass cutting operations. Wound is partially occluding, minor deadwood in the crown.	1.1	4	10-20	C	2
T623	1	<i>Fagus sylvatica</i> Common Beech	6	1	100	1.7		1		1		1.7		1.5	Young	Good	Good	None required	1.2	5	40+	A	2

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T624	1	<i>Fagus sylvatica</i> Common Beech	6	1	120	1.2		1		1		1.2		1.5	Young	Good	Good	None required	1.4	7	40+	A	2
T625	1	<i>Fagus sylvatica</i> Common Beech	6	1	120	2.4		2		2		2		1.5	Semi-mature	Good	Fair	Minor codominance in the crown, minor bark inclusion.	1.4	7	40+	A	2
T626	1	<i>Fagus sylvatica</i> Common Beech	4	1	150	2.4		2		2		2.4		0.5	Semi-mature	Good	Fair	Codominant stems with minor bark inclusion.	1.8	10	40+	B	2
T627	1	<i>Fagus sylvatica</i> Common Beech	6	1	120	2		2		1.5		1.5		1.5	Semi-mature	Good	Good	None required	1.4	7	40+	A	2
TG628	31	<i>Betula pendula</i> Silver Birch(x22) <i>Fraxinus excelsior</i> Ash(x9)	10	33	130									0.5	Early-mature	Good	Good	Tree group with some multi-stem trees. Some of the trees are being suppressed by their neighbours causing over extension over the pavement. Visible heaving of the pavement by the trees root systems, approx 50-60mm from surface level. 5 of the ash are established under HV electricity network.	1.6	8	40+	A	2
T629	1	<i>Fagus sylvatica</i> Common Beech	4	1	100	1		1		1		1		1.5	Young	Good	Good	Recently been topped for electricity network clearance. Downgraded because of its position under the electricity line.	1.2	5	10-20	C	2
T630	1	<i>Fagus sylvatica</i> Common Beech	4	1	60	0.5		0.5		0.5		0.5		1.5	Young	Fair	Fair	Wound @ base of the trunk, possibly from grass cutting operations. Wound is occluding.	0.7	2	20-40	B	2
T631	1	<i>Fagus sylvatica</i> Common Beech	4.5	1	110	1.7		1.5		1.5		1.5		1	Young	Good	Good	None required	1.3	5	40+	A	2
TG632	5	<i>Cupressocyparis leylandii</i> Leyland cypress	6	5	180									0	Semi-mature	Good	Good	Distinct tree group with some aesthetic value.	2.2	15	20-40	B	2
T633	1	<i>Trachycarpus fortunei</i> Chusan Palm	3.5	1	240	0.5		0.5		0.5		0.5		3	Early-mature	Good	Good	None required	2.9	26	20-40	B	2
T634	1	<i>Cotoneaster frigidus</i> Tree Cotoneaster	3	1	100	0.5		0.5		0.5		0.5		0	Semi-mature	Good	Good	None required	1.2	5	20-40	B	2
T635	1	<i>Cotoneaster frigidus</i> Tree Cotoneaster	3	5	90	0.5		0.5		0.5		0.5		0	Semi-mature	Good	Good	None required	1.1	4	20-40	B	2

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						N	NE	E	SE	S	SW	W	NW										
T636	1	<i>Trachycarpus fortunei</i> Chusan Palm	3.5	1	200	0.5		0.5		0.5		0.5		3	Early-mature	Good	Good	None required	2.4	18	20-40	B	2
T637	1	<i>Betula pendula</i> Silver Birch	12	1	340	4		3		4.5		4		1.5	Mature	Good	Good	Tree has been topped in the past.	4.1	52	20-40	B	2
TG638	3	<i>Prunus cerasifera</i> Copper plum (x1), <i>Cedrus atlantica</i> Cedar (x2)	5	3	160									1.5	Early-mature	Good	Fair	Copper plum has been topped, one of the cedars is being suppressed by the plum.	1.9	12	20-40	B	2
T639	1	<i>Betula pendula</i> Silver Birch	10	1	330	3.6		3		3.6		4.5		3	Mature	Good	Fair	Tree has been heavily topped in the past, new crown has developed.	4	49	20-40	B	2
T640	1	<i>Fagus sylvatica</i> Common Beech	22	2	1000	13		9		9		12		3	Late-mature	Good	Fair	Very large tree, co-dominant approximately 1m from ground level. Trunk is partially obscured by ivy. Some over extension of the limbs to the north and east. 18-24 month inspections recommended.	12	452	40+	A	3
T641	1	<i>Sorbus aucuparia</i> Rowan	4	1	90	1.2		1.2		1.2		1.2		1.5	Young	Good	Good	None required	1.1	4	40+	A	2
T642	1	<i>Sorbus aucuparia</i> Rowan	4	1	90	1.2		1.2		1.2		1.2		1.5	Young	Good	Good	None required	1.1	4	40+	A	2
T643	1	<i>Sorbus aucuparia</i> Rowan	4	1	75	1		1		1		1		1	Young	Fair	Poor	The tree has a heavy lean to the north. Needs to be straightened and restaked.	0.9	3	10-20	C	2
T644	1	<i>Tilia platyphyllos</i> Large-leaved Lime	5	1	160	2		2		2		2.4		0	Semi-mature	Good	Good	Epicormic growth around the base of the trunk. There will be an ongoing conflict with the low voltage electricity line.	1.9	12	40+	A	2
T645	1	<i>Fraxinus excelsior</i> Ash	3.5	1	85	1		1		1		1		1	Young	Good	Fair	None required	1	3	20-40	B	2
T646	1	<i>Tilia platyphyllos</i> Large-leaved Lime	6	1	160	2.3		2.3		2.3		2.3		2	Semi-mature	Good	Good	None required	1.9	12	40+	A	2
T647	1	<i>Tilia platyphyllos</i> Large-leaved Lime	8	1	170	2.5		2.5		2.5		2.5		2	Semi-mature	Good	Good	None required	2	13	40+	A	2
T648	1	<i>Tilia platyphyllos</i> Large-leaved Lime	6	1	150	2.2		2.2		2.2		2.2		0	Semi-mature	Good	Fair	Codominant stems in the crown. Multi-stem approximately 50cm from ground level.	1.8	10	20-40	B	2

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						N	NE	E	SE	S	SW	W	NW										
T649	1	<i>Tilia platyphyllos</i> Large-leaved Lime	9	1	190	3.5		3.5	3.5		3.5			2	Semi-mature	Good	Good	Remove climber	2.3	16	40+	A	2
T650	1	<i>Tilia platyphyllos</i> Large-leaved Lime	9	1	210	3		3	3		4			2	Semi-mature	Good	Good	Remove climber	2.5	20	40+	A	2
T651	1	<i>Tilia platyphyllos</i> Large-leaved Lime	9	1	200	2		3	3		3.2			2	Semi-mature	Good	Good	Remove climber	2.4	18	40+	A	2
T652	1	<i>Fraxinus excelsior</i> Ash	8	1	170	2		2	0		2			2	Semi-mature	Good	Fair	Codominant stems in the crown. Tree is suppressed by neighbouring lime.	2	13	20-40	B	2
T653	1	<i>Tilia platyphyllos</i> Large-leaved Lime	6	1	140	1		2	2		2.5			1.5	Semi-mature	Good	Fair	Minor codominance in the crown, epicormic growth at base of the trunk.	1.7	9	40+	B	2
T654	1	<i>Fraxinus excelsior</i> Ash	6	1	110	0.5		0.5	0.5		0.5			1.5	Young	Good	Fair	Codominant stems	1.3	5	20-40	B	2
T655	1	<i>Fraxinus excelsior</i> Ash	6	1	140	0.5		1.5	0.5		1.5			1.5	Young	Good	Fair	Codominant stems	1.7	9	10-20	C	2
T656	1	<i>Fraxinus excelsior</i> Ash	6	1	90	0		1	0.5		0.5			1	Young	Good	Fair	Suppressed by neighbouring tree	1.1	4	10-20	C	2
T657	1	<i>Tilia platyphyllos</i> Large-leaved Lime	6	1	170	3		3	1		3			1.5	Semi-mature	Good	Fair	Codominant stems in the crown. Tree is suppressed by neighbouring ash, consider removing the ash.	2	13	40+	B	2
T658	1	<i>Fraxinus excelsior</i> Ash	6	1	90	0.5		1.5	0.5		1.5			1.5	Young	Good	Fair	Codominant stems	1.1	4	10-20	C	2
T659	1	<i>Tilia platyphyllos</i> Large-leaved Lime	8	1	210	2.5		2.5	2.5		3			1.5	Semi-mature	Good	Good	Crown is partially suppressed by neighbouring ash	2.5	20	40+	A	2
T660	1	<i>Fraxinus excelsior</i> Ash	5	1	110	2		1.5	1		2			1.5	Young	Good	Fair	Codominant stems	1.3	5	10-20	C	2
T661	1	<i>Tilia platyphyllos</i> Large-leaved Lime	7	1	100	0.5		0.5	1		1.5			0	Young	Good	Fair	Codominant stems, epicormic @ base of the trunk. Crown is suppressed by neighbouring ash.	1.2	5	10-20	C	2
T662	1	<i>Fraxinus excelsior</i> Ash	7	1	100	0.5		1.5	1		0.5			1.5	Young	Good	Fair	Codominant stems, crown is suppressed by neighbouring trees.	1.2	5	10-20	C	2
T663	1	<i>Fraxinus excelsior</i> Ash	8	2	170	1.5		1.5	1.5		2			1.5	Semi-mature	Good	Fair	Codominant stems	2	13	10-20	C	2
T664	1	<i>Tilia platyphyllos</i> Large-leaved Lime	7	1	170	2.7		2.3	2.7		2.7			1.5	Semi-mature	Good	Good	Crown is partially suppressed by neighbouring ash	2	13	40+	A	2

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						N	NE	E	SE	S	SW	W	NW										
T665	1	<i>Fraxinus excelsior</i> Ash	7	1	120	1		1		0		1		1.5	Young	Good	Fair	Crown is partially suppressed by neighbouring lime	1.4	7	10-20	C	2
T666	1	<i>Fraxinus excelsior</i> Ash	7	1	120	0.5		1.5		0.5		1.5		1.5	Young	Good	Good	Crown is partially suppressed by neighbouring lime	1.4	7	20-40	B	2
T667	1	<i>Tilia platyphyllos</i> Large-leaved Lime	8	1	200	3		3		3		3		1.5	Semi-mature	Good	Good	Crown is partially suppressed by neighbouring ash	2.4	18	40+	A	2
T668	1	<i>Fraxinus excelsior</i> Ash	7	1	120	1		1.7		0.5		2		1.5	Young	Good	Fair	Codominant stems. Crown is partially suppressed by neighbouring lime	1.4	7	10-20	C	2
T669	1	<i>Tilia platyphyllos</i> Large-leaved Lime	9	1	190	3		3		2.5		3		1.5	Semi-mature	Good	Good	None required	2.3	16	40+	A	2
T670	1	<i>Tilia platyphyllos</i> Large-leaved Lime	9	1	180	3		3		3		3		1.5	Semi-mature	Good	Good	Crown is partially suppressed by neighbouring ash	2.2	15	40+	A	2
T671	1	<i>Fraxinus excelsior</i> Ash	6	1	100	1		1		0.5		1		1.5	Young	Good	Fair	Codominant stems	1.2	5	10-20	C	2
T672	1	<i>Fraxinus excelsior</i> Ash	6	1	90	1		1		1		1		1.5	Young	Good	Fair	None required	1.1	4	20-40	B	2
T673	1	<i>Fraxinus excelsior</i> Ash	6	1	100	1		1		1		1		1.5	Young	Good	Fair	Codominant stems	1.2	5	10-20	C	2
T674	1	<i>Fraxinus excelsior</i> Ash	5	1	100	1.5		1.5		1		2		1.5	Young	Good	Fair	Codominant stems	1.2	5	10-20	C	2
T675	1	<i>Fraxinus excelsior</i> Ash	6	1	100	1		1		1		1		1.5	Young	Good	Good	None required	1.2	5	20-40	B	2
T676	1	<i>Fraxinus excelsior</i> Ash	6	1	100	1		1.5		1		1.5		1.5	Young	Good	Good	None required	1.2	5	20-40	B	2
T677	1	<i>Fraxinus excelsior</i> Ash	7	1	100	0.5		1		0.5		1		1.5	Young	Good	Good	Crown is partially suppressed by neighbouring ash	1.2	5	20-40	B	2
T678	1	<i>Fraxinus excelsior</i> Ash	7	1	150	2.5		1.5		2		2.5		1.5	Semi-mature	Good	Fair	Codominant stems	1.8	10	20-40	B	2
T679	1	<i>Fraxinus excelsior</i> Ash	7	1	110	2		1		1.5		1		1.5	Semi-mature	Good	Good	None required	1.3	5	20-40	B	2
T680	1	<i>Fraxinus excelsior</i> Ash	5	1	90	1.5		0.5		1		0.5		1.5	Young	Good	Fair	Codominant stems	1.1	4	10-20	C	2
T681	1	<i>Fraxinus excelsior</i> Ash	6	1	140	1.5		1.5		1.5		1.5		1.5	Young	Good	Fair	Codominant stems	1.7	9	10-20	C	2

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
TG682	6	<i>Betula pendula</i> Silver Birch (x2) <i>Chamaecyparis lawsoniana</i> Lawson cypress (x4)	13	6	233									2	Mature	Good	Good	Trunks obscured by ivy.	2.8	25	20-40	B	2
TG683	5	<i>Fraxinus excelsior</i> Ash (x4) <i>Acer pseudoplatanus</i> Sycamore (x1)	6	6	200									1	Semi-mature	Good	Fair	Codominant stems	2.4	18	20-40	B	2
T684	1	<i>Crataegus monogyna</i> Hawthorn	10	3	291	2.3		0		2.5				1	Mature	Fair	Fair	Trunks obscured by ivy. Crown is suppressed by neighbouring tree.	3.5	38	10-20	C	2
T685	1	<i>Fraxinus excelsior</i> Ash	13	3	381	4.1		2		4				5	Mature	Fair	Fair	Trunks obscured by ivy. Crown is suppressed by neighbouring tree.	4.6	66	10-20	C	2
T686	1	<i>Fraxinus excelsior</i> Ash	13	5	385	3		3		4				5	Mature	Fair	Fair	Trunks obscured by ivy. Crown is suppressed by neighbouring tree.	4.6	67	10-20	C	2
T687	1	<i>Fraxinus excelsior</i> Ash	14	3	354	2.5		2		5				5	Mature	Fair	Fair	Irregular shaped trunk, obscured by ivy.	4.2	57	10-20	C	2
T688	1	<i>Fagus sylvatica</i> Common Beech	22	1	700	6.3		4.4		5				3	Late-mature	Good	Good	Trunk is partially obscured by ivy. Very large crown size.	8.4	222	40+	A	3
T689	1	<i>Fraxinus excelsior</i> Ash	21	2	484	4.5		2		4.5				8	Mature	Poor	Poor	The eastern stem is hollow, fungal fruit body @ the base of the trunk. The stem has a strong lean towards the carpark spaces (remove eastern stem). Western stem is Ok (stem with the tag).	5.8	106	10-20	C	2
T690	1	<i>Fraxinus excelsior</i> Ash	21	2	446	3.3		3		4				4	Mature	Poor	Fair	Eastern stem has been topped. Deadwood accumulating in the crown of the western stem. Crown will need to be cleaned of deadwood.	5.4	90	10-20	C	2
T691	1	<i>Fraxinus excelsior</i> Ash	21	1	440	4		3		6				4	Mature	Fair	Fair	Limbs are beginning to overextend over carpark. Deadwood in the crown, fungal bracket on the trunk approximately 5m from ground level.	5.3	88	20-40	B	2

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T692	1	<i>Fraxinus excelsior</i> Ash	23	1	510	6.5	4.2	4.5	3.8				6	Mature	Fair	Fair	Limbs are beginning to overextend over road & carpark. Trunk is partially obscured by ivy. Light deadwood accumulating in the crown.	6.1	118	20-40	B	2	
T693	1	<i>Fraxinus excelsior</i> Ash	20	2	400	4	2	4	1				4	Mature	Fair	Fair	Limbs are beginning to overextend over carpark. Light deadwood in the crown.	4.8	72	20-40	B	2	
T694	1	<i>Fraxinus excelsior</i> Ash	20	1	380	3	2	3	1				6	Mature	Fair	Fair	Trunk is obscured by ivy. Crown is suppressed by neighbouring tree. Light deadwood accumulating in the crown.	4.6	65	20-40	B	2	
T695	1	<i>Fraxinus excelsior</i> Ash	20	1	520	3	3	6	2				3	Mature	Fair	Fair	Trunk is partially obscured by ivy. Light deadwood accumulating in the crown.	6.2	122	20-40	B	2	
T696	1	<i>Sorbus aria</i> Whitebeam	6	1	150	2	2	2	2				1.5	Semi-mature	Good	Good	None required	1.8	10	40+	A	2	
T697	1	<i>Sorbus aria</i> Whitebeam	6	1	170	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2	13	40+	A	2	
T698	1	<i>Sorbus aria</i> Whitebeam	6	1	180	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.2	15	40+	A	2	
T699	1	<i>Tilia platyphyllos</i> Large-leaved Lime	4	1	160	2	2	2	2				0	Semi-mature	Good	Fair	Codominant stems	1.9	12	40+	B	2	
T700	1	<i>Tilia platyphyllos</i> Large-leaved Lime	7	1	180	1.5	2.3	2.3	2.2				2	Semi-mature	Good	Fair	Codominant stems with bark inclusion.	2.2	15	40+	B	2	
T701	1	<i>Prunus cerasifera</i> Copper plum	7	1	240	2.3	2.3	2.5	2.5				1.2	Early-mature	Fair	Poor	Historic topping for electricity line clearance. Codominant stems with partial bark inclusion. Minor deadwood in the crown, fungal brackets on one stem.	2.9	26	10-20	C	2	
T702	1	<i>Sorbus aucuparia</i> Rowan	8	1	230	2.1	1.5	1.5	1				1.5	Mature	Fair	Poor	Historic topping for electricity line clearance. Codominant stems with poor crown form.	2.8	24	10-20	C	2	

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T703	1	<i>Tilia platyphyllos</i> Large-leaved Lime	12	1	490	3.7		4		3			3	3	Early-mature	Good	Poor	Codominant stems with partial bark inclusion. Historic topping for electricity line clearance. Good regrowth since last cutting cycle.	5.9	109	20-40	B	2
T704	1	<i>Prunus</i> Cherry	6	1	320	2.5		2.1		2.1			2.3		Mature	Good	Fair	Codominant stems with minor bark inclusion. Historic topping for the electricity network.	3.8	46	10-20	C	2
T705	1	<i>Prunus</i> Cherry	7	1	260	2.5		2		2			2		Mature	Good	Fair	Crown suppressed by neighbouring trees. Historic topping for the electricity network.	3.1	31	10-20	C	2
T706	1	<i>Sorbus aria</i> Whitebeam	8	1	360	2.5		2.8		2			2		Mature	Good	Fair	Crown suppressed by neighbouring trees. Historic topping for the electricity network.	4.3	59	10-20	C	2
T707	1	<i>Carpinus betulus</i> Hornbeam	10	1	270	2		2		2			2		Semi-mature	Good	Good	None required	3.2	33	40+	A	2
T708	1	<i>Carpinus betulus</i> Hornbeam	10	1	220	2		2		2			2		Semi-mature	Good	Good	None required	2.6	22	40+	A	2
T709	1	<i>Carpinus betulus</i> Hornbeam	10	1	240	2		2		2			2		Semi-mature	Good	Good	None required	2.9	26	40+	A	2
T710	1	<i>Carpinus betulus</i> Hornbeam	10	1	290	2		2		2			2		Semi-mature	Good	Fair	Codominant stems with partial bark inclusion.	3.5	38	40+	B	2
T711	1	<i>Carpinus betulus</i> Hornbeam	10	1	250	2		2		2			2		Semi-mature	Good	Good	None required	3	28	40+	A	2
T712	1	<i>Carpinus betulus</i> Hornbeam	10	1	290	2		2		2			2		Semi-mature	Good	Good	None required	3.5	38	40+	A	2
T713	1	<i>Carpinus betulus</i> Hornbeam	10	1	280	2		2		2			2		Semi-mature	Good	Good	None required	3.4	35	40+	A	2
T714	1	<i>Carpinus betulus</i> Hornbeam	10	1	330	2		2		2			2		Early-mature	Good	Good	None required	4	49	40+	A	2
T715	1	<i>Platanus x hispanica</i> London Plane	18	1	500	3.6		3.2		2			3		Mature	Good	Fair	Codominant stems. Historic pollarding.	6	113	40+	B	2
T716	1	<i>Platanus x hispanica</i> London Plane	18	1	470	3.2		3.7		2			3		Mature	Good	Good	None required	5.6	100	40+	A	2
T717	1	<i>Tilia platyphyllos</i> Large-leaved Lime	15	1	410	3.5		4		3			2.2		Mature	Good	Fair	Codominant stems with partial bark inclusion.	4.9	76	40+	A	2

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T718	1	<i>Acer platanoides</i> Norway maple	11	1	340	3.2	2.8	1.5	2.7				3	Early-mature	Good	Fair	Codominant stems	4.1	52	40+	A	2	
T719	1	<i>Carpinus betulus</i> Hornbeam	9	1	190	2	4	2	2				1	Semi-mature	Good	Good	Crown is partially suppressed by neighbouring trees	2.3	16	40+	A	2	
T720	1	<i>Carpinus betulus</i> Hornbeam	9	1	200	2.3	2.1	1.5	2.2				1.5	Semi-mature	Good	Good	None required	2.4	18	40+	A	2	
T721	1	<i>Acer platanoides</i> Norway maple	11	1	290	2.6	2.6	2.6	2.6				2	Early-mature	Good	Fair	Codominant stems	3.5	38	40+	A	2	
T722	1	<i>Carpinus betulus</i> Hornbeam	8.5	1	210	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.5	20	40+	A	2	
T723	1	<i>Carpinus betulus</i> Hornbeam	8.5	1	180	2	2	2	2				1	Semi-mature	Good	Good	None required	2.2	15	40+	A	2	
T724	1	<i>Sorbus aucuparia</i> Rowan	6.5	8	190	2.4	2.4	2.4	2.4				1	Semi-mature	Good	Fair	Multi-stem at the base of the trunk. Historic coppice regrowth.	2.3	16	20-40	B	2	
T725	1	<i>Carpinus betulus</i> Hornbeam	8.5	1	200	2	2	2	2				1	Semi-mature	Good	Good	None required	2.4	18	40+	A	2	
T726	1	<i>Carpinus betulus</i> Hornbeam	8.5	1	230	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.8	24	40+	A	2	
T727	1	<i>Acer platanoides</i> Norway maple	11	1	380	3.3	3.2	2.7	2.8				2	Early-mature	Good	Fair	Codominant stems	4.6	65	40+	B	2	
T728	1	<i>Malus</i> Apple	5	1	200	2.7	2.7	2.2	2.7				1.5	Mature	Good	Good	None required	2.4	18	20-40	B	2	
T729	1	<i>Carpinus betulus</i> Hornbeam	8.5	1	180	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.2	15	40+	A	2	
T730	1	<i>Acer platanoides</i> Norway maple	11	1	410	3.7	3.6	3.5	3.7				2	Early-mature	Good	Fair	Codominant stems	4.9	76	40+	A	2	
T731	1	<i>Carpinus betulus</i> Hornbeam	8.5	1	220	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.6	22	40+	A	2	
T732	1	<i>Carpinus betulus</i> Hornbeam	7.5	1	220	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.6	22	40+	A	2	
T733	1	<i>Carpinus betulus</i> Hornbeam	8	1	240	2	2	2	2				1	Semi-mature	Good	Good	None required	2.9	26	40+	A	2	
T734	1	<i>Betula pendula</i> Silver Birch	6	1	350	3.1	3.6	2.3	2.3				1.5	Mature	Fair	Poor	Historic topping	4.2	55	10-20	C	2	
T735	1	<i>Carpinus betulus</i> Hornbeam	8	1	190	2	2	2	2				1.5	Semi-mature	Good	Good	None required	2.3	16	40+	A	2	

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						N	NE	E	SE	S	SW	W	NW										
T736	1	<i>Carpinus betulus</i> Hornbeam	8	1	230	2.2	2.2	2.2	2.2					1	Semi-mature	Good	Good	None required	2.8	24	40+	A	2
T737	1	<i>Betula pendula</i> Silver Birch	11	1	210	2.5	2.5	2.5	2.5					2	Early-mature	Good	Good	Minor conflict with electricity network.	2.5	20	20-40	B	2
T738	1	<i>Carpinus betulus</i> Hornbeam	8	1	170	2	2	2	2					1.5	Semi-mature	Good	Good	None required	2	13	40+	A	2
T739	1	<i>Carpinus betulus</i> Hornbeam	8	1	200	2	2	2	2					1.5	Semi-mature	Good	Good	Minor conflict with electricity network.	2.4	18	40+	A	2
T740	1	<i>Carpinus betulus</i> Hornbeam	8	1	190	2	2	2	2					1.5	Semi-mature	Good	Good	None required	2.3	16	40+	A	2
T741	1	<i>Carpinus betulus</i> Hornbeam	8	1	240	2	2	2	2					1.5	Semi-mature	Good	Good	None required	2.9	26	40+	A	2
T742	1	<i>Carpinus betulus</i> Hornbeam	8	1	240	2	2	2	2					1.5	Semi-mature	Good	Good	Direct conflict with the electricity network.	2.9	26	40+	A	2
T743	1	<i>Carpinus betulus</i> Hornbeam	8	1	230	2	2	2	2					1.5	Semi-mature	Good	Good	None required	2.8	24	40+	A	2
T744	1	<i>Carpinus betulus</i> Hornbeam	8	1	190	2	2	2	2					1.5	Semi-mature	Good	Good	None required	2.3	16	40+	A	2
T745	1	<i>Carpinus betulus</i> Hornbeam	6	1	140	0.5	0.5	0.5	0.5					1.5	Semi-mature	Good	Good	None required	1.7	9	40+	A	2
T746	1	<i>Carpinus betulus</i> Hornbeam	6	1	130	1	1	1	1					1	Semi-mature	Good	Good	None required	1.6	8	40+	A	2
T747	1	<i>Sorbus aucuparia</i> Rowan	7	1	150	2.3	0.5	2.3	2					2	Early-mature	Fair	Fair	Codominant stems, stub cuts, minor deadwood in the crown.	1.8	10	20-40	B	2
T748	1	<i>Sorbus aucuparia</i> Rowan	7	1	190	2.6	2.6	2.8	0.5					2	Early-mature	Fair	Fair	Codominant stems, stub cuts, minor deadwood in the crown. Crown is partially suppressed by neighbouring tree.	2.3	16	20-40	B	2
T749	1	<i>Prunus</i> Cherry	8	1	340	3.6	3	3.9	3.6					1.5	Mature	Good	Fair	Codominant stems, stub cuts, minor deadwood in the crown.	4.1	52	20-40	B	2
T750	1	<i>Betula pendula</i> Silver Birch	12	1	330	1.4	3	2.5	3					2	Mature	Good	Good	High amenity value	4	49	40+	A	2
T751	1	<i>Betula pendula</i> Silver Birch	12	1	280	3.5	1.9	0.5	2.2					2	Mature	Good	Good	Natural lean towards road. High amenity value.	3.4	35	40+	A	2
T752	1	<i>Betula pendula</i> Silver Birch	12	1	180	0.5	3.2	0.5	0.5					3	Mature	Good	Good	Natural lean towards road. High amenity value.	2.2	15	40+	A	2

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						N	NE	E	SE	S	SW	W	NW										
T753	1	<i>Carpinus betulus</i> Hornbeam	6	2	125	0.5	0.5	0.5	0.5			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.5	7	40+	A	2		
T754	1	<i>Carpinus betulus</i> Hornbeam	7	1	150	1.5	1.5	1.5	1.5			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.8	10	40+	A	2		
T755	1	<i>Carpinus betulus</i> Hornbeam	6	1	160	1.5	1.5	1.5	1.5			2	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.9	12	40+	A	2		
T756	1	<i>Carpinus betulus</i> Hornbeam	6	1	100	0.7	0.7	0.7	0.7			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.2	5	40+	A	2		
T757	1	<i>Carpinus betulus</i> Hornbeam	6	1	110	0.7	0.7	0.7	0.7			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.3	5	40+	A	2		
T758	1	<i>Carpinus betulus</i> Hornbeam	7	1	140	0.9	0.9	0.9	0.9			1	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.7	9	40+	A	2		
T759	1	<i>Aesculus hippocastanum</i> Horse chestnut	14	1	800	9	9	7	9			2	Mature	Good	Good	Trunk is partially obscured by ivy. Large crown size, three by leaders	9.6	289	40+	A	3		
T760	1	<i>Fagus sylvatica</i> Common Beech	12	1	330	4	4	4	4			2	Early-mature	Good	Fair	Codominant stems with partial bark inclusion.	4	49	40+	B	2		
T761	1	<i>Fagus sylvatica</i> Common Beech	22	1	1400	7.6	6.5	7.9	8.9			3	Late-mature	Good	Good	Trunk is partially obscured by ivy. Very large crown size. Historic and amenity value.	17	887	40+	A	2		
T762	1	<i>Betula pendula</i> Silver Birch	15	1	500	5	4	4.5	4			3	Mature	Good	Good	Established in a raised planter. Good amenity value.	6	113	40+	A	2		
T763	1	<i>Betula pendula</i> Silver Birch	11	1	350	4	4	4	3.5			3	Mature	Good	Fair	Established in a raised planter. Codominant stems	4.2	55	40+	A	2		
T764	1	<i>Betula pendula</i> Silver Birch	10	1	220	1	2.2	2.2	2.5			4	Early-mature	Good	Fair	Established in a raised planter. Wounds on the trunk.	2.6	22	20-40	B	2		
T765	1	<i>Betula pendula</i> Silver Birch	10	1	350	2.8	4	2.3	4			4	Mature	Good	Good	Established in a raised planter. Good amenity value.	4.2	55	40+	A	2		
T766	1	<i>Ulmus glabra</i> Wych Elm	3	1	220	1.5	1.5	1.5	1.5			0.5	Semi-mature	Good	Poor	Severly topped in the past. New crown is sprouting.	2.6	22	20-40	B	2		
T767	1	<i>Carpinus betulus</i> Hornbeam	7	1	170	1	1	1	1			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	2	13	40+	A	2		
T768	1	<i>Carpinus betulus</i> Hornbeam	6	1	90	0.5	0.5	0.5	0.5			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.1	4	40+	A	2		
T769	1	<i>Carpinus betulus</i> Hornbeam	6	1	90	0.5	0.5	0.5	0.5			1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.1	4	40+	A	2		

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T770	1	<i>Carpinus betulus</i> Hornbeam	6	1	100	0.7	0.7	0.7	0.7				1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.2	5	40+	A	2	
T771	1	<i>Carpinus betulus</i> Hornbeam	6	1	110	0.7	0.7	0.7	0.7				1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1.3	5	40+	A	2	
T772	1	<i>Carpinus betulus</i> Hornbeam	6	1	80	0.5	0.5	0.5	0.5				1.5	Semi-mature	Good	Good	Raised planter around the base of the trunk.	1	3	40+	A	2	
T773	1	<i>Acer platanoides</i> Norway maple	12	1	340	2.8	2	2.8	2.8				3	Early-mature	Good	Fair	Codominant stems. Crown is suppressed by neighbouring trees. Conflict with the electricity network.	4.1	52	20-40	B	2	
T774	1	<i>Prunus domestica</i> Plum	6	2	374	4.3	3	3.5	2.5				2	Late-mature	Good	Good	Crown is being suppressed by neighbour.	4.5	63	20-40	B	2	
T775	1	<i>Cupressocyparis leylandii</i> Leyland cypress	14	1	510	3.5	5.8	3.5	3.5				3	Mature	Good	Good	Conflict with the electricity network.	6.1	118	20-40	B	2	
T776	1	<i>Cupressocyparis leylandii</i> Leyland cypress	14	5	735	5	5.8	5	5				3	Mature	Good	Fair	Codominant stems. Conflict with the electricity network.	8.8	244	20-40	B	2	
T777	1	<i>Cupressocyparis leylandii</i> Leyland cypress	14	2	630	5	5.8	4	4				3	Mature	Good	Fair	Codominant stems. Conflict with the electricity network.	7.6	180	20-40	B	2	
T778	1	<i>Cupressocyparis leylandii</i> Leyland cypress	14	5	684	3.7	5.8	4	3.5				3	Mature	Good	Fair	Codominant stems. Conflict with the electricity network.	8.2	212	20-40	B	2	
T779	1	<i>Cupressocyparis leylandii</i> Leyland cypress	14	2	615	4.5	5.8	3.2	4				3	Mature	Good	Fair	Codominant stems. Conflict with the electricity network.	7.4	171	20-40	B	2	
T780	1	<i>Acer platanoides</i> Norway maple	8	1	340	3	3	3	3				3	Early-mature	Good	Fair	Codominant stems. Historic topping for the electricity network.	4.1	52	10-20	C	2	
T781	1	<i>Acer platanoides</i> Norway maple	8	1	460	3.5	3.5	3.5	3.5				3	Early-mature	Good	Fair	Historic topping for the electricity network.	5.5	96	10-20	C	2	
T782	1	<i>Betula utilis</i> Himalayan Birch	11	1	190	2.1	2.5	2.5	3				2	Early-mature	Good	Fair	Codominant stems. Conflict with the electricity network.	2.3	16	20-40	B	2	
T783	1	<i>Betula utilis</i> Himalayan Birch	11	1	160	1.5	1.5	1.5	1.5				3	Early-mature	Good	Good	Conflict with the electricity network.	1.9	12	20-40	B	2	
T784	1	<i>Betula utilis</i> Himalayan Birch	11	1	150	3	1.5	0.5	3				3	Early-mature	Good	Good	Conflict with the electricity network.	1.8	10	20-40	B	2	

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T785	1	<i>Acer pseudoplatanus</i> Sycamore	8	1	220	2		2		2		3		3	Early-mature	Good	Fair	Historic topping for the electricity network.	2.6	22	20-40	B	2
T786	1	<i>Tilia platyphyllos</i> Large-leaved Lime	8	1	220	3.3		3.1		1.5		2		3	Semi-mature	Good	Good	None required	2.6	22	40+	A	2
T787	1	<i>Tilia platyphyllos</i> Large-leaved Lime	8	1	230	3.2		3		3.2		3.2		3	Semi-mature	Good	Fair	Codominant stems	2.8	24	40+	A	2
T788	1	<i>Carpinus betulus</i> Hornbeam	8	1	230	2.5		2.5		2.5		2.5		2	Semi-mature	Good	Good	Historic topping for the electricity network.	2.8	24	20-40	B	2
T789	1	<i>Carpinus betulus</i> Hornbeam	7	1	180	2		2		2		2		1.5	Semi-mature	Good	Good	Historic topping for the electricity network.	2.2	15	20-40	B	2
T790	1	<i>Acer pseudoplatanus</i> Sycamore	8	1	190	2.4		2.4		2		2		3	Semi-mature	Good	Fair	Historic topping for the electricity network.	2.3	16	20-40	B	2
T791	1	<i>Carpinus betulus</i> Hornbeam	7	1	150	2		1.5		2		2.5		1.5	Semi-mature	Good	Fair	Historic topping for the electricity network.	1.8	10	20-40	B	2
T792	1	<i>Acer platanoides</i> Norway maple	11	1	380	3.4		1.5		3		3.4		4	Early-mature	Good	Fair	Conflict with the electricity network.	4.6	65	20-40	B	2
T793	1	<i>Carpinus betulus</i> Hornbeam	7	1	120	2		0.5		2		2		1.5	Semi-mature	Good	Fair	Historic topping for the electricity network.	1.4	7	20-40	B	2
T794	1	<i>Cupressus macrocarpa</i> Monterey Cypress	22	1	1100	6.8		6.8		6.8		6.8		10	Mature	Good	Good	Very large crown size. Good amenity value.	13	547	40+	A	2
T795	1	<i>Acer pseudoplatanus</i> Sycamore	6	1	120	3		3		2		3		2	Semi-mature	Good	Fair	None required	1.4	7	20-40	B	2
T796	1	<i>Salix cinerea</i> Grey willow	8	1	260	3.4		3.4		2.7		3.4		2	Semi-mature	Good	Fair	None required	3.1	31	20-40	B	2
T797	1	<i>Betula utilis</i> Himalayan Birch	8	1	140	2.6		2.6		2.6		2.6		2	Semi-mature	Good	Good	None required	1.7	9	40+	A	2
T798	1	<i>Tilia platyphyllos</i> Large-leaved Lime	8	1	220	2.7		2.7		2.7		2.7		3	Semi-mature	Good	Good	None required	2.6	22	40+	A	2
T799	1	<i>Tilia platyphyllos</i> Large-leaved Lime	9	1	210	2.5		2.5		2.5		2.5		3	Semi-mature	Good	Good	None required	2.5	20	40+	A	2
T800	1	<i>Betula utilis</i> Himalayan Birch	9	1	140	2		2		2		2		2	Semi-mature	Good	Good	None required	1.7	9	40+	A	2
T801	1	<i>Acer pseudoplatanus</i> Sycamore	6	1	160	3		3		3		3		2	Semi-mature	Good	Fair	None required	1.9	12	20-40	B	2
T802	1	<i>Acer pseudoplatanus</i> Sycamore	6	1	240	3.5		3.5		3.5		3.5		2	Semi-mature	Good	Fair	Historic topping for the HV electricity network.	2.9	26	20-40	B	2

Tree/Tree group number	No. of trees	Species	Height (m)	Stem count	Stem diameter (mm)	Crown spread (m)								Crown clearance Ht (m)	Life stage: Y-SM-EM-M-LM	Physiological Condition: G-F-P-D	Structural Condition G-F-P-D	Observations	RPR (M)	RPA(M ²)	Remaining contribution in years: <10, 10-20, 20-40, 40+	Retention category	Retention Sub-category
						N	NE	E	SE	S	SW	W	NW										
T803	1	<i>Acer pseudoplatanus</i> Sycamore	14	5	818	8		8		5.4		7		5	Mature	Good	Fair	Historic topping for the HV electricity network. Trunk is partially obscured by ivy. The tree has an interesting multi-stem form.	9.8	303	20-40	B	3
T804	1	<i>Acer platanoides</i> Norway maple	7	1	190	2		2.8		2.8		2.8		2.5	Semi-mature	Good	Fair	Codominant stems	2.3	16	40+	A	2
T805	1	<i>Acer platanoides</i> Norway maple	7	1	210	2		2.8		2.8		2.8		2.5	Semi-mature	Good	Fair	Codominant stems	2.5	20	40+	A	2

Appendix 4

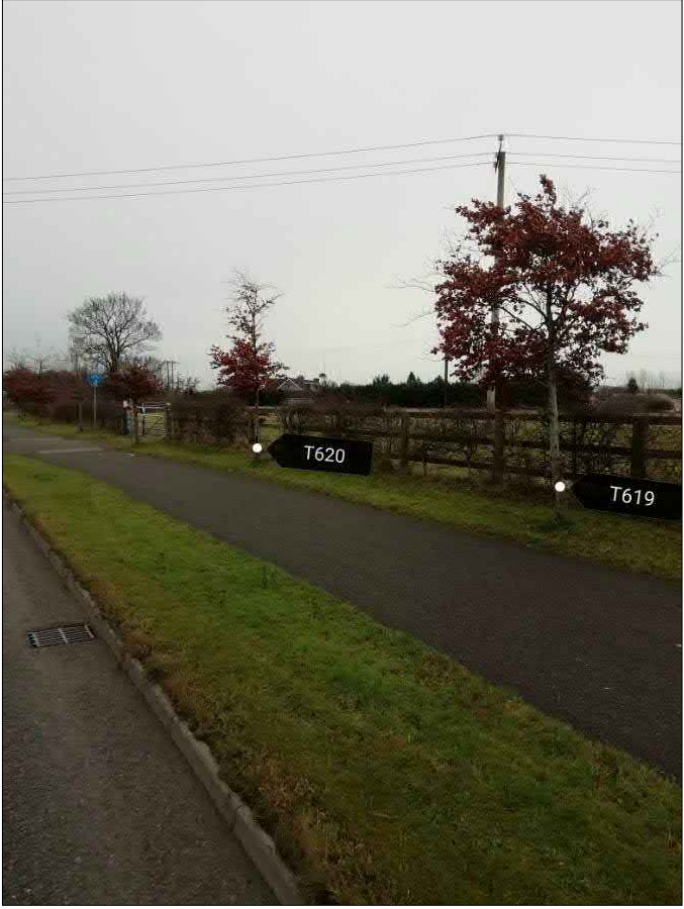
Naas to Kill Cycle Scheme Tree Works Schedule

Tree No	Tree Species	CAT	Description of Tree Works
<i>BS5837</i>			
Johnstown Section preconstruction tree removals			
T629	<i>Fagus sylvatica</i> Common Beech	C2	Fell at ground level.
T630	<i>Fagus sylvatica</i> Common Beech	B2	Fell at ground level.
T631	<i>Fagus sylvatica</i> Common Beech	A2	Fell at ground level.
T641	<i>Sorbus aucuparia</i> Rowan	A2	Fell at ground level.
T642	<i>Sorbus aucuparia</i> Rowan	A2	Fell at ground level.
T643	<i>Sorbus aucuparia</i> Rowan	C2	Fell at ground level.
Kill Section preconstruction tree removals			
T753	<i>Carpinus betulus</i> Hornbeam	A2	Fell at ground level
T755 – T757	<i>Carpinus betulus</i> Hornbeam (x 3)	A2	Fell 3 x trees at ground level
T767 – T769	<i>Carpinus betulus</i> Hornbeam (x 3)	A2	Fell 3 x trees at ground level
T770	<i>Carpinus betulus</i> Hornbeam	A2	Fell at ground level.
T771	<i>Carpinus betulus</i> Hornbeam	A2	Fell at ground level.
T772	<i>Carpinus betulus</i> Hornbeam	A2	Fell at ground level.
T785	<i>Acer</i> <i>pseudoplatanus</i> Sycamore	B2	Fell at ground level.
Ash removals in Johnstown to release the retained limes from canopy competition			
T652	<i>Fraxinus excelsior</i> Ash	B2	Fell at ground level and grind stump.
T654	<i>Fraxinus excelsior</i> Ash	B2	Fell at ground level and grind stump.
T655	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
T656	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
T658	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.

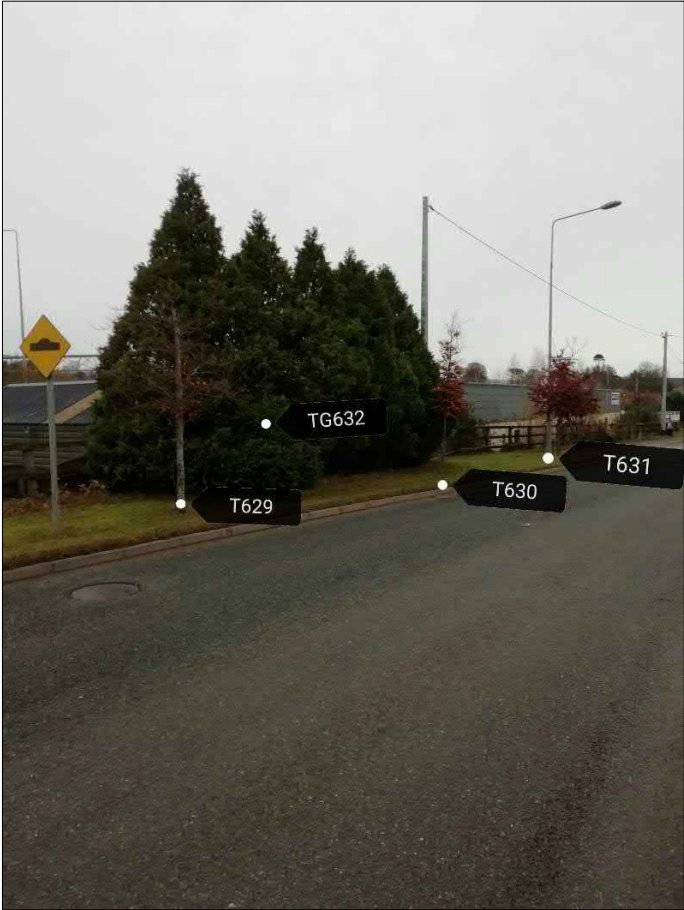
Naas to Kill Cycle Scheme Tree Works Schedule

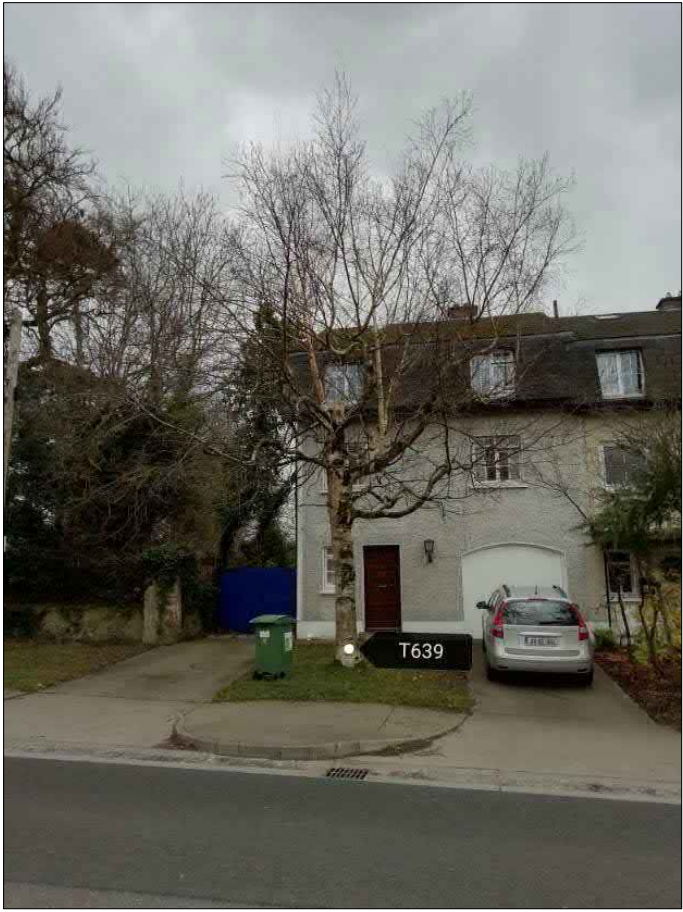
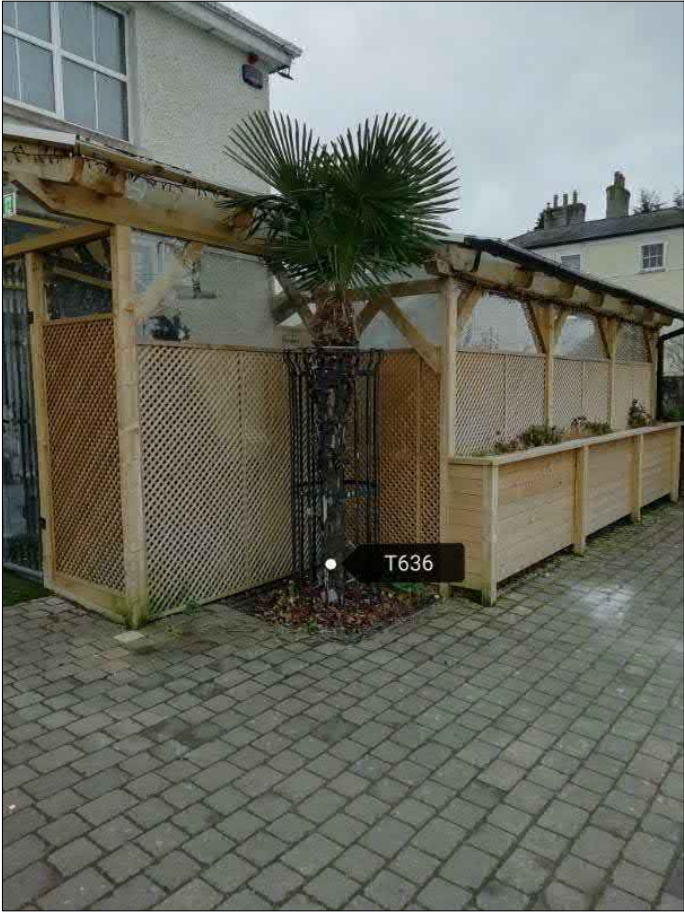
Tree No	Tree Species	CAT	Description of Tree Works
		<i>BS5837</i>	
T660	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
T662	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
T665	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
T668	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
T671	<i>Fraxinus excelsior</i> Ash	C2	Fell at ground level and grind stump.
Further recommended tree works to be carried out prior to public usage of the cycle path.			
T689	<i>Fraxinus excelsior</i> Ash	C2	Remove the eastern stem leaning towards the car park. The western stem with the tree tag is OK.
T690	<i>Fraxinus excelsior</i> Ash	C2	Clean crown of deadwood and any defective branches.
T691	<i>Fraxinus excelsior</i> Ash	B2	Reduce end weight on over extended limbs over the carpark by 10-15%. Clean crown of deadwood and any defective branches.
T692	<i>Fraxinus excelsior</i> Ash	B2	Reduce end weight on over extended limbs over the road and carpark by 10-15%. Clean crown of deadwood and any defective branches.
T693	<i>Fraxinus excelsior</i> Ash	B2	Reduce end weight on over extended limbs over the carpark by 10-15%. Clean crown of deadwood and any defective branches.
T694	<i>Fraxinus excelsior</i> Ash	B2	Clean crown of deadwood and any defective branches.
T695	<i>Fraxinus excelsior</i> Ash	B2	Clean crown of deadwood and any defective branches.

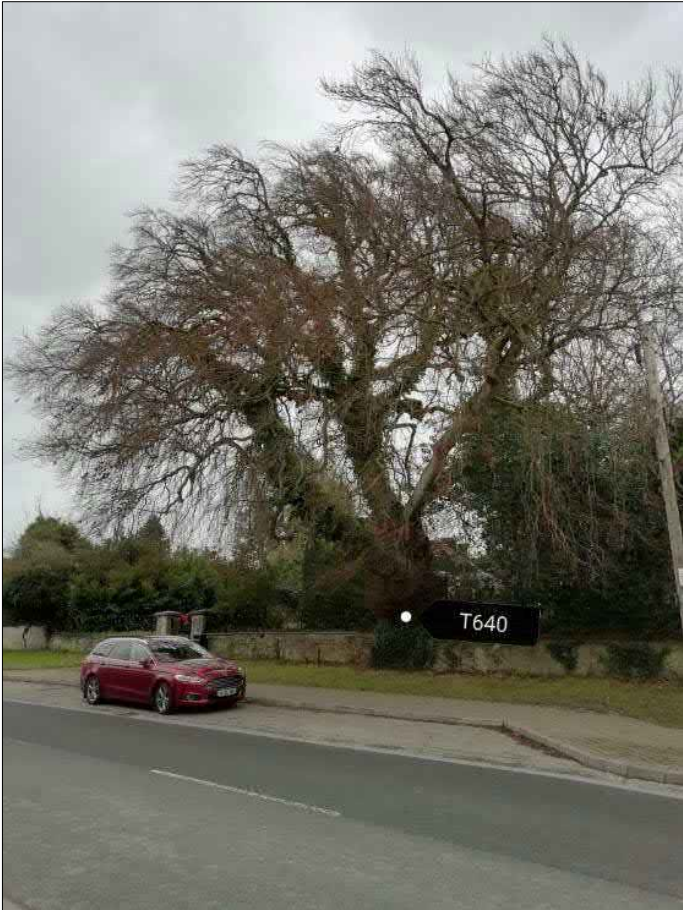
Appendix 5

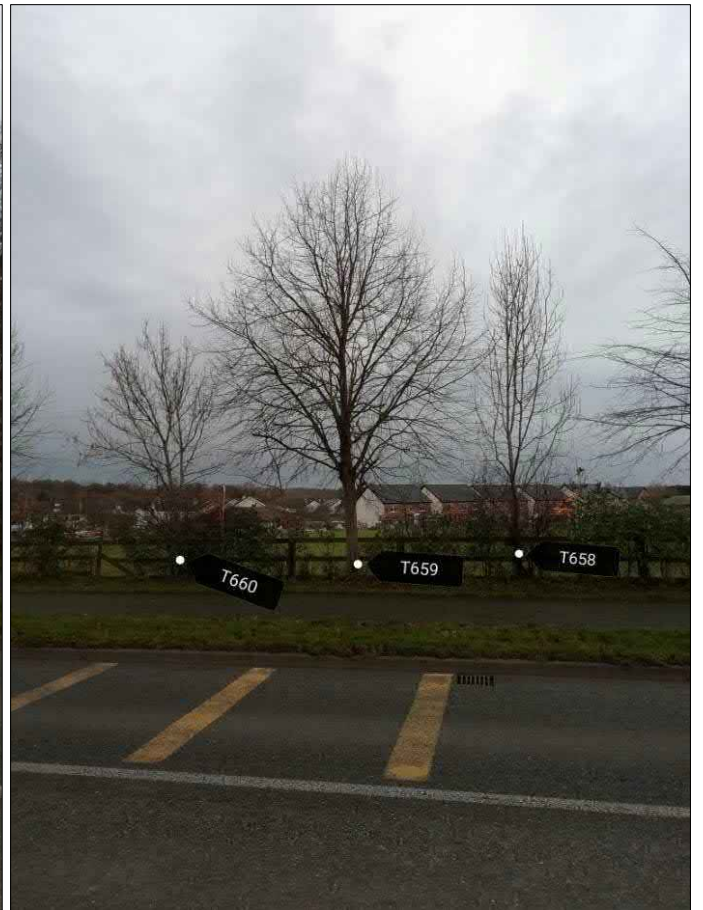


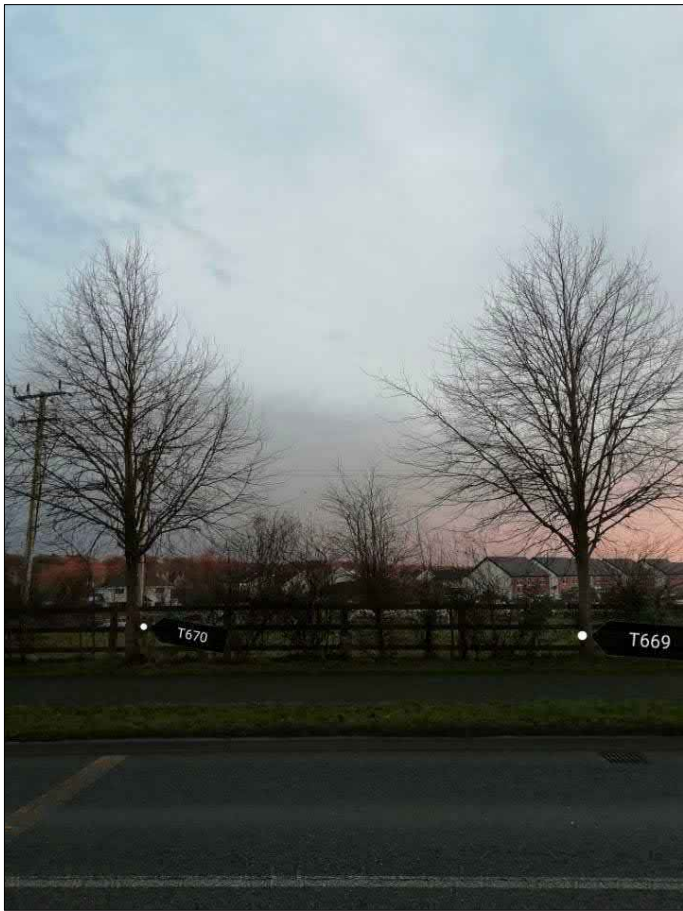


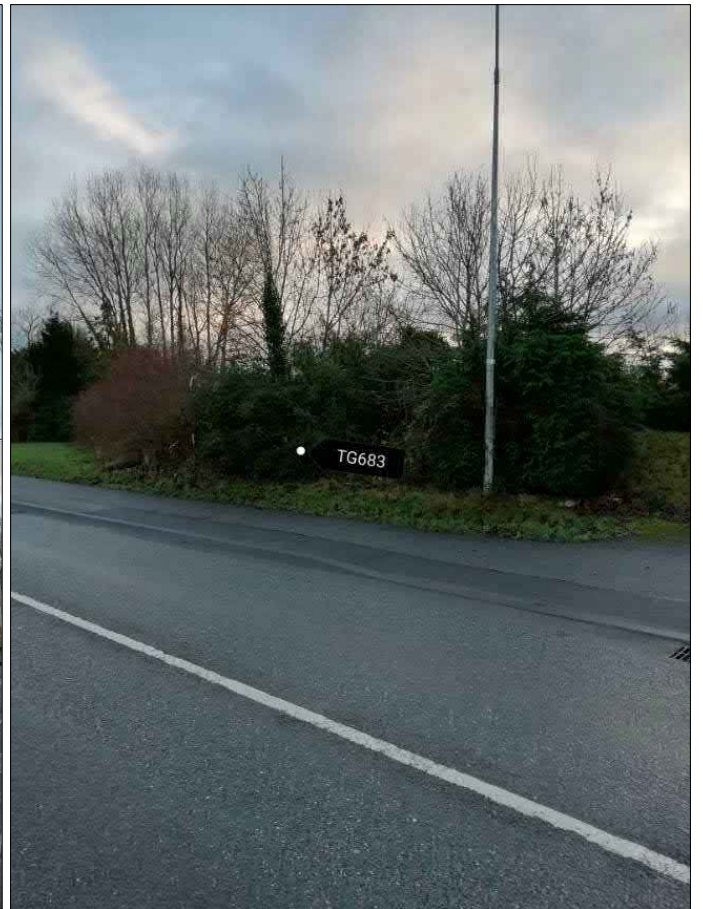
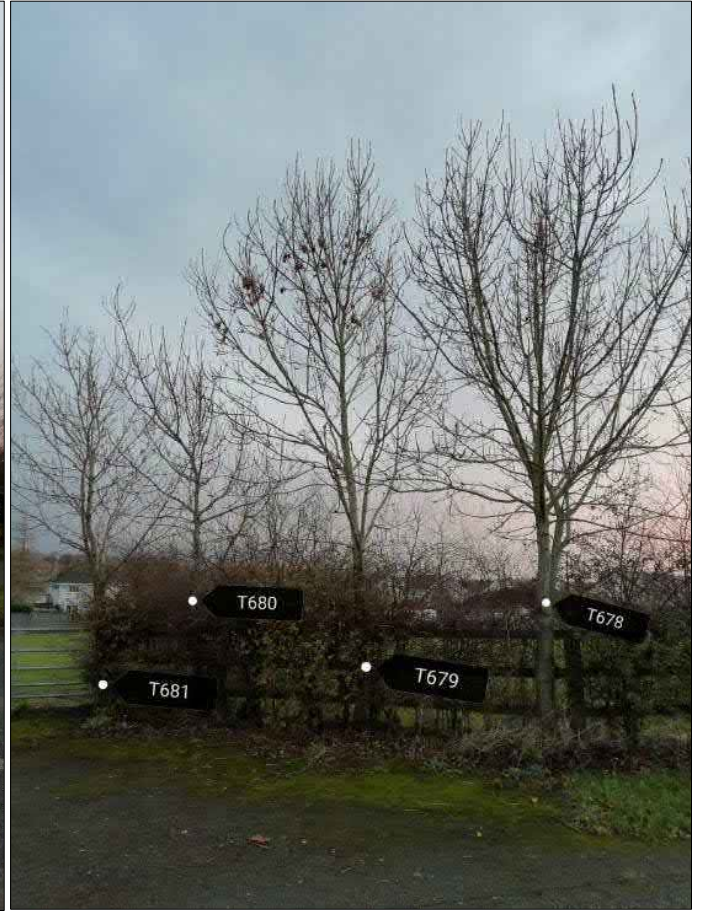




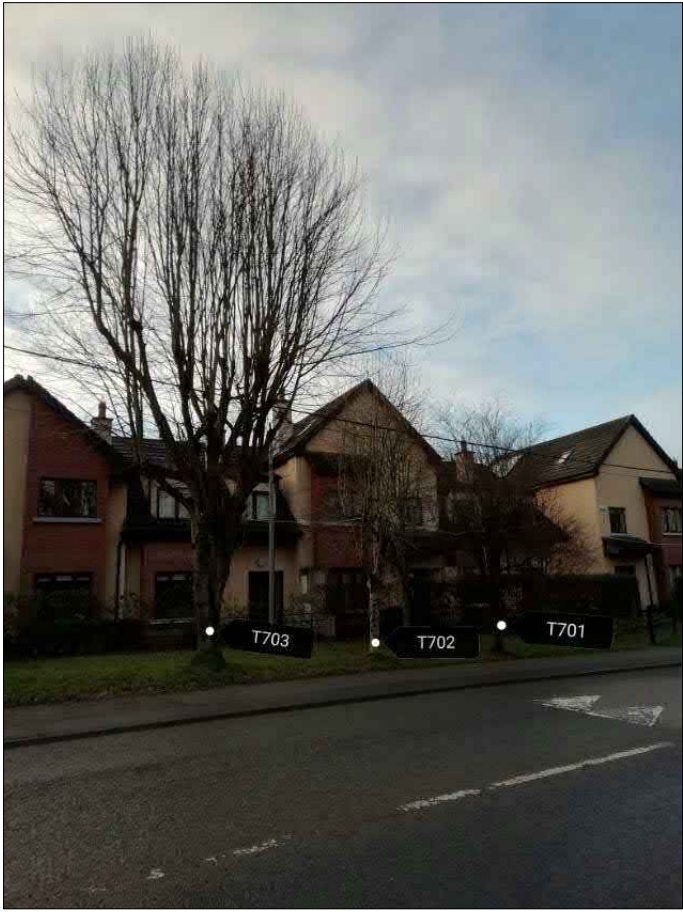


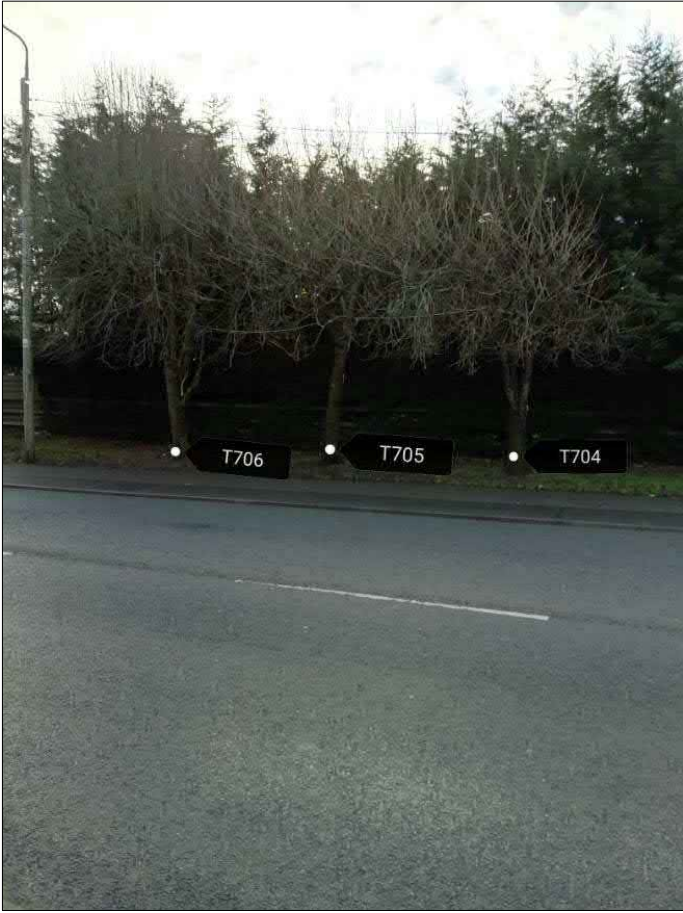






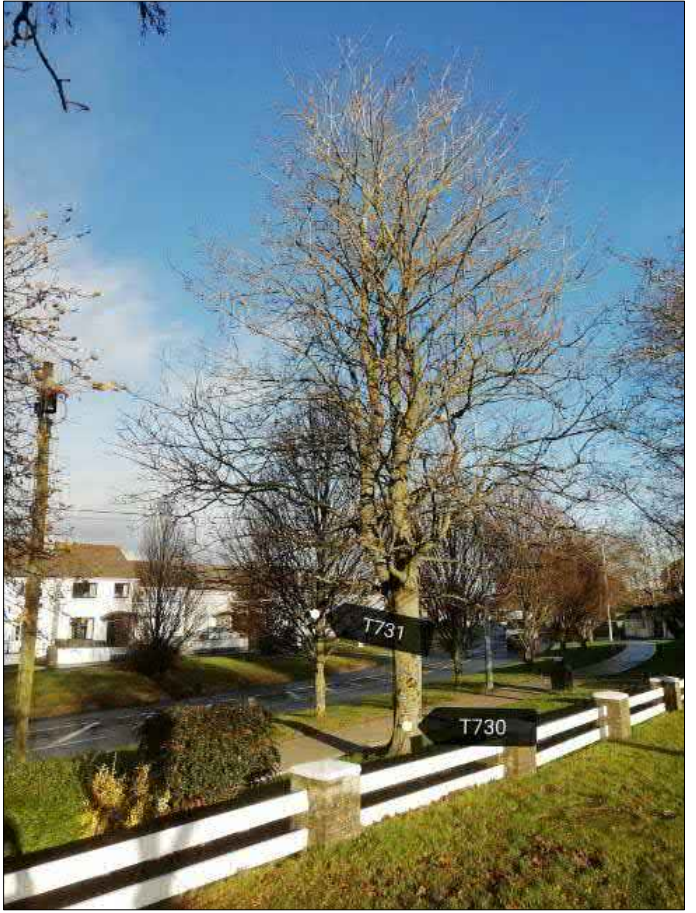




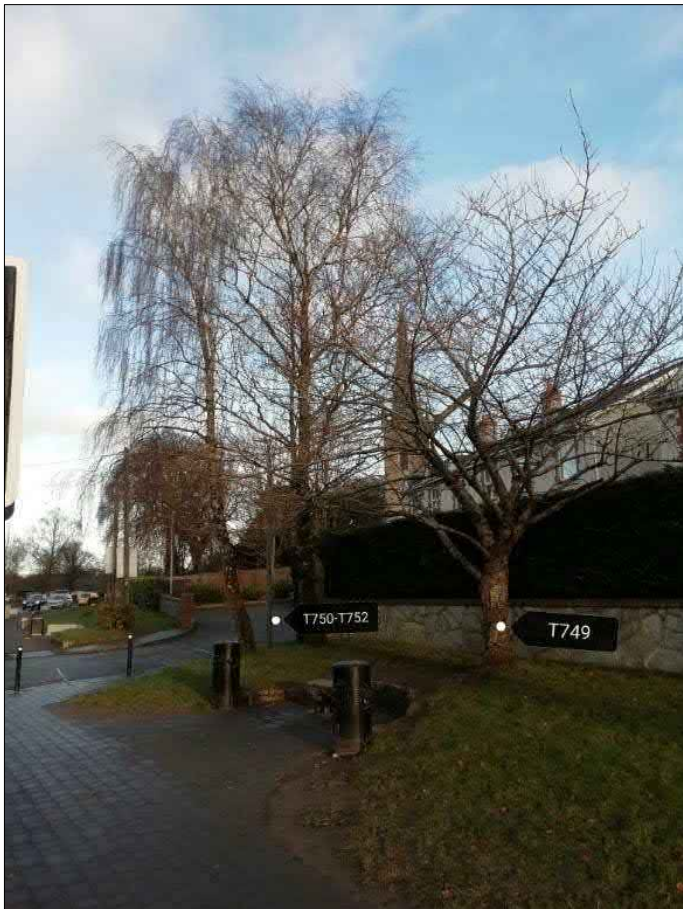
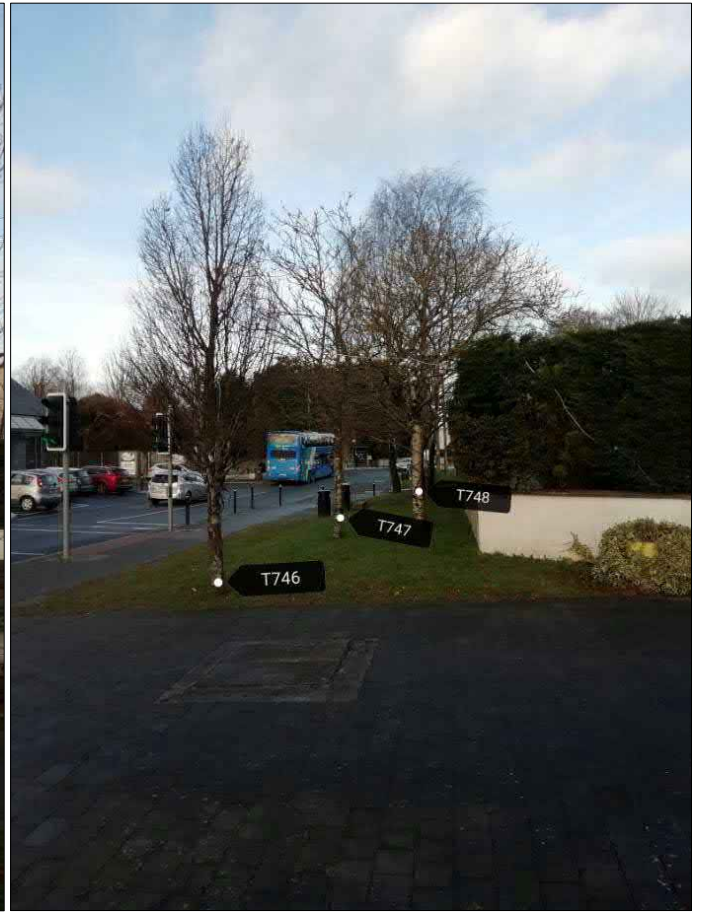


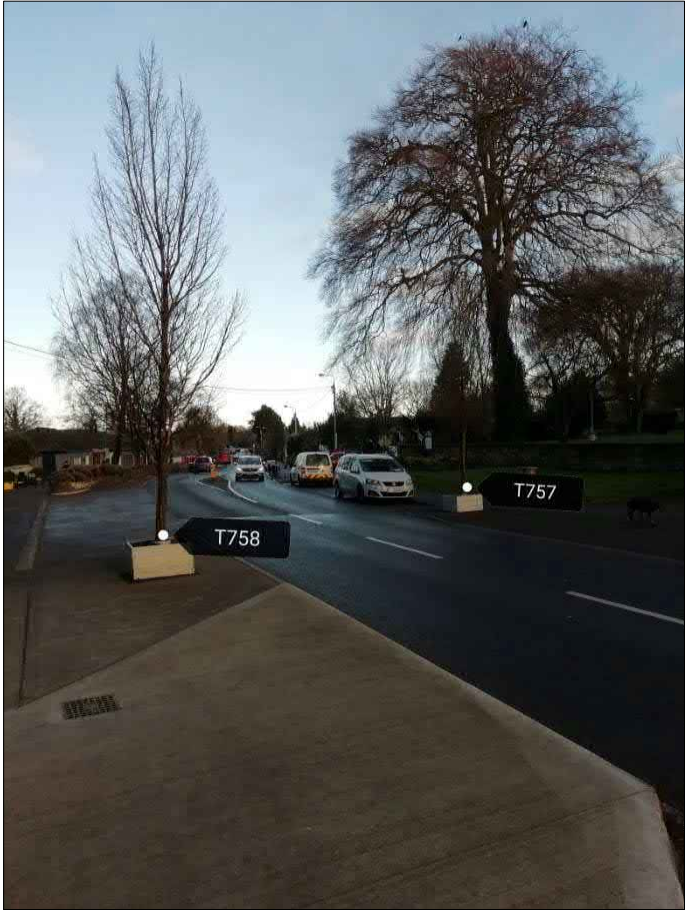


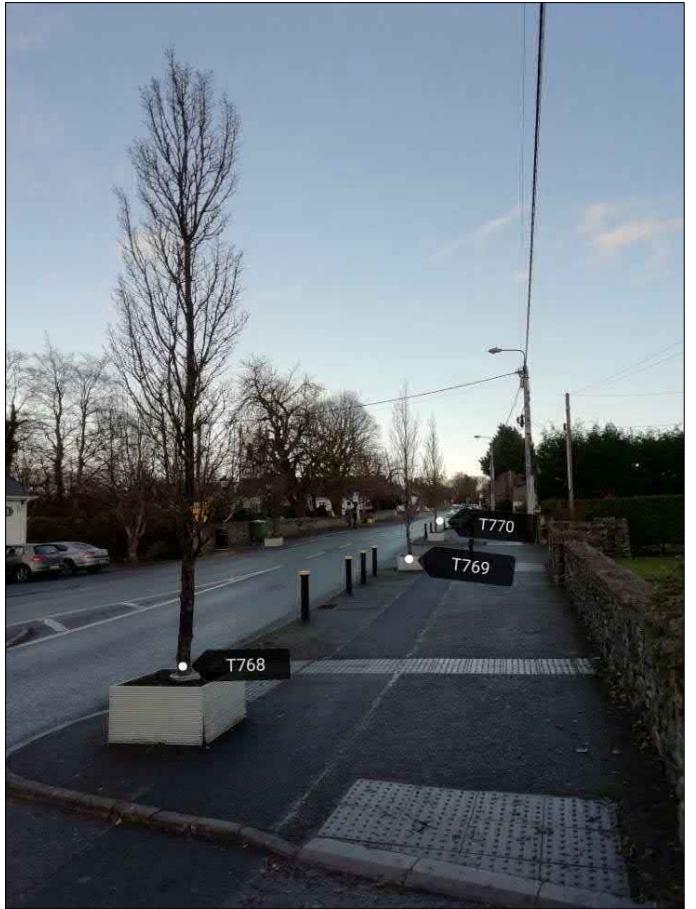
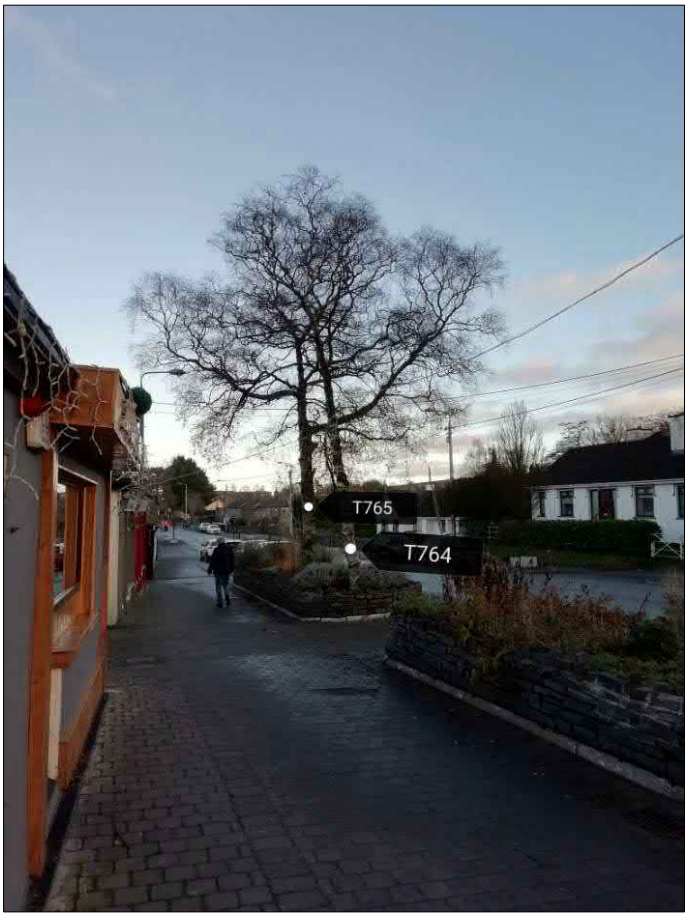


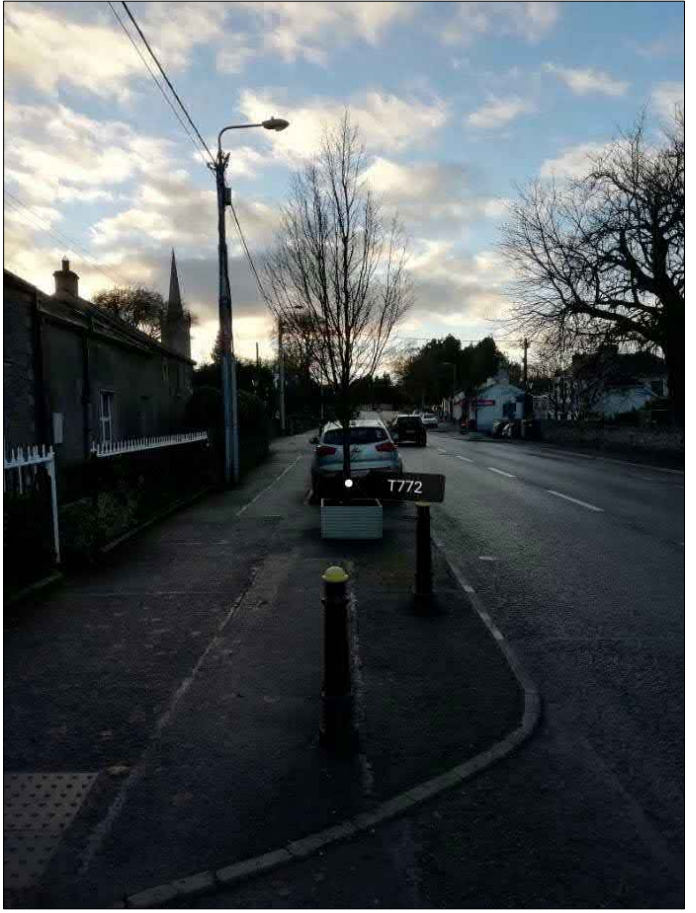


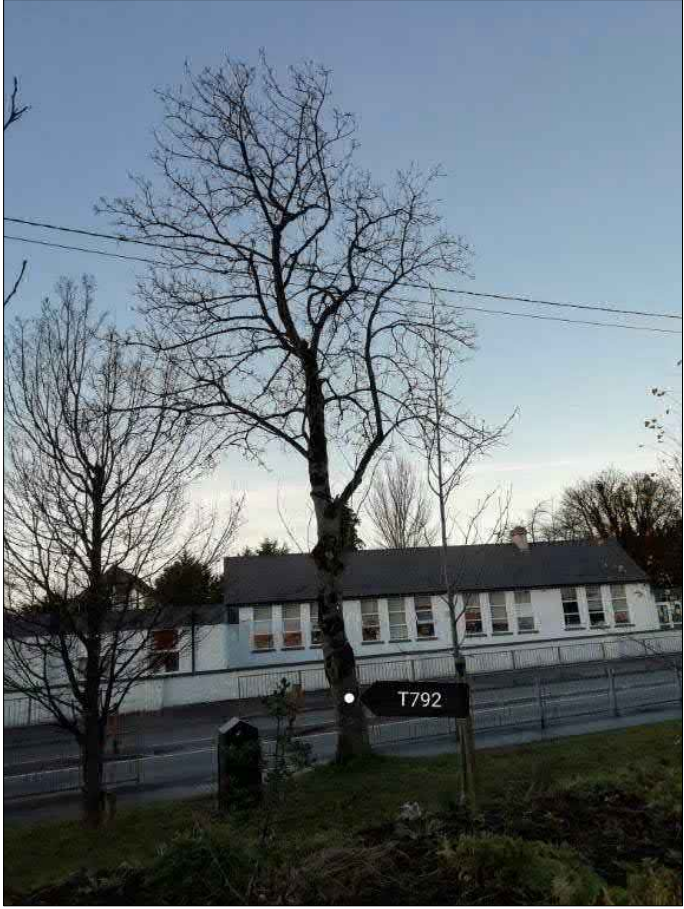
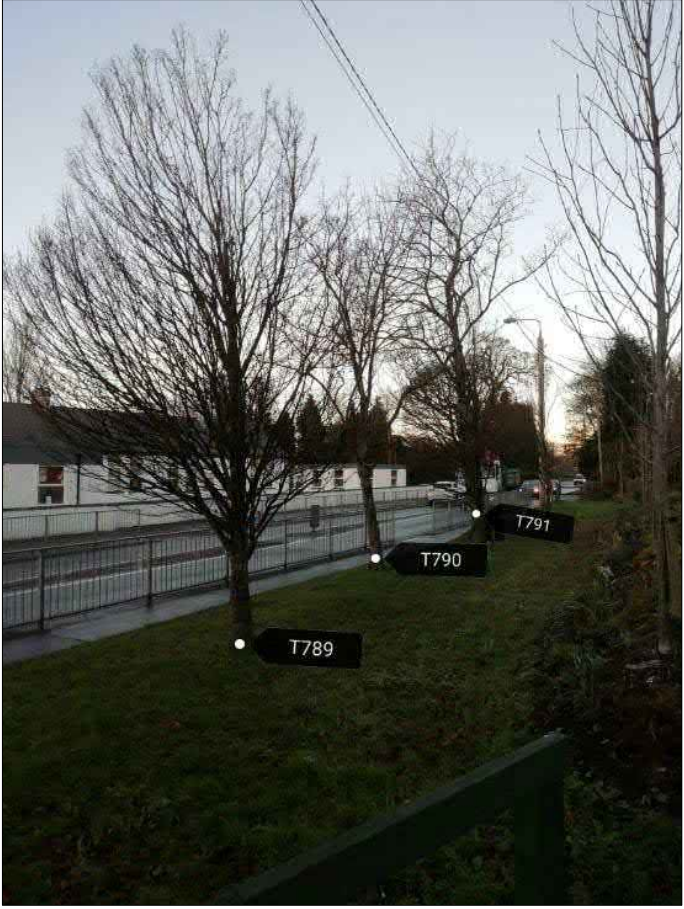
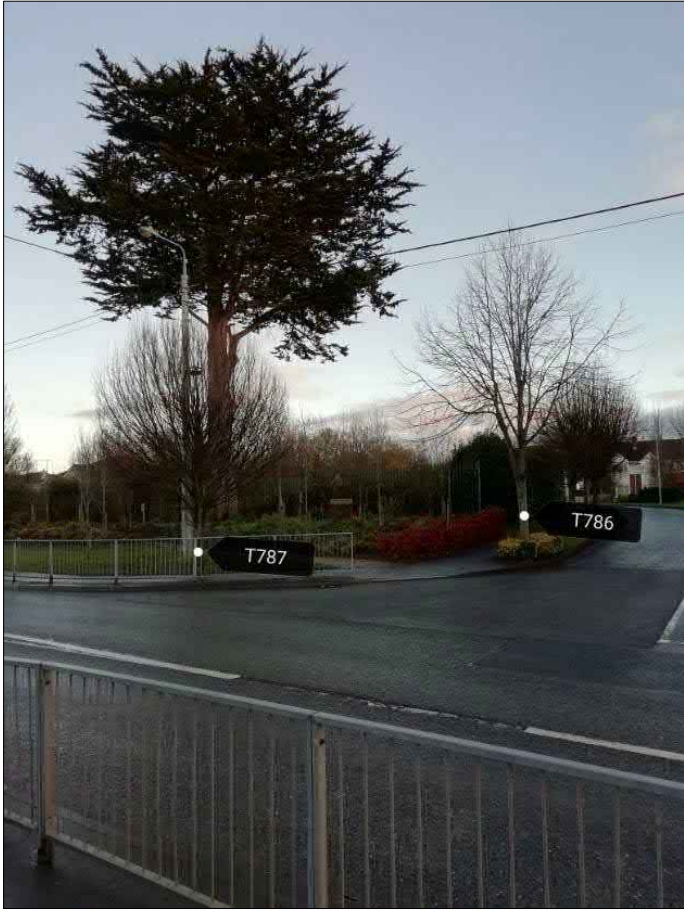
















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