

Galway Cycle Network Phase 1

WP-02 Doughiska Road (South) - Section 38 Report

Galway City Council

August 2021



Notice

This document and its contents have been prepared and are intended solely as information for Galway City Council and use in relation to Galway Cycle Network Phase 1

WS Atkins Ireland Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 0	DRAFT	DR	AB	ST	KB	July 2021
Rev 1	2 nd Draft	DR	AB	ST	KB	Aug 2021
Rev 2	For Information	DR	AB	ST	KB	Aug 2021

Client signoff

Client	Galway City Council
Project	Galway Cycle Network Phase 1
Job number	5193732
Client signature / date	

Contents

Chapter	Page
1. Project Description	5
2. Purpose of the Scheme	6
2.1. Background	6
2.2. Project Aims & Objectives	6
2.3. Route Specific Objectives	7
3. Scheme Context	8
3.1. National Transport Policy	8
3.2. Regional Policy	9
4. Existing Transport Network	11
4.1. Road Network	11
4.2. Junctions	11
4.3. Public Transport	12
4.4. Pedestrian & Cycle Facilities	12
5. Options Assessment Process	13
5.1. Options Assessment	13
5.2. Methodology for Options Assessment	13
5.3. Preferred Options	13
6. Preliminary Design	15
6.1. Link Design	15
6.2. Pedestrian Crossings	15
6.3. Public Transport	15
6.4. Drainage	15
6.5. Pavements	15
6.6. Services	15
6.7. Land Take	16
6.8. Proposals for Tree Removal and Planting of new trees	16
7. Route Assessment	17
7.1. General	17
7.2. Quality of Service (QoS)	17
7.3. QoS Assessment – Doughiska Road (South)	18
8. Summary & Conclusion	19
8.1. Pedestrian, Cyclist & Vehicular Impacts	19
8.2. Environmental Impacts	19
8.3. Preliminary Cost Estimates	19
8.4. Conclusion	19
Appendix A. Preliminary Design Drawings	21
Appendix B. Environmental Impact Assessment Screening Report	22
Appendix C. Screening for Appropriate Assessment Report	23

Tables

Table 1 - GTS recommended measures within the study area (Source: GTS Appendix D & F)	9
--	----------

Table 2 - Summary of Utility Companies' Infrastructure	16
Table 3 - Quality of Service Criteria	17
Table 4 - Number of Conflicts per 100m	18
Table 5 - Journey Time Delay	18
Table 6 - Quality of Service Summary	18
Table 7 - Preliminary Cost Estimate Summary	19

Figures

Figure 1 - Proposed Galway Cycle Network Phase 1 Routes	5
Figure 2 - Extract from GTS Executive Summary Fig.7.1	7
Figure 3 - Galway Development Plan Map (2017-2023)	10
Figure 4 - 14m to 16m Carriageway on Doughiska Road (South)	11
Figure 5 - 7m wide carriageway with 2m footpath	11
Figure 6- Raised Cycle lane cross section	13
Figure 7 - Shared street cross section	14

1. Project Description

The Galway Cycle Network Phase 1 scheme has been commissioned to Atkins by Galway City Council (GCC) in October 2019, under the National Transport Authority's (NTA) Consultancy Services Framework (2016) and has been developed in consideration of current GCC policies included in the Galway Transport Strategy (GTS) (August 2016).

The Galway Cycle Network Phase 1 consists of 5 routes located to the east of Galway City, as shown in **Figure 1**. These routes are corridors along existing roads and have been identified within the GTS and within the scope of this commission as follows:

- Route 1 – Ballybane Road between Skerrit roundabout and Monivea Road junction, excluding the N6 and Dublin Road junctions.
- Route 2 (A and B) – Doughiska Road extending between the start of the Sean Bhaile estate to the north and Coast Road to the South, excluding the junction with the Dublin Road.
- Route 3 – Ballyloughane Road (full extent excluding the junction with the Dublin Road)
- Route 4 – Castlepark Road (full extent)
- Route 5 – Monivea Road extending from the Ballybane Road and terminating at the start of the ghost island junction to the west of the Clayton Hotel entrance

The purpose of this report is to present Work Package 02 (WP-02) of the Galway Cycle Network Phase 1 Scheme which is Route 2B – Doughiska Road (South), which is to be progressed in accordance with Section 38 of the Road Traffic Act 1994¹.

Figure 1 - Proposed Galway Cycle Network Phase 1 Routes



¹ Section 46(2) of the Public Transport Regulation Act 2009 amends Section 179(6) of the Planning and Development Act of 2000 (Exemptions) to make provision for the enhancement of public bus services and/or to improve facilities for cyclists under Section 38 of the Road Traffic Act 1994.

2. Purpose of the Scheme

2.1. Background

Galway City's generally flat topography is conducive to cycling, however the current mode share of 5% is relatively low. As is also evident with the bus network, and noted within the Galway Transport Strategy, the existing network of cycle infrastructure is limited and discontinuous. The volume of vehicular traffic on the city streets also contributes to an environment that is neither appealing nor perceived as safe for cycling.

In order to deal with the ever-growing congestion problem in the city it is important to reduce the number of vehicles entering the city. As an area of relatively flat topography and a compact city centre, Galway is well suited to cycling as a means of transport. However, the existing cycle facilities in the city and surrounding areas are limited and discontinuous.

At present the car accounts for 60% of the traffic model in the city. The aim is to try and reduce the dependency on the car as a mode of transport by 20%. This is seen as possible due to the short nature of many of the journeys. With this the GTS notes that it is envisaged that cycling will increase to almost 10% and this will be done by making the cycling network in the city more attractive and safer to use.

The routes within the Galway Cycle Network Phase 1 scheme have been identified to link residential estates, schools and hospitals and the Parkmore Area in the east of Galway City. The new scheme will look to create an attractive facility for cyclists and help encourage cycling in the area.

Doughiska Road (South) has no formal cycling facilities at present. The scheme along this route will look to improve cycle linkage between a number of residential, retail and recreational sites.

2.2. Project Aims & Objectives

Galway City Council (GCC) propose to deliver several high-quality cycle routes to the east of the city. The proposed scheme will aim to deliver a Quality of Service in line with the National Cycle Manual. It will provide optimal balance of provisions between the various competing transport modes along the routes.

The objectives of the proposed upgrade are outlined in this section. The objectives are assessed based on multi criteria headings outlined by the Department of Transport in their report '*Common Appraisal Framework for Transport Projects and Programmes (March 2016)*'. The multi-criteria headings are as follows:

- **Safety:** To reduce the potential for conflict between all road users along the routes through the provision of a facility which is in line with the current standards. The Scheme will seek to:
 - Reduce the frequency of conflict between all road users by providing a safer route for all users.
 - Allow priority for cyclists at junctions.
 - Improve safety for vulnerable road users and provide a better environment for vulnerable road users within the study area.
- **Physical Activity:** Provide improved opportunities for pedestrians and cyclists thereby promoting physical activity.
- **Environment:** To minimise impacts on the receiving environment.
- **Accessibility & Social Inclusion:** To improve accessibility for all road users and bring social inclusion benefits to those for whom non-motorised means are the predominate form of transit.
- **Integration:** To support the strategies set out in national and regional policies and guidelines.
- **Economy:** To provide an investment that offers good value for money.

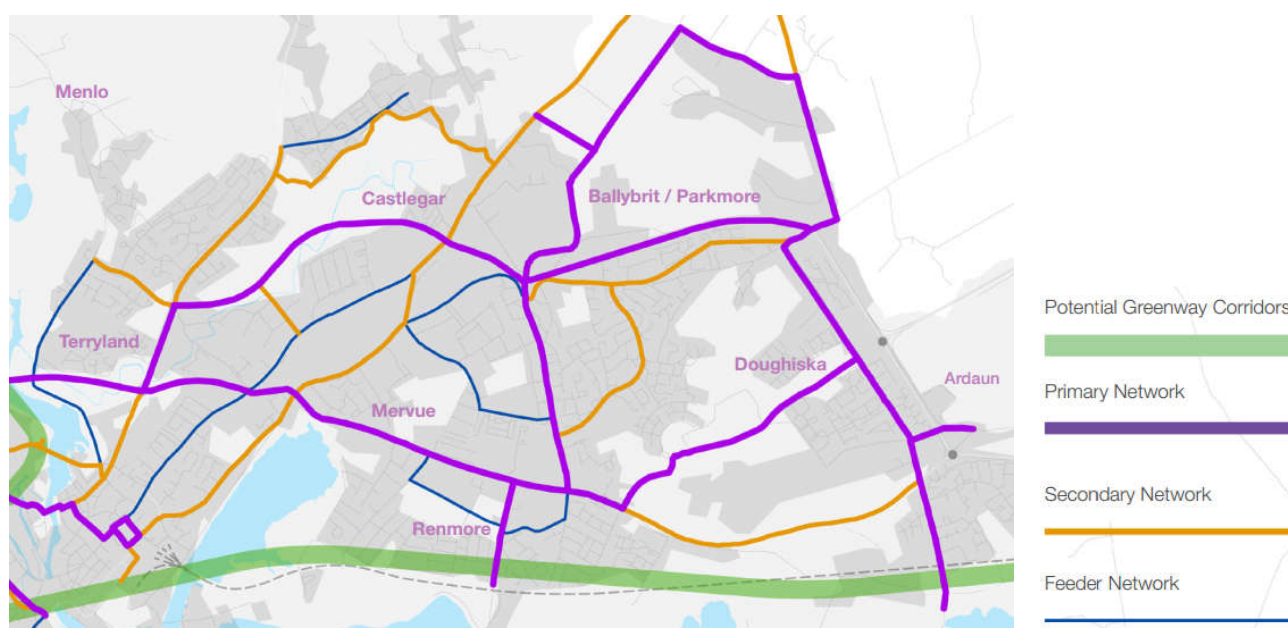
In tandem with the above objectives, the aim of the Galway Transport Strategy (GTS) is to address the current and future transport needs of the city. A shift is required towards sustainable travel, reducing the dependence on the private car. The cycle network proposed in the GTS is intended to maximise the provision of high-quality dedicated cycling facilities and to improve measures giving priority to cyclists, encouraging uptake in cycling both for commuting and as a leisure activity in the city and surrounding areas.

In order to achieve this, a set of objectives have been set out in the GTS as follows:

- To provide a primary 'trunk' cycle network which will provide a convenient and safe route for medium-distance radial commuter / leisure journeys.
- To provide a secondary cycle network which will provide a recognisable grid network for local journeys and will be connected to the primary network for longer journeys.
- To increase options for cycling in and across the city centre.

The primary and secondary networks on the east side of the city are shown in **Figure 2**.

Figure 2 - Extract from GTS Executive Summary Fig.7.1



As can be seen from the above, the Galway Cycle Network Phase 1 routes connect to a number of Greenway, Primary and Secondary Network routes; notably:

- Dublin Road, which in turn provides a direct link to the city centre. Ballybane Road, **Doughiska Road** (North and South) and Ballyloughane Road each connect to this corridor.
- Bothar na dTreabh (N6) which provides linkage east to west, and will eventually tie-in to the Ballybrit and Briarhill junctions (i.e. Ballybane Road, **Doughiska/Monivea Road**).
- The Galway to Athlone Greenway, will provide trans-county linkage, and subject to the preferred route is envisaged to link with **Doughiska Road (South)** and Ballyloughane Road.

2.3. Route Specific Objectives

The Route-specific objectives for Doughiska Road (South) include all Scheme Objectives noted in Section 2.2 and the following:

- **Route Development:** To develop this Route as a Primary Route, as per the GTS proposals.
- **GAA Club Users:** To provide for improvements for those pedestrian and cycle users accessing Castlegar GAA club (accessed from Doughiska Road).
- **Retail & Medical Practices:** To provide for improvements for those pedestrian and cycle users accessing the retail units and medical/dental practices at the junction of Doughiska Road and Roscam.
- **Other Schemes:** To allow for future tie-ins to, or connectivity to, the proposed schemes noted in Section 2.2 (i.e. the proposed Dublin Road Scheme and the proposed Galway to Athlone Greenway).

3. Scheme Context

The following National, Regional and Local planning policies have been considered as part of this study, with the relevant sections summarised below.

3.1. National Transport Policy

3.1.1. National Cycle Policy Framework (NCPF 2009 - 2020)

The backdrop to this policy is the government's new transport policy for Ireland. The NCPF sets out a suite of interventions to improve the ease and safety of cycling in order to achieve greater mode share going forward. The framework states that the focus needs to be on:

- Reducing volumes of through-traffic, especially HGVs, in city and town centres and especially in the vicinity of schools and colleges;
- Calming traffic/enforcing low traffic speeds in urban areas;
- Making junctions safe for cyclists and removing cyclist-unfriendly multi-lane one-way street systems;
- Paying special attention to integrating cycling and public transport.

Other interventions include the following:

- Schools will be a strong focus of the NCPF;
- Supporting the provision of dedicated signed rural cycle networks for Cycling Tourism;
- Ensuring surfaces used by cyclists are maintained to a high standard and are well lit;
- Ensuring that all cycling networks are sign-posted to a high standard;
- Supporting the provision of secure cycle parking at all destinations of importance;
- Integrating cycling and Public Transport, including cycle parking at stations, and the capability to carry bikes on Public Transport services;
- Creation of municipal bike systems to complement an improved Public Transport system.

The NCPF states that making provision for cyclists in the urban environment does not merely consist of providing dedicated cycling facilities, but also involves wider traffic interventions that benefit all vulnerable road users

3.1.2. National Cycle Manual 2011 – Present

The National Cycling Manual (NCM) embraces the principles of Sustainable Safety, as this will offer a safe traffic environment for all road users including cyclists. The five principles of Sustainable Safety are described in the NCM (Section 1.1) and noted below:

- Functionality – i.e. the design which is fit for purpose is safer.
- Homogeneity – i.e. reducing the relative speed, mass and directional differences of different road users sharing the same space increases safety.
- Legibility – i.e. a road environment that all road users can read and understand is safer.
- Forgivingness – i.e. environments that contribute to benign outcomes of accidents are safer (“passive safety”).
- Self-awareness – i.e. where road users are aware of their own abilities and limitations to negotiate a road environment, the environment is safer.

The NCM offers guidance on integrating the bicycle in the design of urban areas. Throughout the design process of this scheme the NCM is utilised.

3.2. Regional Policy

3.2.1. Galway Transport Strategy

The Galway Transport Strategy was published by the National Transport Authority in August 2016, and adopted by Galway City Council in 2017, and sets out the proposed cycle network for the Greater Galway Area. There are a number of proposals within the Galway Transport Strategy (GTS) relating to the routes and road network within the study area. The summary of measures proposed in Appendices D and F of the GTS are presented in **Table 1**.

Table 1 - GTS recommended measures within the study area (Source: GTS Appendix D & F)

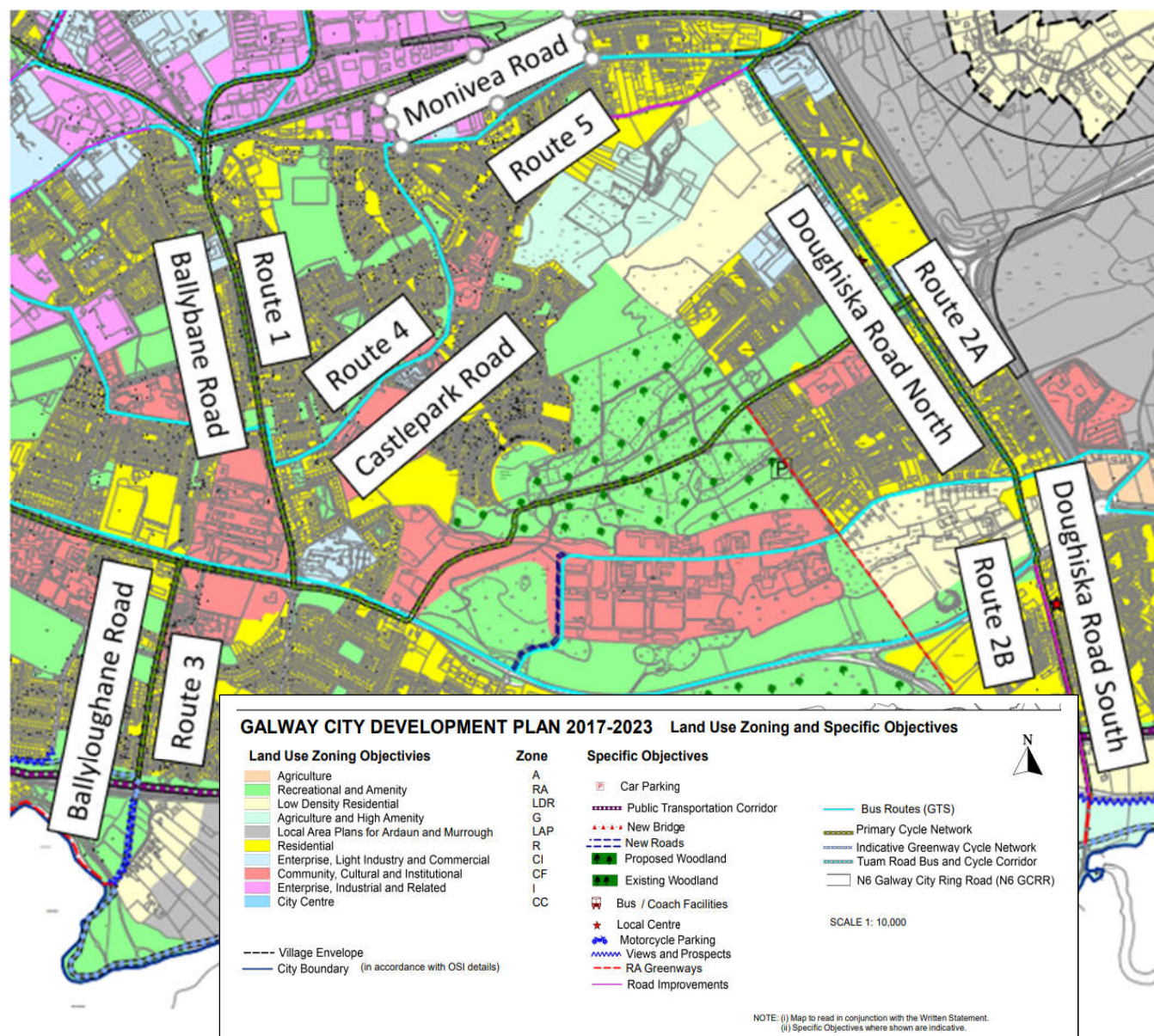
Route	Scheme Extents	GTS Proposals
		<i>(including some areas outside of the scheme extents)</i>
Doughiska Road	Between Dublin Road and Coast Road	<p>GTS Appendix D does not include Conceptual Design Proposals for this Route.</p> <p>GTS Appendix F – F4.10 Renmore and Dublin Road</p> <p>Identify Doughiska Road south of Dublin Road as Primary Cycle Route.</p> <p>Proposal:</p> <p><i>Proposal to install on-road cycle lanes on both sides from the Dublin Road to the Dublin-Galway railway line crossing. Traffic calming measures and signage proposed to reduce motorised traffic speeds and advertise the presence of cyclists from the railway crossing to the Coast Road and further south to connect to the Greenway.</i></p>

3.2.2. Galway City Development Plan (2017 – 2023)

The Galway City Development Plan 2017-2023 sets out to promote and facilitate movement within and to the City through the integration of land use with a sustainable transport system, with priority given to public transport, walking and cycling. There are several relevant chapters in the Development Plan which relate to Cycling and Walking. The main objectives relevant to this scheme are summarised below:

- Support the Galway Transport Strategy proposals for a primary cycle network to facilitate safe and convenient medium distance journeys.
- Support the Galway Transport Strategy proposals for a secondary cycle network and feeder links to facilitate safe and convenient local journeys and to afford linkage into the primary cycle network.
- Improve bicycle parking at key destinations and near bus stops /interchanges.
- Ensure facilities for pedestrians and cyclists are designed in accordance with national standards.
- Consider the introduction of reduced speed limits in the city centre and residential areas of the city.
- Continue to encourage an increase in the use of sustainable transport modes including public transport through targeted promotion.

Figure 3 - Galway Development Plan Map (2017-2023)



4. Existing Transport Network

Doughiska Road (South) is a Local Road extending between the junction with the Dublin Road to the north and the Coast Road to the south. It serves mainly residential development and one commercial/recreational area located to the west of the junction with Dublin Road. In line with DMURS Table 3.1 Doughiska Road (South) is a Link Road. The length of this route is circa 0.7km

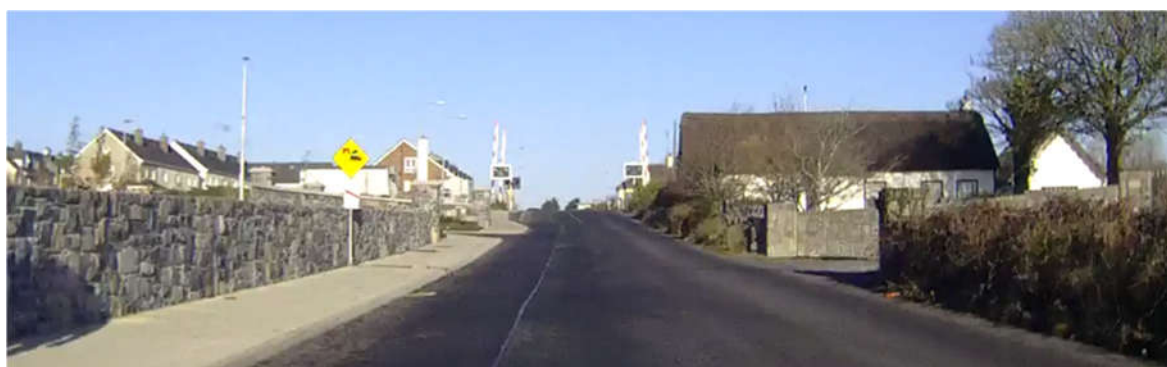
4.1. Road Network

The cross section of Doughiska Road (South) varies significantly north and south of the railway crossing. To the north of the rail crossing it is a single carriageway circa 7m wide kerb-to-kerb with wide footpaths either side and total width of circa 14-16m; this cross section is shown in **Figure 4**. To the south of the railway crossing it is reduced to circa 7m carriageway with a 2m wide footpath along the western edge with stone walls either side and a footpath on the western side and is shown in **Figure 5**.

Figure 4 - 14m to 16m Carriageway on Doughiska Road (South)



Figure 5 - 7m wide carriageway with 2m footpath



Based on Dec 2019 traffic survey carried out by IDASO the AADT on Doughiska Road (South) is 3,277 with 85%ile speed of 52km/h. 2.6% of traffic is comprised of Heavy Goods Vehicles. The existing speed limit along this route is 50km/h.

4.2. Junctions

This route is circa 700m long. There are 8 junctions along this section of Doughiska Road, all of these are with residential estates. The existing junctions have wide junction mouths and radii.

In addition to the junctions, there is one commercial entrance located near the junction with Dublin Road which also serves as an entrance to Castlegar GAA amenities and park-&-ride facility provided to Galway Clinic from this area. The junction with Roscam (Ros Caoin) area located some 120m south of Dublin Road is relatively

heavily trafficked in the morning peak with right turning movement from Roscam estate blocked by the northbound queue on Doughiska Road on the approach to traffic signalised Dublin Road junction.

4.3. Public Transport

There are no bus stops along this route.

There is a railway level crossing located circa 150m north of Coast Road.

4.4. Pedestrian & Cycle Facilities

There is what can be considered to be a shared footway/cycle lane on Doughiska Road (South), with visual separation from pedestrians only by a change in surface type (concrete for pedestrians, asphalt for cyclists). This facility is not indicated by any signage or road markings. It is approximately 400m in length over the total 640m of the route.

South of the railway there is a footway on one side of the road, and cyclists must use the carriageway with vehicular traffic.

5. Options Assessment Process

5.1. Options Assessment

An Option Selection Report was compiled by Atkins with the following aims and objectives:

- To consider the context of the scheme in terms of Local and Regional Planning Policy.
- To identify significant engineering and environmental constraints.
- To set out the route options considered and to summarise their feasibility and relative ranking in terms of various relevant criteria.
- To appraise the route options and make a recommendation in relation to a preferred concept route option.

5.2. Methodology for Options Assessment

Each of the routes were assessed individually with various cross section and junction options using a Multi-Criteria Analysis based on their performance in terms of the needs of the cyclist and impacts on the community and environment. For the purposes of the option assessment, Doughiska Road was split into two routes, one to the north of the existing Dublin Road, and one to the south (i.e. Doughiska Road (South)).

Each option was assessed in a comparative manner to each other and the highest ranked option carried forward to become part of the Preferred Option. The full detail of this options assessment process is included in the Options Selection Report WP - 02 (Atkins document ref. 5193732DG0092). The following options were assessed in the report:

1. Do Nothing
2. Shared Street
3. Mandatory Cycle Lane
4. Raised Adjacent Cycle Lane
5. Raised Cycle Track

5.3. Preferred Options

It is considered that both Options 4 and 5 are equally suitable in terms of the quality of service provided, for all road users. However, given the low traffic volumes and speeds, the slight difference in cost, and the fact that Option 4 has a lesser adjustment in levels (and hence aids in the construction of tie-ins), Option 4, the Raised Cycle Lane, is considered the preferred Option, when the route is considered holistically. However, given the impacts in terms of landtake south of the railway crossing, this section has been examined further.

A raised cycle lane, as shown in Figure 6, is recommended from the junction with the Dublin Road and as far south as the railway crossing (this is approximately 550m in length). South of the railway crossing Option 2 (Shared Street) is recommended (150m in length).

By implementing this combination of options, the requirement for land take south of the level crossing will be eliminated. Although the AADT for this section of road drops to 2,753 the speed on this section of road would still need to be reduced from 52km/h to below 50km/h. This could be achieved by traffic management methods such as entry treatments at the junction with Coast Road and/or intermittent speed reduction measures between the Coast Road and the railway, combined with the reduction of carriageway width to 6m.

Figure 6- Raised Cycle lane cross section

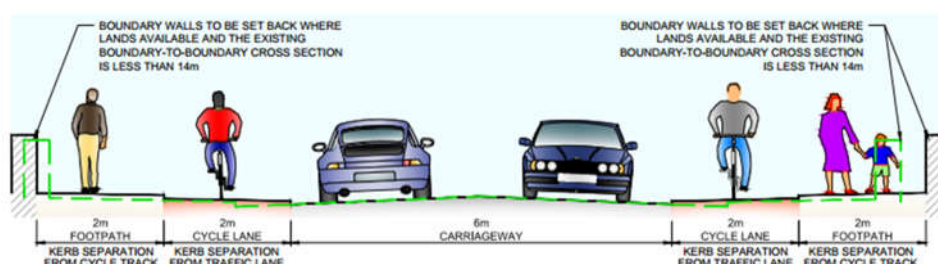
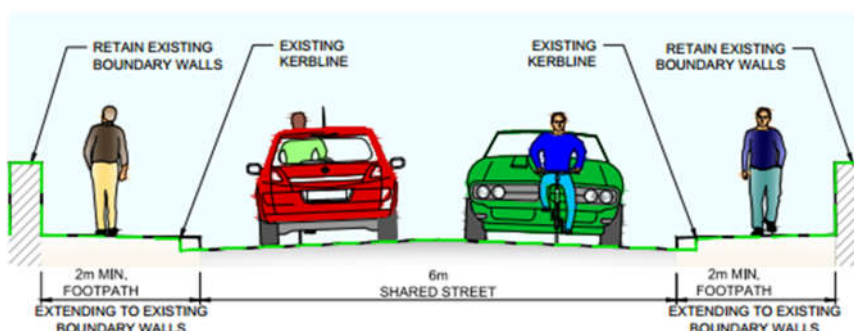


Figure 7 - Shared street cross section



Therefore, the emerging preferred route on Doughiska Road (South) is summarised as follows:

- A raised cycle lane is to be implemented to the north of the level crossing.
- A shared cycle facility is to be implemented south of the level crossing to reduce landtake.
- Reduction of speed along the route is required (assisted by the provision of a narrower carriageway).
- Junction treatments to be applied throughout the route.

6. Preliminary Design

Atkins prepared a Preliminary Design & Appraisal Report for the scheme (document ref. 5193732DG0101), which contains the full details of the proposals. The preliminary design was subject to a Stage 1 Road Safety & User Audit (Atkins, document ref. 5193732DG0127).

The following sections summarise the Preliminary Design features. The Preliminary Design Drawings are contained in Appendix A.

6.1. Link Design

As noted in Chapter 5, the Preferred Route Option for Doughiska Road (South) as per the Link Types in NCM Section 4.3, is a Raised cycle lane (NCM Ref: 4.3.2.3) to the north of the Railway line and a wide shared street (NCM ref: 4.3.1) to the south of the railway.

6.2. Pedestrian Crossings

The existing controlled pedestrian positions are to be retained where applicable and raised tables added where appropriate. Additional controlled facilities are to be included along the route as denoted within the Preliminary Design Drawings. All controlled crossings shall be either segregated signalised crossings or Toucan crossings (to cater for both pedestrians and cyclists).

Uncontrolled pedestrian crossing facilities are proposed across all side roads.

All crossings will be designed as per the minimum required within DMURS (Section 4.3.2) and the Traffic Signs Manual (Section 7.16).

6.3. Public Transport

There are no existing bus routes along Doughiska Road (South).

The railway line into Galway City crosses Doughiska Road (South). The existing infrastructure at this level crossing is to be maintained, as denoted in the Preliminary Design Drawings.

6.4. Drainage

Typically, drainage will be provided using new gullies and existing or new storm drainage pipes where appropriate. The new facilities will generally slope towards the road in order to minimise the need for additional drainage collection measures. In some areas, where this may not be possible, additional channels or measures may be required.

6.5. Pavements

In order to give the highest quality of service for cyclists, it is envisaged that a smooth asphalt surface course will be used with 10mm aggregate as recommended by the National Cycle Manual, with sufficient base and foundation layers to prevent failure.

Shared streets, where cyclists share the trafficked lanes with vehicular traffic shall be resurfaced to ensure a smooth ride surface and suitable skid resistance is achieved.

6.6. Services

At the outset of the project, utility companies were contacted seeking information relating to their plant and ducting within the route corridor. The following information was received, as contained in **Table 2**.

Table 2 - Summary of Utility Companies' Infrastructure

Service Provider	Services Present
ESB	Yes – Numerous underground lines, and overhead lines
Virgin Media	Yes – underground network.
Irish water	Yes – Watermain present, and network of foul water services
GNI	Yes – Medium pressure gas mains.
ENet	No
BT	Yes

A Ground Penetrating Radar (GPR) and utility survey, including slit trenches for verification, will be carried out during the detailed design stage to determine the location of services to the most accurate extent possible. Any service diversions or protection works will be determined at that stage. Given the nature of the scheme, which is contained within the existing boundary extents for the majority of the length of the routes, service diversions are expected to be minimal.

6.7. Land Take

At this preliminary design stage there are no proposals for acquiring private lands as part of the proposals for this route.

6.8. Proposals for Tree Removal and Planting of new trees

To accommodate the provision of the necessary pedestrian and cyclist infrastructure, the proposed scheme requires the removal of a number of trees at various locations along the scheme (as noted within the Preliminary Design Drawings). A tree survey has been undertaken (in 2021) by an independent arboriculturist, which has determined the value, age and condition of all trees along the proposed route and any mitigation required where affected.

At this stage it is estimated that two trees will have to be removed on Doughiska Road (South), which have been classified as being of “Fair” condition by the arboriculturist. Three replacement trees are proposed at an adjacent location, just north of these trees to be removed. Trees for removal, and proposed trees, are noted on the Preliminary Design Drawings.

7. Route Assessment

7.1. General

The routes have been designed to provide the highest quality of service possible for all users, within the constraints identified. Segregation along the majority of the routes allows for minimal conflicts between pedestrians and cyclists, increasing comfort and attractiveness for both. Where shared streets are proposed, measures to control speed are proposed to ensure that cyclists and motorised vehicles can safely use the same space.

7.2. Quality of Service (QoS)

The National Cycle Manual provides five criteria on which the quality of service for cyclists is assessed. These are:

- **Pavement Condition Index (PCI):** a measure of the physical integrity of the cycling surface. It is determined by comprehensive visual inspection as set down by the Department of Transport. In the absence of a formal PCI score, use a locally derived marking system out of 100.
- **Number of adjacent cyclists:** this describes the capacity for cycling two abreast and/or overtaking. “2 + 1” accommodates two abreast plus one overtaking.
- **Number of conflicts:** a measure of the potential interruptions to a cyclist per 100m and may include bus stops, side roads, driveways², entrances, junctions, pedestrian crossings³, parking and loading etc.
- **Junction time delay:** a measure of the actual time delay at junctions as a percentage of the overall journey time, assuming an average journey speed of 15 km/h.
- **HGV influence:** a measure of the number of HGVs and buses adjacent to cyclists as a percentage of the total traffic during peak hours.

Table 3 below outlines the range within each criterion that the proposed scheme must fall within to obtain a ranking. To achieve a particular QoS, at least four of the five criteria must be achieved with the fifth no more than one ranking lower.

Table 3 - Quality of Service Criteria

Quality of Service	PCI Range	No. Adjacent Cyclist	No. of Conflicts (per 100m)	Journey Time Delay	HGV Influence
Level A+	86 – 100	2 + 1	0 – 1	0 – 5%	0 – 1%
Level A	66 – 85	1 + 1	0 – 1	6 – 11%	0 – 1%
Level B	51 – 65	1 + 1	1 – 3	11 – 26%	2 – 5%
Level C	41 – 50	1 + 0	4 – 10	26 – 50%	6 – 10%
Level D	20 - 50	1 + 0	> 10	> 50%	> 10%

The paragraphs following show the quality of service assessment for the proposed scheme. Assumptions for the delay calculation are set out below.

- 30 seconds average delay at each signalised junction.
- 30 second average delay at each signalised crossing; however, considering the suburban nature of the scheme, and therefore relatively low pedestrian demand for crossings, it is considered that the likelihood of

² For the purposes of this scheme driveways have been excluded when quantifying conflicts, due to their proliferation on some routes when compared to others (e.g. Castlepark Road compared to Doughiska Road (South)). All cycle facilities proposed have priority over those entering/exiting driveways.

³ For the purposes of this scheme uncontrolled crossings have been excluded when quantifying time delays.

any one cycle journey on a route encountering a red-light would only be at 1 in every 4 pedestrian crossings (or a 25% chance when approaching any given crossing). This assumption has been made so as not to misrepresent the likely actual delay as a result of signalised pedestrian crossings.

- No delay at each zebra crossing
- Average journey speed of 15 kph

The calculations for the number of conflicts and delay were carried out in both directions (northbound and southbound) and the worst case used for the QoS calculation. These are summarised below.

7.3. QoS Assessment – Doughiska Road (South)

Table 4 - Number of Conflicts per 100m

Conflict Type	Northbound	Southbound
Number of side roads	4	4
Number of bus stops	0	0
Number of signalised junctions	1	1
Number of conflicts	5	5
Length of the route	0.64km	0.64km
No. of conflicts per 100m	0.78	0.78

Table 5 - Journey Time Delay

Conflict Type	Northbound	Southbound
Number of Signalised Crossings Encountered on One Journey (<i>i.e. 1 in 4 of the Actual number [in brackets]</i>)	0.25 [Actual = 1]	0.25 [Actual = 1]
Number of Zebra Crossings	0	0
Number of Signalised Junctions	1	1
Total Delay	37.5 Sec.	37.5 Sec.
Total Journey Time (incl. Delay)	191.1 Sec.	191.1 Sec.
Journey time delay	19.6%	19.6%

Table 6 - Quality of Service Summary

Route	PCI Range	No. Adjacent Cyclists	No of Conflicts (per 100m)	Journey Time Delay	HGV Influence	Quality of Service
Doughiska Road (South)	90	1+1	0.78	19.6%	2.6%	Level B

8. Summary & Conclusion

8.1. Pedestrian, Cyclist & Vehicular Impacts

The new route will provide a safe, accessible and attractive route for pedestrians and cyclists. New and improved crossings will allow pedestrians to cross all of the roads within the scheme extents in a safe manner. The provision of this high-quality cycle infrastructure will provide an attractive route for cyclists linking a number of residential, recreational and educational areas.

In general, there will be limited impacts to the existing vehicular traffic on the surrounding road network, however given the nature of the proposals (e.g. reduction in carriageway width, reduction in junction radii and an increase in pedestrian crossings) there will be a slowing of traffic speeds compared to the existing, and therefore some increase in journey time. This however is a necessity in order to provide a scheme which is safe and in line with best practice and guidelines. These proposals will help to reduce the likelihood of conflicts between all road users.

8.2. Environmental Impacts

As part of the Preliminary Design Phase an Environmental Impact Assessment Screening Report was prepared (Atkins ref. 5193732DG0097). This found no significant adverse impacts to the receiving environment will arise as a result of the proposed development. Refer to Appendix B for a copy of this document.

Also, as part of the Preliminary Design Phase a Screening for Appropriate Assessment Report was undertaken (Atkins ref. 5193732DG0099). The report determined that due to the scope and nature of the proposed project, it is considered that the proposed project, either alone or in combination with other plans or projects, will not result in likely significant effects on the Galway Bay Complex SAC or Inner Galway Bay SPA, or any other European site, in view of their conservation objectives. Refer to Appendix C for a copy of this document.

8.3. Preliminary Cost Estimates

Details of the Primary Cost Estimates are summarised in **Table 7**.

Table 7 - Preliminary Cost Estimate Summary

Doughiska Road (South)	
Length (m)	700
Construction	€ 569,822
Prep. & Admin	€ 56,982
Traffic Mgmt.	€ 56,982
Land & Property	€ 0
Adjustments	€ 319,311
Total (Ex VAT)	€ 1,003,097
(per km Rate)	€ 1,435,000
Total (Inc. VAT)	€ 1,143,929
(per km Rate)	€ 1,635,000

8.4. Conclusion

The preliminary design for the scheme has been undertaken in line with DMURS and the NCM, developing the preferred option as outlined in the Option Selection Report.

The proposed improvements realised as part of the scheme align with the aims and objectives, as follows:

- The potential for conflicts shall be reduced through the provision of formalised crossing facilities throughout.

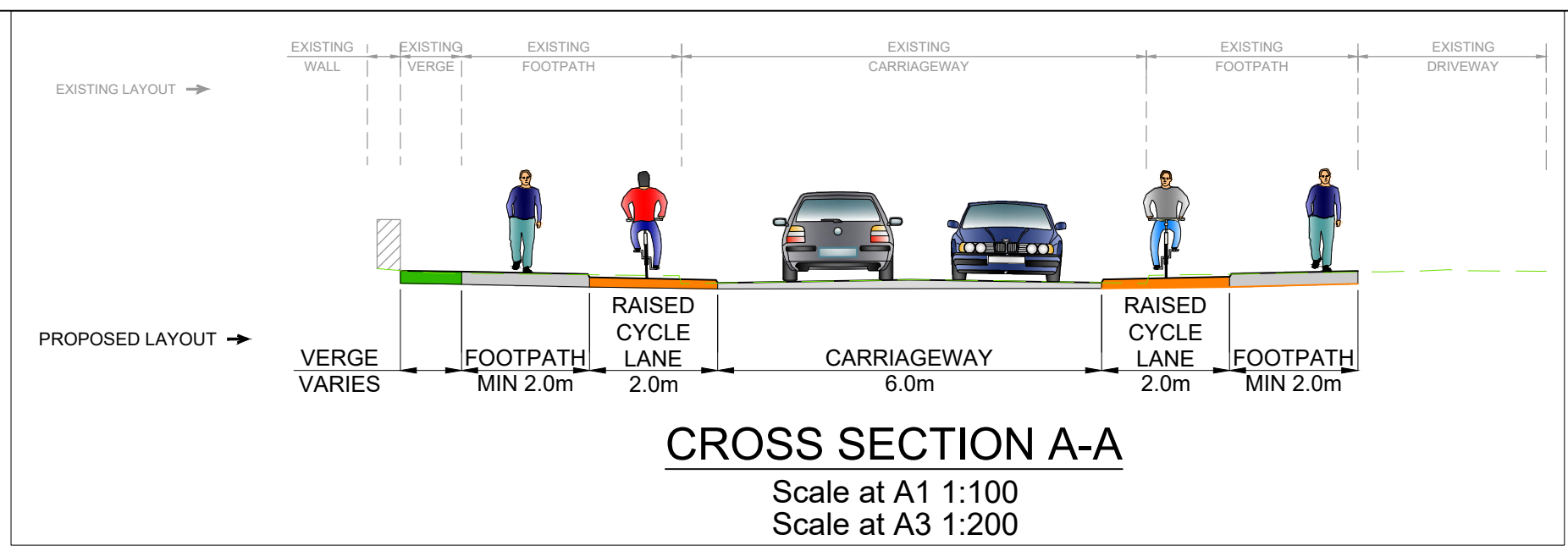
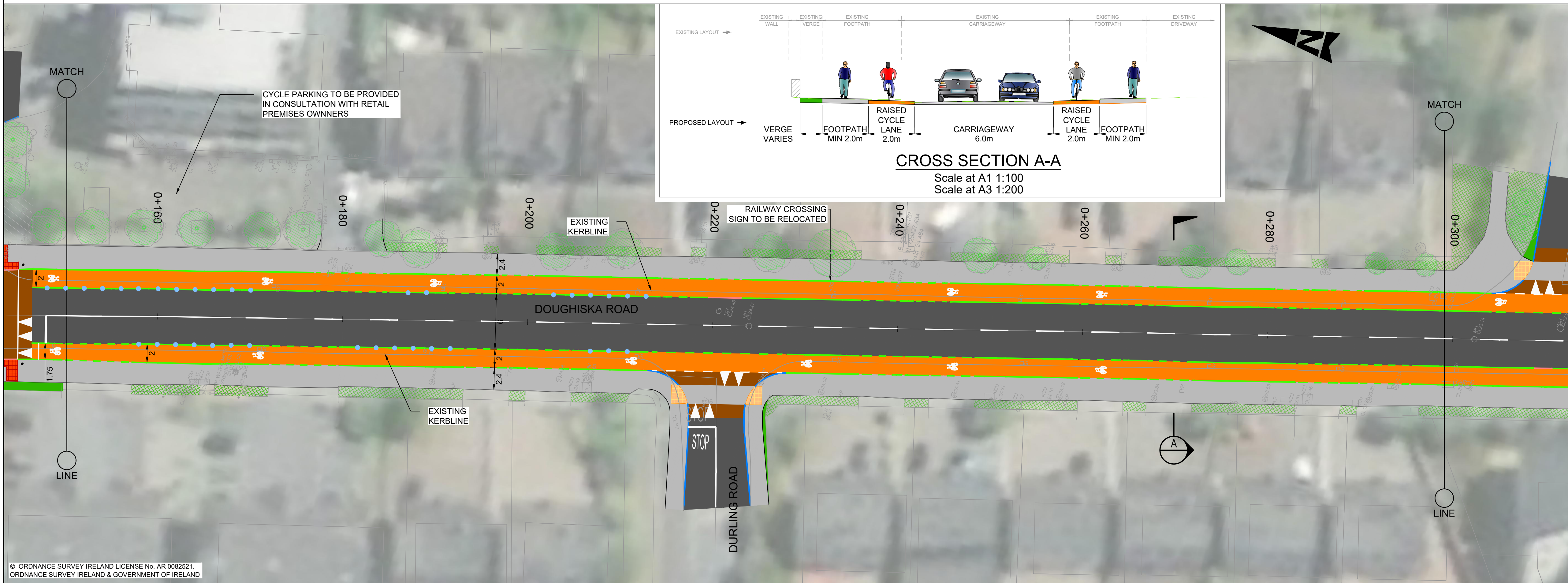
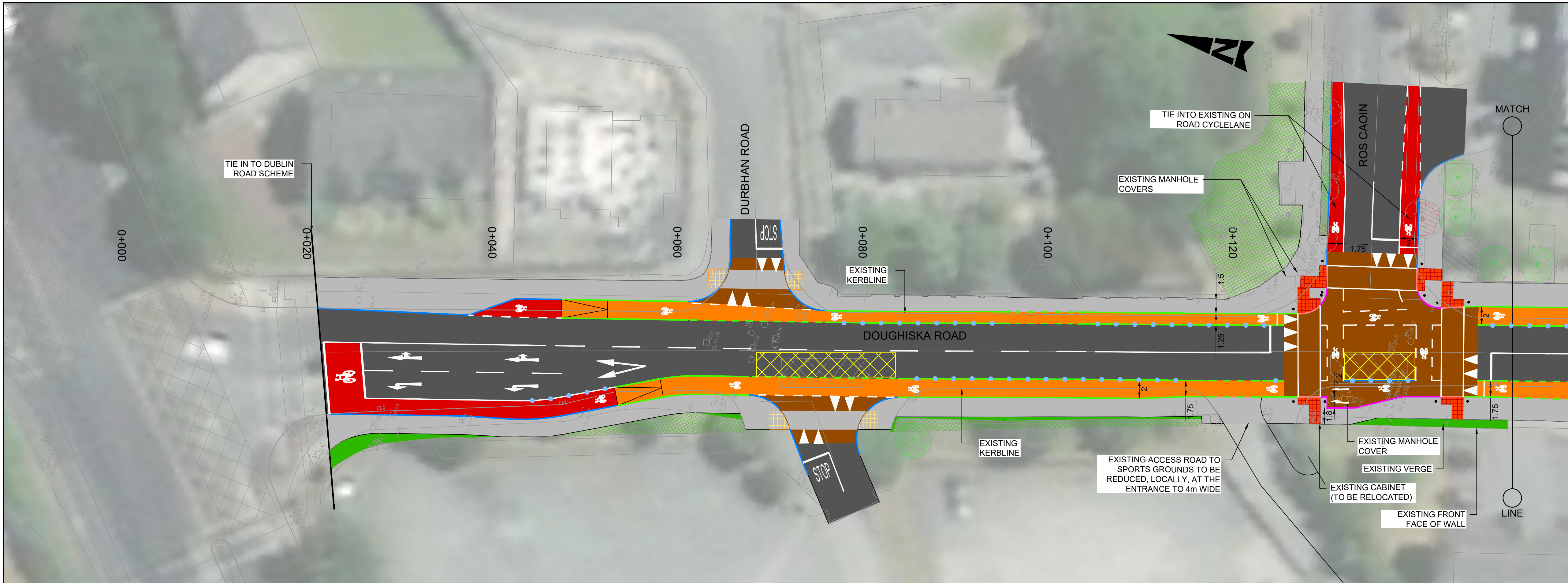
- Where traffic volumes and speeds require it, the potential for conflicts shall be reduced by the segregation of cyclists from vehicular traffic.
- The potential for conflicts between cyclists and pedestrians shall be reduced through the implementation of segregated facilities for the majority of the scheme.
- Vulnerable road users shall be catered for through formalised crossing facilities, footways and the provision of kerbing and tactile paving in line with best practice.
- The provision of the proposed facilities shall bring enhancements for pedestrians and cyclists, thereby promoting physical activity. The route will provide improvements for those pedestrian and cyclists accessing the Castlegar GAA Club and the retail and medical practices at Roscam.
- Likewise, accessibility and social inclusion shall be improved for those road users who rely on a non-motorised means of transport.
- The proposals integrate with national and local policies and strategies, and in particular meet the minimum objectives for the cycle routes as outlined in the Galway Transport Strategy. The proposals also facilitate the future tie-in / connectivity to other proposed cycle schemes within the GTS (namely those on the Dublin Road, and the Galway to Athlone Greenway).
- The impact on the environment will be minimal.
- From these benefits the proposals will offer good value for money, both at a strategic level, and also to those individual users for whom the scheme shall enable a modal switch from the private car to walking / cycling.

Appendix A. Preliminary Design Drawings

A1

DO NOT SCALE

File: 5193732_HTR_DR_0166.dwg
Date: Aug 24, 2021 - 10:33am
Plotted by: JDemora

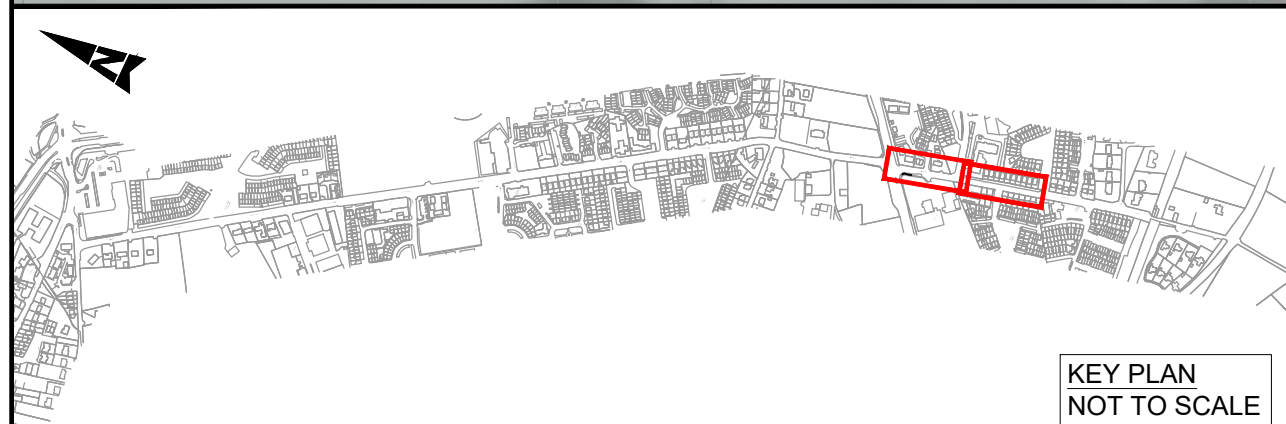


- GENERAL NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR
 5. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION

- LEGEND:
- EXISTING KERBLINE TO BE RETAINED
 - 25mm CONCRETE ENTRANCE KERB
 - 50mm CONCRETE KERB
 - 50mm BEVELLED KERB
 - 75mm CONCRETE KERB
 - 100mm CONCRETE KERB
 - KASSEL KERB
 - FLUSH KERB
 - CARRIAGEWAY
 - PROPOSED FOOTPATH
 - PROPOSED SHARED SPACE
 - PROPOSED RAISED CYCLE TRACK / LANE
 - PROPOSED ON ROAD CYCLE LANE
 - PROPOSED RAISED TABLE / ENTRY TREATMENT
 - PROPOSED TACTILE PAVING (CONTROLLED)
 - PROPOSED TACTILE PAVING (UNCONTROLLED)
 - PROPOSED TACTILE PAVING (CORDUROY PAVING)
 - PROPOSED GRASS VERGE
 - EXISTING GRASS VERGE TO BE RETAINED
 - EXISTING SHRUB TO BE RETAINED
 - EXISTING FOOTWAY / CYCLEWAY
 - AREA OF LANDTAKE
 - PROPOSED BUS SHELTER
 - EXISTING TREES TO BE REMOVED
 - EXISTING TREES TO BE RETAINED
 - PROPOSED TREES (LOCATION INDICATIVE)
 - DELINEATOR POSTS

- NOTES:
1. DO NOT SCALE FROM DRAWING.
 2. PROPOSED CYCLE TRACKS, CYCLE LANES AND FOOTWAYS SHALL BE MIN. 2m WIDE UNLESS NOTED OTHERWISE

© ORDNANCE SURVEY IRELAND LICENSE No. AR 0082521
ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND



KEY PLAN
NOT TO SCALE



Rev	Description	By	Date	Chk'd	Auth
E	FOR INFORMATION	DB	24.08.21	ST	KB
D	FOR INFORMATION	DB	07.07.21	ST	KB
C	FOR INFORMATION	JD	18.05.21	ST	KB
B	FOR INFORMATION	JD	12.04.21	ST	KB
A	FOR INFORMATION	JD	26.05.20	ST	KB
-	FOR INFORMATION	DB	29.04.20	ST	KB

ATKINS
Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

1st Floor Technology House
Parkmore Technology Park, Galway
Tel (+353) 091 786 050
Fax (+353) 091 779 830

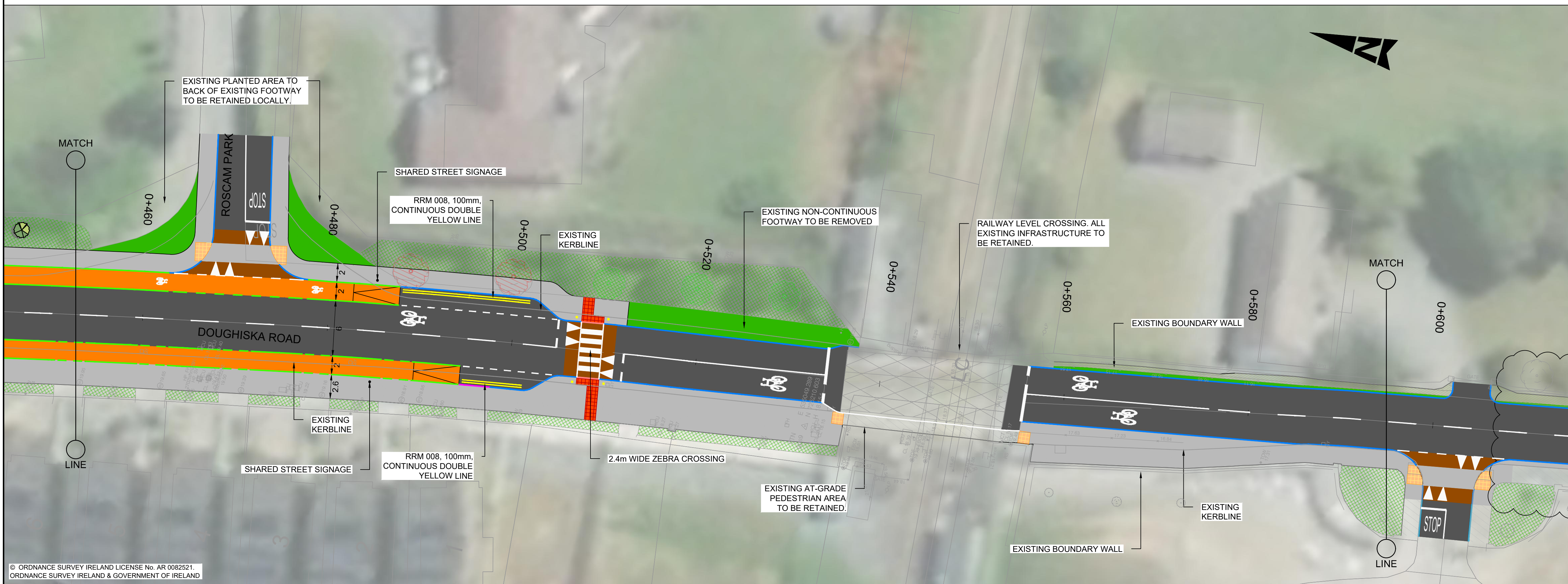
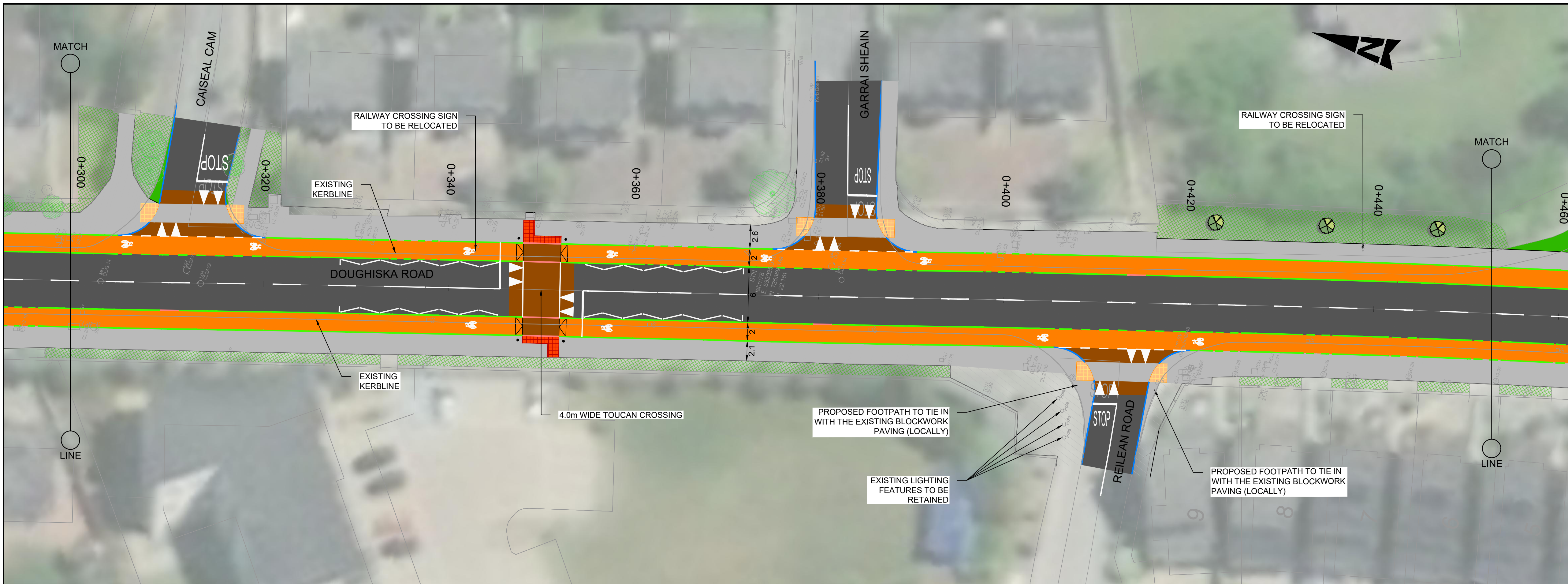
Client	GALWAY CITY COUNCIL		
Project	GALWAY CYCLE NETWORK PHASE 1		

INFORMATION			
Title			
DOUGHISKA ROAD (SOUTH) PRELIMINARY DESIGN SHEET 1 OF 3			
Original Scale	Design/Draw	Checked	Authorised
1:250 @ A1 1:500 @ A3	DB	ST	KB
Date	Date	Date	Date
29.04.20	29.04.20	29.04.20	29.04.20
Status	Drawing Number	Rev	
I	5193732 / HTR / DR / 0166	E	

A1

DO NOT SCALE

File: 5193732_HTR_DR_0167.dwg
Date: Aug 24, 2021 - 10:35am
Plotted by: JDemora

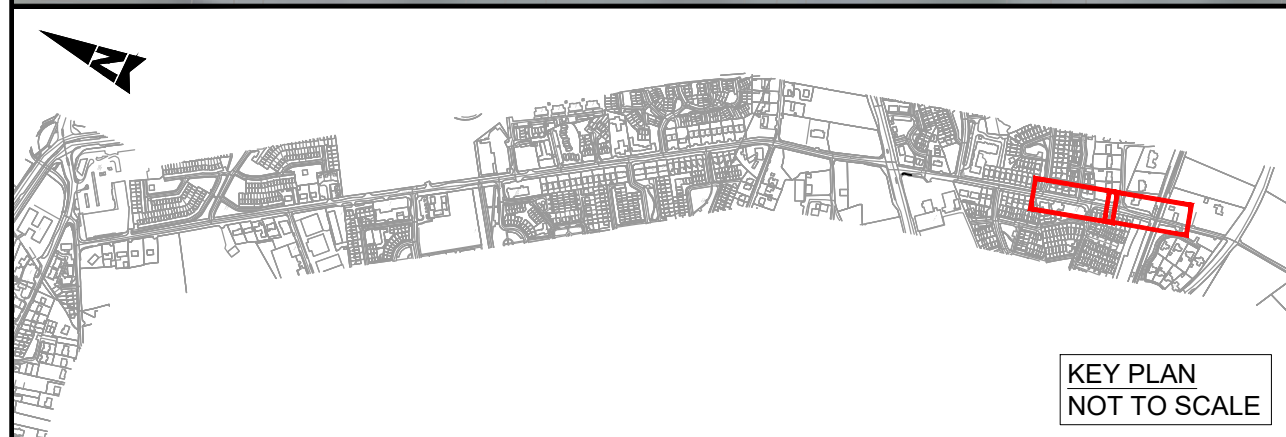


- GENERAL NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 2. ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 3. ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 4. ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR
 5. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION

- LEGEND:
- EXISTING KERBLINE TO BE RETAINED
 - 25mm CONCRETE ENTRANCE KERB
 - 50mm CONCRETE KERB
 - 50mm BEVELLED KERB
 - 75mm CONCRETE KERB
 - 100mm CONCRETE KERB
 - KASSEL KERB
 - FLUSH KERB
 - CARRIAGEWAY
 - PROPOSED FOOTPATH
 - PROPOSED SHARED SPACE
 - PROPOSED RAISED CYCLE TRACK / LANE
 - PROPOSED ON ROAD CYCLE LANE
 - PROPOSED RAISED TABLE / ENTRY TREATMENT
 - PROPOSED TACTILE PAVING (CONTROLLED)
 - PROPOSED TACTILE PAVING (UNCONTROLLED)
 - PROPOSED TACTILE PAVING (CORDUROY PAVING)
 - PROPOSED GRASS VERGE
 - EXISTING GRASS VERGE TO BE RETAINED
 - EXISTING SHRUB TO BE RETAINED
 - EXISTING FOOTWAY / CYCLEWAY
 - AREA OF LANDTAKE
 - PROPOSED BUS SHELTER
 - EXISTING TREES TO BE REMOVED
 - EXISTING TREES TO BE RETAINED
 - PROPOSED TREES (LOCATION INDICATIVE)
 - DELINEATOR POSTS

- NOTES:
1. DO NOT SCALE FROM DRAWING.
 2. PROPOSED CYCLE TRACKS, CYCLE LANES AND FOOTWAYS SHALL BE MIN. 2m WIDE UNLESS NOTED OTHERWISE

© ORDNANCE SURVEY IRELAND LICENSE No. AR 0082521.
ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND



Rev	Description	By	Date	Chk'd	Auth
E	FOR INFORMATION	DB	24.08.21	ST	KB
D	FOR INFORMATION	DB	07.07.21	ST	KB
C	FOR INFORMATION	JD	18.05.21	ST	KB
B	FOR INFORMATION	JD	12.04.21	ST	KB
A	FOR INFORMATION	JD	26.05.20	ST	KB
-	FOR INFORMATION	DB	29.04.20	ST	KB

ATKINS
Member of the SNC-Lavalin Group

Atkins House, 150-155 Airside
Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

1st Floor Technology House
Parkmore Technology Park, Galway
Tel (+353) 091 786 050
Fax (+353) 091 779 830

Client	GALWAY CITY COUNCIL		
Project	GALWAY CYCLE NETWORK PHASE 1		

INFORMATION			
Title			
DOUGHISKA ROAD (SOUTH) PRELIMINARY DESIGN SHEET 2 OF 3			
Original Scale	Design/Drawn	Checked	Authorised
1:250 @ A1 1:500 @ A3	DB	ST	KB
Date	Date	Date	Date
29.04.20	29.04.20	29.04.20	29.04.20
Status	Drawing Number	Rev	
I	5193732 / HTR / DR / 0167	E	

A1

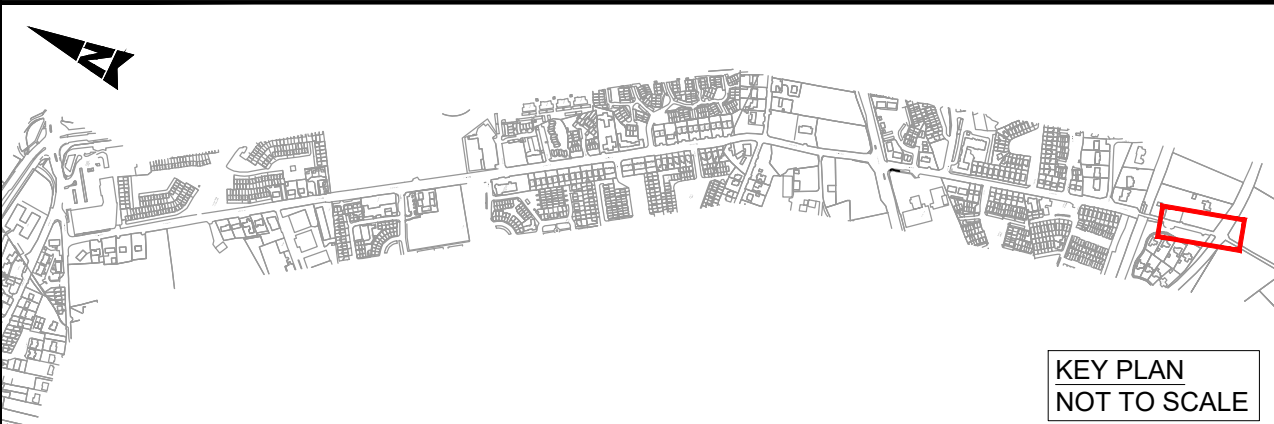
DO NOT SCALE

File: 5193732_HTR_DR_0168.dwg

Date: Aug 24, 2021 - 10:37am

Plotted by: JDemaria

© ORDNANCE SURVEY IRELAND LICENSE No. AR 0082521.
ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND



KEY PLAN
NOT TO SCALE



Rev	Description	By	Date	Chk'd	Auth
E	FOR INFORMATION	DB	24.08.21	ST	KB
D	FOR INFORMATION	DB	07.07.21	ST	KB
C	FOR INFORMATION	JD	18.05.21	ST	KB
B	FOR INFORMATION	JD	12.04.21	ST	KB
A	FOR INFORMATION	JD	26.05.20	ST	KB
-	FOR INFORMATION	DB	29.04.20	ST	KB

Atkins House, 150-155 Airside Business Park, Swords, Co. Dublin
Tel (+353) 01 810 8000
Fax (+353) 01 810 8001

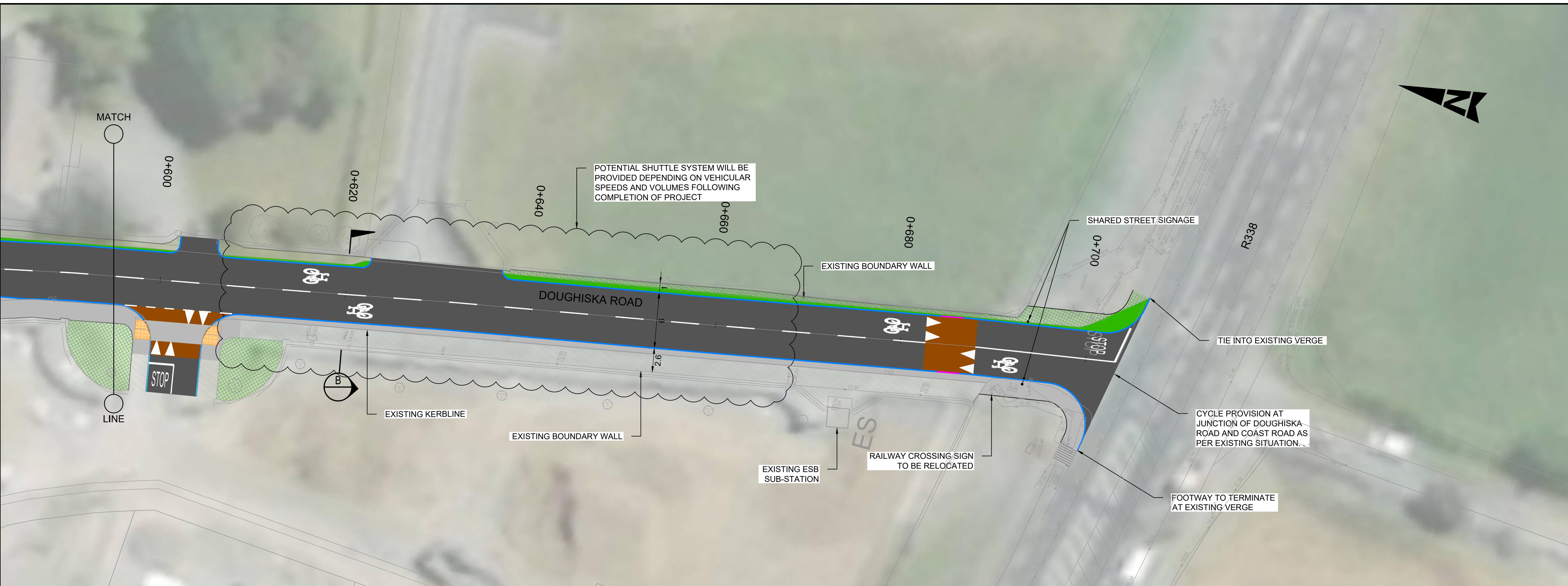
Unit 2B, 2200 Cork Airport Business Park, Cork
Tel (+353) 021 429 0300
Fax (+353) 021 429 0360

1st Floor Technology House Parkmore Technology Park, Galway
Tel (+353) 091 786 050
Fax (+353) 091 779 830

ATKINS
Member of the SNC-Lavalin Group

Client	GALWAY CITY COUNCIL		
Project	GALWAY CYCLE NETWORK PHASE 1		

Title DOUGHISKA ROAD (SOUTH) PRELIMINARY DESIGN SHEET 3 OF 3			
Original Scale 1:250 @ A1 1:500 @ A3	Design/Drawn DB	Checked ST	Authorised KB
Date 29.04.20	Date 29.04.20	Date 29.04.20	Date 29.04.20
Status I	Drawing Number 5193732 / HTR / DR / 0168	Rev E	



- GENERAL NOTES**
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE
 - ONLY WRITTEN DIMENSIONS SHALL BE USED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS
 - ALL LEVELS ARE IN METRES AND ARE TO MALIN HEAD DATUM
 - ALL COORDINATES ARE IN METRES AND ARE TO IRISH TRANSVERSE MERCATOR
 - DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION

- LEGEND:**
- EXISTING KERBLINE TO BE RETAINED
 - 25mm CONCRETE ENTRANCE KERB
 - 50mm CONCRETE KERB
 - 50mm BEVELLED KERB
 - 75mm CONCRETE KERB
 - 100mm CONCRETE KERB
 - KASSEL KERB
 - FLUSH KERB
 - CARRIAGEWAY
 - PROPOSED FOOTPATH
 - PROPOSED SHARED SPACE
 - PROPOSED RAISED CYCLE TRACK / LANE
 - PROPOSED ON ROAD CYCLE LANE
 - PROPOSED RAISED TABLE / ENTRY TREATMENT
 - PROPOSED TACTILE PAVING (CONTROLLED)
 - PROPOSED TACTILE PAVING (UNCONTROLLED)
 - PROPOSED TACTILE PAVING (CORDUROY PAVING)
 - PROPOSED GRASS VERGE
 - EXISTING GRASS VERGE TO BE RETAINED
 - EXISTING SHRUB TO BE RETAINED
 - EXISTING FOOTWAY / CYCLEWAY
 - AREA OF LANDTAKE
 - PROPOSED BUS SHELTER
 - EXISTING TREES TO BE REMOVED
 - EXISTING TREES TO BE RETAINED
 - PROPOSED TREES (LOCATION INDICATIVE)
 - DELINEATOR POSTS

- NOTES :**
- DO NOT SCALE FROM DRAWING.
 - PROPOSED CYCLE TRACKS, CYCLE LANES AND FOOTWAYS SHALL BE MIN. 2m WIDE UNLESS NOTED OTHERWISE

Purpose **INFORMATION**

Appendix B. Environmental Impact Assessment Screening Report

Galway Cycle Network Phase 1

WP-02 Doughiska Road (South) - Environmental Impact Assessment Screening

Galway City Council

August 2021



Notice

This document and its contents have been prepared and are intended solely as information for Galway City Council and use in relation to EIA Screening for Galway Cycle Network Phase 1 - WP-02.

WS Atkins Ireland Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 27 pages including the cover.

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 0	Draft for Client Comment	JL/AMc	AMc	DL	ST	31/05/21
Rev 1	Final	JL/AMc	AMc	DL	ST	17/06/21
Rev 2	Final	JL/AMc	AMc	DL	ST	10/08/21

Contents

Chapter	Page
1. Introduction	4
1.1. Purpose of this Report	4
2. Methodology	6
2.1. Relevant Legislation	7
3. Environmental Impact Assessment Screening	9
3.1. Step 1 - Mandatory Screening for EIA	9
3.2. Step 2- Determining if the project is likely to have significant effect on the receiving environment.	9
3.3. Criteria for Determining Whether Development Listed in Part 2 of Schedule 5 Should be subject to an EIA	15
3.4. Potential for Significant Effects on the Receiving Environment	21
3.5. Screening Conclusion	21
4 References	22
Appendices	24
Appendix A. Drawings	25

Figures

Figure 1-1: Proposed Galway Cycle Network Phase 1 Routes, with WP-02 labelled	5
Figure 2-1 - EIA Screening Process (Source: 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft' (EPA, 2017)).	7

1. Introduction

The Galway Cycle Network Phase 1 scheme has been commissioned to Atkins by Galway City Council (GCC) in October 2019, under the National Transport Authority's (NTA) Consultancy Services framework (2016) and has been developed in consideration of current GCC policies included in the Galway Transport Strategy (GTS) (August 2016).

The Galway Cycle Network Phase 1 consists of 5 routes located to the east of Galway City, as shown in Figure 1-1. These routes are corridors along existing roads and have been identified within the GTS and within the scope of this scheme as follows:

- Route 1 – Ballybane Road between Skerrit roundabout and Monivea Road junction, excluding the N6 and Dublin Road junctions;
- Route 2 (A and B) – Doughiska Road extending between the start of the Sean Bhaile estate to the north and Coast Road to the South, excluding the junction with the Dublin Road;
- Route 3 – Ballyloughane Road (full extent excluding the junction with the Dublin Road);
- Route 4 – Castlepark Road (full extent); and,
- Route 5 – Monivea Road extending from the Ballybane Road and terminating at the start of the ghost island junction to the west of the Clayton Hotel entrance.

This report refers to the assessment of Work Package 02 (WP-02) of the Galway Cycle Network Phase 1 Scheme which is Route 2B – Doughiska Road (South) (hereafter referred to as the proposed project). Refer to Figure 1-1 for the location of the proposed project.

1.1. Purpose of this Report

This report has been prepared to support a Part VIII Planning Application by Galway City Council in relation to a high-quality cycle route located to the east of Galway City. The purpose of this report is to determine whether the project requires the preparation of an Environmental Impact Assessment Report (EIAR). The project has been screened to generate a summarised overview of the potential impacts on the receiving environment, and in the context of relevant statutory requirements.

A Stage 1 Screening for Appropriate Assessment has also been prepared (Atkins, 2021). The project has been assessed with regards to the likely significant effects of the project on Natura 2000 sites within the zone of influence of the proposed project.



5193732DG0097 | Rev 2 | August 2021
Atkins | 5193732DG0097 rev 2.docx

2. Methodology

This project has been screened in accordance with Section 3.2 of the *'Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft'* (EPA, 2017), the Environmental Impact Directive (85/337/EEC) and all subsequent relevant amendments, Planning and Development regulations (2001-2021), including S.I. No. 296 of 2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, which came into operation on 1st September 2018. The project had been screened in accordance with the Roads Act, 1993 and the European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulation 2019 S.I. No. 279 of 2019.

As set out under the relevant legislation (detailed further in Section 2.1 of this report), there are three key steps when carrying out EIA screening for a particular project:

- **Step 1** is to determine if the proposed infrastructure works represent a project as understood by the Directive and if a mandatory EIAR is required. Such projects are defined in Article 4 of the EIA Directive and set out in Annexes I and II. Projects requiring a mandatory EIAR are included under Section 50 of the Roads Act (1993-2021), S.I. No. 279 of 2019 amendments and the prescribed projects listed in Section 8 of the Roads Regulations, 1994 (S.I. No. 119 of 1994).
- **Step 2** is to determine if the project is likely to have significant effects on the receiving environment. Section 50 (1)(b) of the Roads Act (1993-2021) states that if An Bord Pleanála considers that any road development proposed (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment it shall direct that the development be subject to an environmental impact assessment. Section 50 (1)(e) of the Roads Act (1993-2021) states where a decision is being made pursuant to this subsection on whether a road development that is proposed would or would not be likely to have significant effects on the environment, An Bord Pleanála, or the road authority or the Authority concerned (as the case may be), shall take into account the relevant selection criteria specified in Annex III. Annex III as has been transposed into Irish Legislation via Schedule 7 of the Planning and Development Regulations 2001-2021.

There are no exacting rules as to what constitutes “significant” in terms of environmental impacts. The responsibility is on Planning Authorities to carefully examine every aspect of a development in the context of characterisation of the project; location of the project and type and characteristics of potential impacts. It is generally not necessary to provide specialist studies or technical reports to complete this screening process, rather to investigate where further studies may be required, and where risks, if any, to the integrity of the receiving environment may lie.

For the purposes of screening sub-threshold development for EIA, all of the relevant information as presented within EIA Planning and Development Regulations 2018 (Schedule 7A) has been provided on behalf of the applicant, Galway City Council. The potential for the project to pose a significant impact to the receiving environment has also been evaluated in accordance with criteria listed in the Planning & Development Regulations, 2001, and EIA Planning and Development Regulations 2018 (Schedule 7).

The findings of the EIA screening assessment prepared for the project has informed our professional opinion as to whether an EIAR is warranted for the proposed project, with due regard to all relevant statutory requirements and technical guidance. However ultimately it is the responsibility of the relevant planning authority to make a determination as to whether an EIAR is required for a particular project, based on screening conducted by the planning authority.

Figure 2-1 provides a summary of the main steps involved in the EIA screening process.

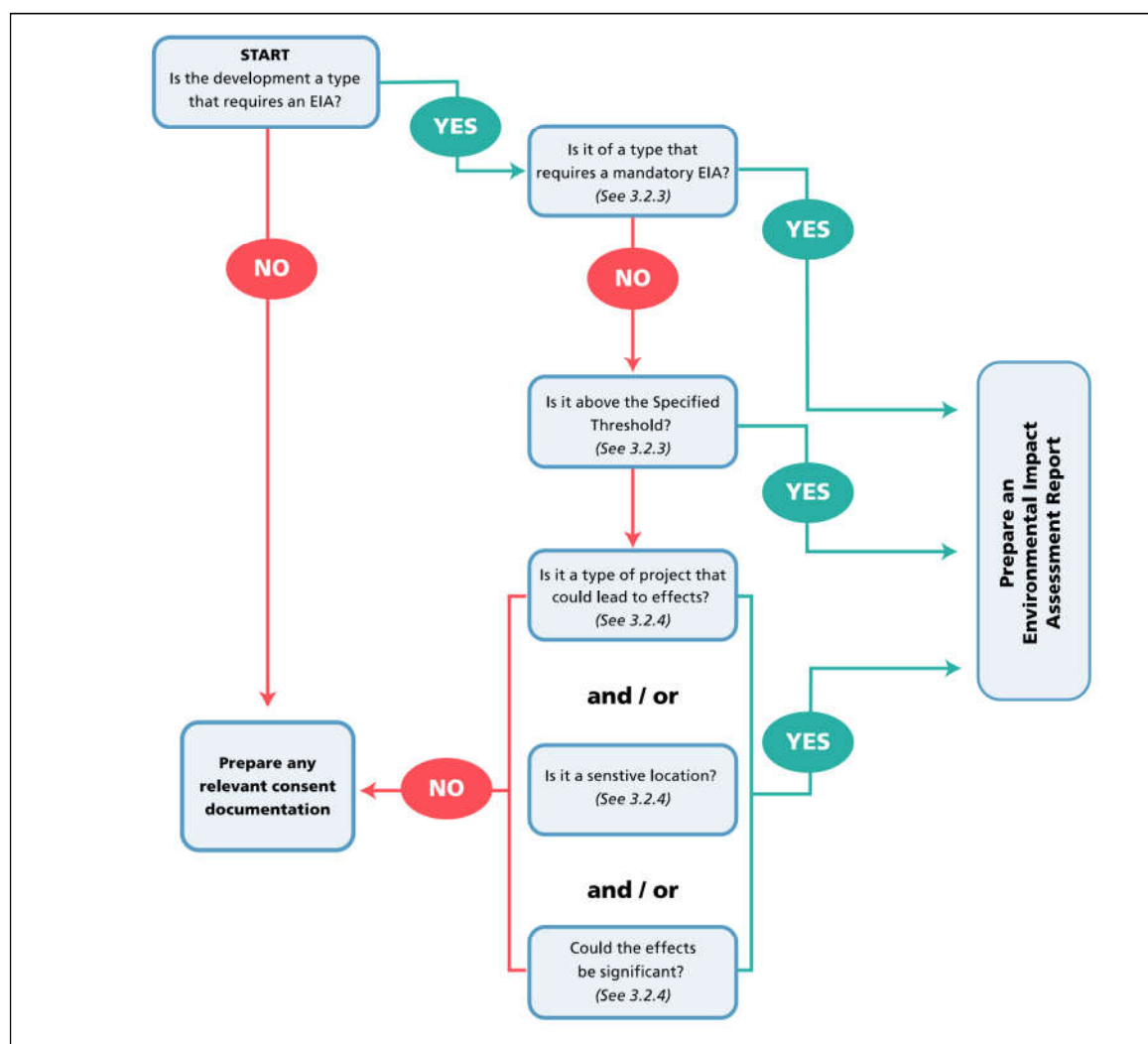


Figure 2-1 - EIA Screening Process (Source: ‘Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft’ (EPA, 2017)).

2.1. Relevant Legislation

The Environmental Impact Directive (85/337/EEC) was brought into force in 1985. Subsequent amendments were made with the following pieces of legislation - 97/11/EC, 2003/35/EC, 2009/31/EC, 2011/92/EU and 2014/52/EU. The Directive was originally transposed into Irish Law by the European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349/1989). This amended the Local Government (Planning and Development Act) 1963 and introduced the requirement for an Environmental Impact Assessment in certain specified circumstances. The most recent amendment to the Directive is focused on clarifying and simplifying the process of EIA. The screening criteria have been updated, and Member States have a mandate to simplify their assessment procedures. EIA reports are to be made more readily understandable to members of the general public. Section 50 of the Roads Acts 1993 and the 2019 amended Regulation outlines certain categories of roads projects which require an EIAR.

New EIA Regulations ((Planning and Development) Environmental Impact Assessment) Regulations 2018 (S.I. No. 296 of 2018)) transposing the 2014 EIA Directive were recently adopted and came into operation on 1st September 2018. These regulations amend the Planning and Development Regulations 2001 (S.I. No.600 of 2001); they seek to transpose EIA Directive 2014/52/EU and to give further effect to the 2011 Directive, as follows;

- An EIAR is required as a matter of course on specified large-scale projects which have a high likelihood of impacting on the receiving environment. These projects are listed in full within the Planning & Development Regulations (2001-2021), Schedule 5, Part 1 – Development for the purposes of Part 10.
- Each EU Member State has discretionary consideration for the requirement of an EIA in relation to various processes and activities. These projects are listed in full within the Planning & Development Regulations

(2001-2021), Schedule 5, Part 2 – Development for the purposes of Part 10. If the proposed project is listed under Schedule 5, Part 2, but does not exceed the relevant stated thresholds, it is considered to be sub-threshold. Part 10, article 92 of the Planning & Development Regulations, 2001 as amended states “‘sub-threshold development’ means development of a type set out in Part 2 of Schedule 5, which does not equal or exceed, as the case may be, a quantity, area or other limit specified in that Schedule in respect of the relevant class of development”. Any sub-threshold developments should be evaluated to determine if the project is likely to have a significant impact on the environment.

- Criteria to evaluate whether significant impacts on the receiving environment will arise from a proposed development are listed under Schedule 7 of the relevant Planning & Development Regulations (2001-2021). A list of the relevant information to be provided by the applicant or developer for the purposes of sub-threshold EIA screening is presented in Schedule 7A of the Regulations, and summarised below;
 1. A description of the proposed development, including in particular:
 - a. a description of the physical characteristics of the whole proposed development and, where relevant, of demolition works; and,
 - b. a description of the location of the proposed development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
 2. A description of the aspects of the environment likely to be significantly affected by the proposed development.
 3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment resulting from:
 - a. the expected residues and emissions and the production of waste, where relevant: and,
 - b. the use of natural resources, in particular soil, land, water and biodiversity.
 4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.

3. Environmental Impact Assessment Screening

3.1. Step 1 - Mandatory Screening for EIA

The project has been screened against the criteria outlined in Section 50(1)(a) of the Roads Act 1993-2021¹ and Article 8 of S.I. No. 119/1994- Roads Regulations, 1994². This project does not fall within any category of development requiring a mandatory EIA; hence the preparation of an EIAR is not required under Section 50 (1)(a).

3.1.1. Sub-threshold Development Likely to Have Significant Effects on the Environment

The scheme has been screened against the criteria outlined in Section 50(1)(b) of the Roads Act 1993-2021, as follows;

'Where the Minister considers that any proposed road development (other than development to which paragraph (a) applies) consisting of the construction of a proposed public road or the improvement of an existing public road would be likely to have significant effects on the environment, he shall direct the road authority to prepare an environmental impact statement in respect of such proposed road development and the authority shall comply with such direction'.

Therefore, it is considered that the scheme should undergo an EIA screening to determine if an EIAR would be required in accordance with Section 50(1)(b) of the Roads Act 1993-2021.

3.2. Step 2- Determining if the project is likely to have significant effect on the receiving environment.³

All relevant information as required under Schedule 7A has been provided on behalf of Galway City Council and is presented within this screening report. The potential for this project to pose a significant impact to the receiving environment has also been evaluated in accordance with criteria listed in the Planning & Development Regulations, 2001, and EIA Planning and Development Regulations 2020 (Schedule 7), as presented within this screening report.

3.2.1. Description of the Proposed Development (Schedule 7A (1))

A description of the Physical Characteristics of the Whole Proposed Development and Where Relevant of Demolition Works (Schedule 7A (1) (a))

Drawings of the preliminary design are shown in Appendix A. A description of the proposed scheme is as follows;

Route 2B – Doughiska Road (South)

The proposed cycle scheme along this route will consist of a raised adjacent cycle lane north of the level crossing and a shared street facility south of the level crossing.

The shared street option includes narrowing the existing carriageway to 6m and the provision of a minimum 2m wide footpath either side of the road. This solution is acceptable in low speed and low traffic volume environments.

The raised cycle track option includes a 50mm high vertical kerb segregation between the carriageway and cycle lane and a 50mm high vertical kerb segregation between the cycle lane and adjacent footpath. In principle, this option is suitable for locations with an AADT less than 5500 and speeds of up to 50km/h.

Construction Methodology

Works will commence with the clearance and off-site removal of redundant road signage, boundary treatment, surface materials and topsoil. The works will be undertaken using a combination of operatives using hand tools, mechanical excavators and small dumper trucks. To facilitate the main works, underground utilities which conflict

¹ <http://www.irishstatutebook.ie/eli/2021/si/12/made/en/print>

² <http://www.irishstatutebook.ie/eli/1994/si/119/made/en/print>

³ Pursuant to Schedule 7(A) of the Planning and Development Regulations as amended 2001-2018

with the main works will be uncovered using mechanical excavators and hand digging where appropriate. A utility survey, including slit trenches for verification, will be carried out during the detail design stage to determine the location of services to the most accurate extent possible. Any service diversions or protection works will be required at that stage. This is likely to be restricted to locations where the walking and cycling facilities cross or interface with public roads.

Following the diversion of utilities, the initial pavement and cycle lane/track construction phase will be undertaken. This will include the excavation and removal of the existing stone, soil, concrete and bitumen materials along the route followed by the installation of new path and track base materials, or their retention, where proposed levels and material conditions allow. Any excavations will be largely undertaken by mechanical means, with any spoil arisings to be removed off site or reused locally where testing confirms its suitability. The base layers of the pavement and cycle lane/track are to be made of compacted stone materials.

Drainage works, likely to run in tandem with the pavement construction phase, are considered to be minimal and restricted to areas where the scheme interfaces with the public road. Drainage for the proposed scheme will be provided using new gullies and, new or existing storm drainage pipes where appropriate. The new facilities will generally slope towards the road in order to minimise the need for additional drainage collection measures. In some areas, where this may not be possible, additional channels or measures may be required.

The works will also involve constructing the civil engineering elements required to facilitate the commissioning of the traffic signals and the public lighting elements at the latter stages of construction once all the heavy civil engineering works have been executed. Service chambers and underground duct sets will be laid within trenches and backfilled with granular material. Signal poles and public lighting columns will be erected, and duct connections will be made to the base of each pole unit. The final pavement surface course will be laid using an asphalt paving machine followed by compaction using a vibrating roller.

For soft landscaping areas topsoil profiles will be graded to tie into the new pavement levels followed by grass seeding. The top soiling and seeding will be undertaken using a combination of mechanical excavator, tractor unit drawing a rotavator / rake / seed spreader and also operatives using hand tools for areas where machinery access is unavailable.

A Description of the Location of the Proposed Development, with Particular Regard to the Environmental Sensitivity of Geographical Areas Likely to be Affected (Schedule 7A(1)(b)).

The pedestrian and cycleway will be constructed within the city of Galway, along the existing Doughiska Road (south) which is maintained by Galway City Council.

Under the Galway City Development Plan (GCDP) 2017-2023 there are a number of zoning objectives adjacent to the footprint of the proposed pedestrian and cycle route:

- Route 2B: Along Doughiska Road South (south of the Old Dublin Road) the surrounding areas are zoned as 'Residential', 'Low Density Residential' and 'Recreational and Amenity';

Under the Galway City Development Plan (FDP) 2017-2023 there are a number of specific objectives adjacent to the footprint of the proposed pedestrian and cycle routes:

- Route 2B: The Doughiska Road is assigned for road improvements, with 'Views and Prospects' at the end of the route;

The following objectives have been defined for each zone under the Galway City Development Plan 2017-2023:

- Residential: *'To provide for residential development and for associated support development, which will ensure the protection of existing residential amenity and will contribute to sustainable residential neighbourhoods';*
- Recreational and Amenity: *'To provide for and protect recreational uses, open space, amenity uses and natural heritage';*
- Low Density Residential: *'To provide for low-density residential development which will ensure the protection of existing residential amenity';* and,

The Galway City Development Plan 2017-2023 sets out to promote and facilitate movement within and to the County through the integration of land use with a sustainable transport system, with priority given to public transport, walking and cycling. There are several relevant chapters in the Development Plan which relate to Cycling and Walking. Policy 3.6 Cycling and Walking within the Galway City Development Plan highlights policies relating to the proposed project, as follows:

- *“Support the Galway Transport Strategy proposals for a primary cycle network to facilitate safe and convenient medium distance journeys.*
- *Support the proposed Greenways as part of the primary cycle network and as part of a link to Bearna, Oranmore, Maigh Cuilinn and Oughterard.*
- *Support the Galway Transport Strategy proposals for a secondary cycle network and feeder links to facilitate safe and convenient local journeys and to afford linkage into the primary cycle network.*
- *Facilitate cycling on the proposed bus network where appropriate and on the proposed Cross-City Link in the city centre.*
- *Improve bicycle parking at key destinations and near bus stops /interchanges.*
- *Promote and facilitate the extension of the Public Bike Share Scheme across the city.*
- *Implement a structured programme of improvements across the whole city pedestrian network and at road crossings.*
- *Promote accessibility for all users including persons with disabilities and reduced mobility and have regard to best practice guidance from the National Disability Authority (NDA).*
- *Promote, facilitate and maintain maximum connectivity and permeability for pedestrians and cyclists in the design of new developments and in upgrading existing developments in accordance with the Design Manual for Urban Roads and Streets (2013) and Permeability a Best Practice Guide, NTA (2015).*
- *Promote the implementation of a Wayfinding Scheme with provision of directional information and signage at appropriate locations across the city as part of a greater public realm strategy.*
- *Ensure facilities for pedestrians and cyclists are designed in accordance with national standards.*
- *Support and promote initiatives such as Park and Stride, Green Schools Programme and the concept of having safe routes to school.*
- *Consider the introduction of reduced speed limits in the city centre and residential areas of the city.*
- *Continue to encourage an increase in the use of sustainable transport modes including public transport through targeted promotion.”*

It is considered that the proposed project is fully compatible with the zoning requirements of the Galway City Development Plan, providing a social amenity and pedestrian and cycle access, and complementing the residential, commercial, industrial, and community nature of the area. The proposed scheme is in line with policy 3.3 of the Galway City Development Plan 2017-2023 to ‘*continue to progress a sustainable transport solution for the city through the implementation of measures included in the GTS and required supporting projects in particular the N6 GCRR project*’.

Designated Conservation Area

The proposed scheme is located ca. 0.18km north of Oranmore Bay. There are no watercourses crossed by the proposed project or within the immediate vicinity. Oranmore Bay (EPA Code: IW_WE_170_0500) discharges to Inner Galway Bay North (EPA Code: IW_WE_0000). Oranmore Bay has ‘unassigned’ ecological status and Inner Galway Bay has ‘Good’ ecological status with both being reported as ‘Not at Risk’ of failing to meet the relevant Water Framework Directive (WFD) objectives.

There are 12no. European sites within 15km of the proposed project; 8no. Special Areas of Conservation (SACs) and 4no. Special Protection Areas (SPAs). Oranmore Bay and Inner Galway Bay have been designated as a Special Area of Conservation (SAC); Galway Bay Complex SAC (Site Code: 000268) and Special Protection Area (SPA) for birds; Inner Galway Bay SPA (Site Code: 004031). These sites are indirectly connected to the proposed project via. a short distance (ca. 0.18km) of agricultural lands. The existing road corridor will be utilised for the cycle path within this general area in the vicinity of the European sites and therefore only small scale works are required. No hydrological link has been identified between the proposed project and any of the designated sites..

There are 9no. proposed Natural Heritage Areas (pNHAs) and 2no. Natural Heritage Areas (NHA) within 15km of the proposed project. There is no hydrological link to any of these National Heritage Areas. The proposed project is ca. 0.18km from Galway Bay Complex pNHA (Site Code: 000268) which is encompassed in the SPA and SAC mentioned previously.

There are no Geological Heritage Areas within the project site or its immediate vicinity. The closest Geological Heritage Area from the site is Two Mile Ditch Quarry (Site Code: GY132) which is located ca. 3.2km north west of the project (GSI, 2021). According to the GSI, 2021 *'this quarry is a very large working quarry'* with its geological importance reported by GSI (2021) as *'the site is a good representative for the Carboniferous Limestone geology of east Galway'*.

There will be no land take from any of the designated sites within 15km of the proposed project and, based on the findings of the Stage 1 Appropriate Assessment Screening report (Atkins, 2021) there will be no potential significant adverse effects to designated sites within the receiving environment arising from the proposed project.

Hydrogeology

There are no GSI registered wells reported within the vicinity of the proposed project (GSI, 2021) with the closest reported wells located ca. 1.4km east and 1.5km west of the proposed project. Both of these wells are reportedly used for Agricultural and Domestic purposes.

There are no Public Drinking Water Supply and Source Protection Zones within 10km of the proposed scheme (GSI, 2021). The closest Public Drinking Water Supply or Source Protection Zone is the Group Scheme Preliminary Source Protection Area for Brockagh Lisduff located ca. 11.2km east of the proposed project (GSI, 2021). Taking account of the distance of this public water supply there is no residual risk to regional potable supplies.

The proposed project is underlain entirely by a regionally important bedrock aquifer which is karstified (GSI, 2021). Groundwater vulnerability beneath the proposed project has been classified by GSI (2021) as 'extreme' with portions of 'Rock at or near Surface or Karst' to the east and west of the proposed project. Both of these vulnerability ratings indicate that groundwater is shallow in this area and vulnerable to contamination during the construction phase. The proposed project is within the Clarinbridge groundwater body (EPA Code: IE_WE_G_0008).

Geology

The proposed project is entirely underlain by *'till derived from limestones'* with portions of *'Karstified bedrock outcrop or subcrop'* to the east and west of the proposed project.

There are 3no. karst features within 500m of the proposed project as follows;

- Swallow Hole (1121NEK024) located ca. 70m north of the proposed project;
- Swallow Hole (1121NEK021) located ca. 345m north west of the proposed project; and,
- Enclosed Depression (1121NEK025) ca. 220m west of the proposed project.

Given the nature of the bedrock aquifer and groundwater vulnerability within the general area and proximity of the of karst features there is a strong likelihood that unidentified karst features may be within the vicinity of the proposed project. The presence of such karst features indicate that groundwater and surface water interactions are likely to exist and are therefore both vulnerable to contamination. No recorded landslides, landslide susceptibility or historic mines have been reported within the vicinity of the proposed project (GSI, 2021).

Flooding

There are no reported flooding issues along the proposed project or within the vicinity. A high flooding probability has been identified to the south of the proposed project along the coastline however, this flooding extent does not extend as far north as the proposed project. The nature, along with the location of the proposed scheme, is unlikely to give rise to any potential flood risk. No flooding or storm water management issues related to the proposed site are identified as warranting further investigation.

Biodiversity

Merlin Park Woodlands covers a large area ca. 500m west of Doughiska Road and this park contains a wide range of habitats including native oak-ask-hazel woodland, mixed broadleaf woodland, conifer woodland, limestone pavement, wet grassland and scrub⁶. Lesser Horseshoe bats (*Rhinolophus hipposideros*) have been recorded within Merlin Park. The proposed Route 2B Doughiska Road does not intersect with this area of urban woodland and as such impacts on the habitats found within the woodlands are not anticipated.

A number of bird species which have been designated for protection under the Wildlife Acts and European Birds Directive have been identified within the vicinity of the proposed project from the National Biodiversity Data Centre Maps (<https://maps.biodiversityireland.ie/>), including Northern Lapwing (*Vanellus vanellus*), Herring Gull (*Larus*

argentatus), Black-headed Gull (*Larus ridibundus*), Common Redshank (*Tringa totanus*), Eurasian Curlew (*Numenius arquata*), and Northern Shoveler (*Anas clypeata*) amongst others.

A number of protected mammal species including the Badger (*Meles meles*), Red Squirrel (*Sciurus vulgaris*), Lesser Horseshoe Bat (*Rhinolophus hipposideros*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) were also recorded by the NBDC within close vicinity of the pedestrian and cycle route.

According to National Biodiversity Data Centre 2021, floral invasive species Japanese knotweed (*Fallopia japonica*) has been recorded at a number of locations to the west of the proposed project. The closest of which is ca. 0.75km south west of the proposed project which was reported in 2015. The proposed project site was surveyed for invasive plant species listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011 S.I. No. 477/ 2011. Species surveyed for included Japanese knotweed (*Fallopia japonica*) and associated hybrids. Surveys were undertaken during May 2021 which is within the seasonally appropriate window to assess the project site for the presence of invasive plant species. No evidence of third schedule invasive plant species were recorded within the extents of the project site.

Archaeology and Cultural Heritage

The proposed project is located within an area which has numerous National Inventory of Architectural Heritage (NIAH) and Sites and Monuments Record (SMR) features within the surrounding area including Merlin Park House and Merlin Park Castle to the west of the project site. There are no NIAH or SMR features within the immediate vicinity of the proposed project with the closest SMR and NIAH features located ca. 215m south of the proposed project; Unclassified Castle (GA094-075---) and quay/wharf (30409425). The Zone of Notification (ZoN) of the Castle extends to ca. 200m south of the proposed project. The existing road corridor will be used for the proposed project and the works will be small scale in nature.

The environmental sensitivity of geographical areas likely to be affected by the proposed development are evaluated further within Section 3.3.2 of this report (*'Location of proposed development - The environmental sensitivity of geographical areas likely to be affected by the proposed development'*) as required under Schedule 7 of the relevant regulations.

3.2.2. Description of Aspects of the Environment Likely to be Significantly affected by the Proposed Development (Schedule 7A (2)).

The proposed project is located ca. 0.18km north of Galway Bay Complex SAC / pNHA (Site Code: 000268) and Inner Galway Bay SPA (Site Code: 004031) at its starting / terminating point. The proposed scheme does not lie within any Nature Reserves or Natural Heritage Areas (detailed in Section 3.3.1 of this report). There are 12no. European sites within 15km of the site. It is not anticipated that there will be a significant impact on these areas.

The proposed project will be entirely within the existing road corridor and is not within the immediate vicinity of any cultural heritage features. Therefore, it is anticipated that it is unlikely that there will be a significant impact on archaeological or cultural heritage features.

Additionally, it will be the responsibility of the Contractor to determine a suitable location for the site compound within the proposed development area, but away from any identified environmental sensitive receptors so as to avoid potential impacts to the environment and the general public. The exact location will be subject to a review of all potential environmental receptors by the Contractor, once appointed, which will be documented within the Contractors Detailed Construction Environmental Management Plan (CEMP). The final proposed site compound location will be subject to Client approval.

The only other relevant aspects of the environment (including human health), which could potentially be significantly affected by the proposed project are receiving groundwater environment, surface water environment, air quality environment, the receiving noise and vibration environment, and the receiving traffic environment, during the construction phase.

The works will mainly involve excavations to an anticipated maximum depth of 0.5m bgl along the existing road networks, the exact construction depth for the footpath and cycle track pavements is subject to the outcome of ground investigations. GSI (2021) have reported a 'extreme' groundwater vulnerability beneath the proposed project with portions of 'rock at or near surface or karst' vulnerability rating to the east and west indicating that the groundwater beneath the vicinity of the proposed project may be vulnerable to contamination.

The proposed project is located to the north of Galway Bay Complex SAC/pNHA and Inner Galway Bay SPA. However, the cycleway at this point will be within the existing road corridor and of small scale and therefore significant impacts are not anticipated. Due to the nature and scale of the project it is anticipated that the

construction works, and operation of the proposed project will not have a significant impact on surface water and groundwater quality.

The proposed scheme lies within a sub-urban area and there are sensitive receptors adjacent to the scheme i.e. residential properties. Dust may be generated during the construction phase. Construction will require the use of machinery such as dump trucks, loading shovels etc. The presence of such machines may result in a temporary increase in noise and dust. The air quality at the proposed project is 'good' (EPA, 2021). However, management of dust will be in line with relevant best practice measures such as those set out in *'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes'* (NRA, 2011). Due to the nature and scale of the project it is anticipated that the construction works will not have a significant impact on air quality. It is anticipated that the operational phase will likely have a positive impact on air quality.

Noise levels will not exceed the indicative levels of acceptability for construction noise in an urban environment as set out in the NRA guidance *'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes'* (NRA, 2014). It is anticipated that the works will be scheduled during day-time hours. The Contractor will also be obliged to prepare a project specific CEMP prior to commencement of the proposed project, which will include specific control measures in accordance with standard industry best practice to be implemented to fully address any potential air quality / dust emissions, noise / vibration nuisance, and onsite noise / vibration monitoring should this be necessary. Construction contractors will be required to comply with the requirements of the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988 as amended in 1990 and 1996 (S.I. No. 320 of 1988, S.I. No. 297 of 1990 and S.I. No. 359 of 1996), and the Safety, Health and Welfare at Work (Control of Noise at Work) Regulations, 2006 (S.I. No. 371 of 2006). Due to the nature and scale of the project it is anticipated that the construction works, and operation of the proposed project will not have a significant impact on noise.

Due to the scale and nature of the project it is anticipated that there may be impacts on traffic volumes during the construction phase of the project. The roadworks will be carried out on a phased basis. A traffic light system will be maintained throughout the works area to ensure that traffic is controlled and continues to flow during the construction phase. It is considered that there will be no significant negative impact on traffic during the construction and operational phase of the project.

3.2.3. A Description of Any Likely Significant Effects (To the Extent of The Information Available on Such Effects) of The Proposed Development on The Environment (Schedule 7A(3)).

The Expected Residues and Emissions and the Production of Waste where relevant (Schedule 7A (3)(a)).

The proposed project may give rise to air, noise, water emissions and waste. However, the proposed project will be designed in order to minimise any potential impacts as a result of these emissions during the operational phase. Standard mitigation measures will be implemented by the Contractor to address potential air and noise emissions during the construction phase. The Contractor will ensure that onsite storm water management during the construction phase is carried out in accordance with relevant best practice measures as set out in Construction Industry Research and Information Association (CIRIA) guidance *'C532 - Control of Water Pollution from Construction Sites'*.

During the construction phase the following waste streams will be generated: construction and demolition (C&D) waste, mixed municipal waste (MMW), recyclables such as plastic wrapping, wooden pallets, paper and/or waste electrical and electronic equipment (WEEE). All waste generated will be disposed of by the Contractor in accordance with all relevant waste management legislation. The Contractor will be responsible for segregating each waste type as per the relevant List of Waste (LoW) (also referred to European Waste Catalogue (EWC) code). All waste materials must be removed offsite by a suitably permitted waste haulage contractor who holds a current valid waste collection permit issued by the National Waste Collection Permit Office (NWCPO).

Waste Policy 9.12 within the Galway City Development Plan (2017-2023) will be implemented during the construction of the routes:

'Continue to promote waste prevention and minimisation.'

The Contractor will be obliged to prepare a project specific Construction and Demolition (C&D) Waste Management Plan (WMP) prior to commencement of the proposed development in accordance with the relevant guidelines *'Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects'* prepared by the DoEHLG.

The operational phase of the project should be accompanied by an increase in bicycle traffic and an associated reduction in vehicular traffic. The proposed scheme is not likely to have a significant environmental effect with regard to expected residues and emissions and the production of waste.

The Use of Any Natural Resources in particular soil, land, water and biodiversity (Schedule 7A (3)(b)).

During the construction of the proposed project natural resources in the area will not be required to facilitate the provision of this project.

Soil will be excavated to an anticipated maximum depth of 0.5m bgl to facilitate the foundation for the cycleway and the ducting for the signalling associated with the scheme. Soils may be reused onsite where suitable. Engineering grade fill material (hardcore or similar) will be imported to the site during the proposed works. The contractor shall employ soil stabilisation measures if required to minimise the quantity of remaining material being disposed offsite. All soil requiring disposal offsite will require testing against the EPA "Determining if Waste is Hazardous" criteria, and (EPA, 2019), and the waste acceptance criteria (WAC) for the receiving facilities before being moved offsite to an appropriate, licenced, permitted or registered facility. The use of other natural resources with respect to soils and land will not be required arising from the proposed project.

Therefore, based on the environmental setting, and taking account of the nature, scale and location of the proposed project other than standard construction materials, the proposed project (during both construction and operational phases) will not have a significant impact on natural resources.

3.2.4. The Compilation of The Information at Paragraphs 1 To 3 Shall Take into Account, where Relevant, the Criteria set out in Schedule 7 (Schedule 7A(4)).

All relevant criteria set out in Schedule 7 of the Regulations is presented in Section 3.2 ('Criteria for Determining Whether Development Listed in Part 2 of Schedule 5 Should be subject to an EIA') of this screening report.

During the preparation of Sections 3.3.1 to 3.3.3 (i.e. Schedule 7A (1) to (3)) all pertinent Schedule 7 information has been taken account of as required, with specific details presented in the following section of this report (Section 3.4).

3.3 Criteria for Determining Whether Development Listed in Part 2 of Schedule 5 Should be subject to an EIA

3.3.1 Characteristics of proposed development (Schedule 7(1))

The size and design of the whole of the proposed development (Schedule 7(1)(a))

Refer to Section 3.2.1 under 'A description of the Physical Characteristics of the Whole Proposed Development and Where Relevant of Demolition Works (Schedule 7A (1) (a))'.

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 (Schedule 7(1) (b))

Committed Development

A search of Galway City Planning records has been undertaken for the applications submitted within the past 5 years. This search identified over 100no. developments, given the urban location of the proposed project. The majority of these developments have already been constructed or are of small scale in nature (i.e. extension works, or property retention works) or are considered to be a reasonable distance from the proposed works) and have therefore not been considered further. 3no. relevant developments have been further evaluated with respect to cumulative impacts with the proposed project (WP-02), as follows;

- **JLH Property Holding Company. Construction of 51no. residential developments (1995). Granted 26/6/2019**

This project will be constructed south of the Old Dublin Road and is located ca. 300m from the proposed project. There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. The contractor for the proposed project will provide a traffic management plan for the works along the Doughiska Road (south) to ensure minimal impact on traffic. The Contractor will also be obliged to prepare a project specific CEMP prior to commencement of the proposed scheme, which will include specific control measures in accordance with standard industry best practice to be implemented to fully address any potential air quality / dust emissions,

noise / vibration nuisance, and onsite noise / vibration monitoring should this be necessary. There is no significant impact anticipated from the operational phase. Therefore this project is unlikely to result in significant cumulative impacts with the proposed development.

- **Bayhill Park Ltd, Construction of 14no. residential developments (15319). Granted 4/5/2016**

This project will be constructed ca. 100m from the proposed project. There may be a cumulative impact on traffic, dust and noise; however due to the nature and scale of the project it is not anticipated that these impacts will be significant. From aerial photographs, the construction of this development has been started, and it is unlikely that the project will be constructed at the same time as the proposed project. The contractor for the proposed project will provide a traffic management plan for the works along Doughiska Road (south) to ensure minimal impact on traffic. The Contractor will also be obliged to prepare a project specific CEMP prior to commencement of the proposed scheme, which will include specific control measures in accordance with standard industry best practice to be implemented to fully address any potential air quality / dust emissions, noise / vibration nuisance, and onsite noise / vibration monitoring should this be necessary. There is no significant impact anticipated from the operational phase. Therefore this project is unlikely to result in significant cumulative impacts with the proposed development.

- **DWK Developments Ltd, Permission for minor amendments to previously granted planning – amendments of change of house type (17109). Granted 20/6/2017**

This project will be constructed adjacent to the proposed project and will be accessed off the road along which the proposed project will be aligned. This is a relatively small project and due to the size and scale of this project it is not likely to have a significant impact on the proposed development. Therefore this project is unlikely to result in significant cumulative impacts with the proposed development.

The Galway Cycle Network Phase 1 is to be undertaken in a phased basis with different cycleway routes being constructed at separate times on separate roadways (i.e. in four Work Packages). There is no direct or indirect connectivity between Doughiska Road (South) (WP-02) the two of the three other Work Packages i.e. WP-01 and WP-03), notwithstanding that WP-04 will contain Doughiska Road (North) which is located north of the Old Dublin Road junction, with which Doughiska Road (South) forms the southern arm. No significant impacts are anticipated from these Works Packages, during either their construction or operation, given the scale, nature and locations of these projects.

The remaining Work Packages forming Phase 1 of the Galway Cycle Network are scheduled to be constructed consecutive to the proposed project, and likely not concurrently. The proposed project will likely be in operation, or else not yet commenced, whilst construction of these other cycleway network routes is being progressed. These other sections of cycleways are entirely along the urban roadways of Galway City. Given the nature, scale and location of these other proposed cycleway projects, and as no significant impacts are anticipated from the proposed project, it is considered the proposed Route 2B Doughiska Road (South) project will not act in combination to give rise to any cumulative impacts.

3.3.1.1 The nature of any associated demolition works (Schedule 7(1)(c))

Refer to Section 3.2.1 under 'A description of the Physical Characteristics of the Whole Proposed Development and Where Relevant of Demolition Works (Schedule 7A (1) (a))'.

3.3.1.2 The use of natural resources, in particular land, soil, water and biodiversity (Schedule 7(1)(d))

Refer to Section 3.2.3 under 'The Use of Any Natural Resources in particular soil, land, water and biodiversity (Schedule 7A (3)(b)). The proposed project is not likely to have a significant environmental effect with regard to the production of waste.

3.3.1.3 The production of waste (Schedule 7(1)(e))

Refer to Section 3.2.3 under 'The Expected Residues and Emissions and the Production of Waste where relevant (Schedule 7A (3)(a)).' All waste will be removed to an appropriately licenced/ permitted waste disposal/ recovery facility.

3.3.1.4 Pollution and nuisances (Schedule 7(1)(f))

Refer to Section 3.2.2 under 'Description of Aspects of the Environment Likely to be Significantly affected by the Proposed Development (Schedule 7A (2))'. There will be minimal impact on the Galway Bay Complex SAC/pNHA and Inner Galway Bay SPA due to the limited nature of works proposed to be carried out and all works will be completed on the existing road networks. The Contractor will also be obliged to prepare a project specific CEMP prior to commencement of the proposed project, which will include specific mitigation measures to be

implemented to fully address any potential surface water impacts and monitoring as necessary. No significant impacts from pollution or nuisances are anticipated from the proposed project.

3.3.1.5 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 (Schedule 7(1)(g))

There are 2no. Seveso (COMAH) establishments within 15km of the proposed project. Cold Chon (Galway) Ltd in Oranmore and Circle K Galway Terminal at Galway Harbour, both Upper Tier Seveso sites. Cold Chon (Galway) Ltd is located ca. 3km east of the proposed project and Circle K Galway Terminal is located ca. 4.7km west of the proposed project. Due to the distance of Cold Chon (Galway) Ltd and Circle K Galway Terminal from the proposed project, the proposed scheme is not located in a high-risk area with respect to major accidents/disasters and is outside the consultation distance as per Table 2 of the Schedule 8 of the Planning and Development Regulation, 2001 (S.I. No. 600/2001). Due to the nature and scale of the proposed project, along with the control procedures to be implemented, it is not anticipated that there will be a significant impact on this Seveso site.

The potential for flooding within the proposed scheme has been reviewed. A Strategic Flood Risk Assessment (FRA) (consisting of Stage 1 and Stage 2 FRA) was undertaken as part of the Galway Transport Strategy (2016), Appendix K, which recommended that for areas with the potential for coastal flooding, which applies to the section of Ballyloughane Road south of the railway: *'A stage 3 site specific detailed flood risk assessment should be carried out at the detailed design stage to ensure sustainable development in flood risk areas'*.

Refer to 3.3.1 under *'A Description of the Location of the Proposed Development, with Particular Regard to the Environmental Sensitivity of Geographical Areas Likely to be Affected (Schedule 7A(1)(b)).'*

3.3.1.6 The risks to human health (for example, due to water contamination or air pollution) (Schedule 7(1)(h))

Dust may be generated during the construction phase. However, management of dust will be in line with best practice such as that set out in 'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes' (NRA, 2011).

Noise levels during the construction phase, will not exceed the indicative levels of acceptability for construction noise in an urban environment as set out in the NRA guidance *'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes'* (NRA, 2014). The Contractor will be required to comply with the requirements of the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988 as amended in 1990 and 1996 (S.I. No. 320 of 1988, S.I. No. 297 of 1990 and S.I. No. 359 of 1996), and the Safety, Health and Welfare at Work (Control of Noise at Work) Regulations, 2006 (S.I. No. 371 of 2006). No significant impact on human health due to noise pollution is anticipated to occur during the operational phase of the project.

There are no reported public drinking water supplies within a 2km radius of the project (GSI, 2021). It has been noted that the proposed project is underlain by a regionally important karstified aquifer with 'Extreme' groundwater vulnerability with portions of 'Rock at or near Surface or Karst' indicating that groundwater is shallow. However, due to the nature and scale of the proposed project it is not anticipated to have a significant impact on groundwater.

Given the location, nature and scale of the proposed project, the overall risk to human health is low.

3.3.2 Location of proposed development - The environmental sensitivity of geographical areas likely to be affected by the proposed development (Schedule 7(2))

The existing and approved land use (Schedule 7(2)(a))

The pedestrian and cycleway will be constructed within a sub-urban setting of the city of Galway along the existing Doughiska Road (south) which is maintained by Galway City Council. The proposed project and surrounding area are primarily dominated by land use zoned for 'residential, recreational and amenity', 'enterprise, light industry and commercial', 'community, cultural and institutional', 'low density residential' and 'enterprise, industrial and related.'

The location of the proposed project has been detailed previously in Section 3.3.1 under Schedule 7A (1)(a).

The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground (Schedule 7(2)(b))

Refer to Section 3.2.3 under *The Use of Any Natural Resources in particular soil, land, water and biodiversity (Schedule 7A (3)(b))*.

During the construction of the proposed project natural resources will not be required to facilitate the provision of this project.

The absorption capacity of the natural environment, paying particular attention to the following areas (Schedule 7(2)(c)):

(i) Wetlands, riparian areas, river mouths

There are 2no. wetlands reported within vicinity of the proposed project; Inner Galway Bay SPA Wetland and Galway Bay Complex SAC (Galway) Wetland, both of which are encompassed within the aforementioned SAC and SPA. These Wetland sites have both been assigned an internationally important rating. These wetland habitats are vulnerable to changes in hydrology, hydrogeology and water quality. These habitats are closest to proposed project at its starting/terminating point. However, works will be entirely along roadways and will be remote from these habitats. Therefore, there are no significant impacts to these wetland sites anticipated as a result of the proposed project.

(ii) Coastal zones and the marine environment

The proposed project is ca. 0.18km from the Oranmore Bay / Atlantic coast. It is anticipated that works will be of small scale and within the existing road corridor.

Due to the nature and scale of the proposed project it is not anticipated that it will have a significant impact on the coastal zone or marine environment.

(iii) Mountain and forest areas

There are no mountain areas within 2km of the proposed project and therefore no impacts on this habitat type. There are areas of Broadleaved Woodland to the west of the proposed project within the grounds of Merlin Park University Hospital.

Given the distance of this habitat from the proposed project and the fact that all works will be along the existing road network, no impacts are anticipated on these woodland areas.

(iv) Nature reserves and parks

There are no nature reserves or national parks located within 15km of the proposed project.

(v) Areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive

There are 12no. European designated sites within 15km of the proposed project; 8no. Special Areas of Conservation (SACs) and 4no. Special Protection Areas (SPAs). The proposed project is located ca. 180m north of 2no. designated European sites at its starting/terminating point; Galway Bay Complex SAC (Site Code: 000268) and Inner Galway Bay SPA (Site Code: 004031). There are 9no. proposed Natural Heritage Areas (pNHAs) and 2no. Natural Heritage Areas (NHA) within 15km of the proposed project. Galway Bay Complex pNHA (Site Code: 000268) is the closed pNHA located within the same area as Galway Bay Complex SAC and Inner Galway Bay SPA

The risk from the direct link between the proposed project and the Galway Bay Complex SAC, Inner Galway Bay SPA and Galway Bay Complex pNHA is negated due to the scale and nature of the proposed scheme and fundamentally as the lands made available for the works have been identified within the existing street boundaries.

No hydrological links have been established between the proposed project and any of these designated conservation sites. The proposed project will not impact any designated conservation sites through surface pathways given the lack on connectivity.

The excavations associated with the construction of the cycleway will be relatively shallow (ca. <500mm) and therefore no significant impacts on groundwater are likely. As such there are no indirect impacts anticipated through hydrogeological pathways, either during the construction or operation of the cycleway routes, on any internationally or nationally designated conservation sites.

It is considered that the proposed project will not give rise to significant effects on Galway Bay Complex SAC, Inner Galway Bay SPA and Galway Bay Complex pNHA. There is no anticipated potential for significant impact on areas classified or protected under legislation.

- (vi) Areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure.

The proposed project lies within the Clarinbridge groundwater body (GWB) (EPA Code IE_WE_G_0008) which has 'good' status for the period of 2013-2018 (EPA, 2021). The groundwater body is currently 'not at risk' of failing to achieve the relevant objectives of the EU Water Framework Directive (WFD) by 2027. Due to the nature and scale of the works the proposed project is not anticipated to significantly impact groundwater quality.

There are no watercourses crossed by the proposed project or within the immediate vicinity. Oranmore Bay (EPA Code: IW_WE_170_0500) discharges to Inner Galway Bay North (EPA Code: IW_WE_0000). Oranmore Bay has an 'unassigned' ecological status and Inner Galway Bay has 'Good' ecological status with both being reported as 'Not at Risk' of failing to meet the Water Framework Directive (WFD) objectives.

It is considered that due to the nature and scale of the project the works will not have a significant impact on baseline surface water quality.

Air quality in the area is reported as 'good' (EPA, 2021). Dust may be generated during the construction phase which has the potential to impact on human health. However, management of dust will be in line with best practice such as that set out in 'Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes' (NRA, 2011). Due to the nature and scale of the project it is anticipated that there will be no significant impact on air quality.

It is anticipated that during construction there may be an increase in noise volumes. The Contractor will be required to prepare a CEMP and implement standard construction control measures to minimise noise levels associated with construction works. Noise levels shall not exceed the indicative levels of acceptability for construction noise in a rural environment as set out in the TII guidance 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes' (TII, 2014).

It is considered that due to the nature and scale of the works there will be no significant impact on baseline air and water quality from the proposed project.

(vii) **Densely populated areas**

The proposed project will be constructed within the city of Galway which is a densely populated area. The project will be constructed within the Doughiska Road (South) corridor. Galway city has a population of 79,934 (CSO, 2016). The Contractor will be required to prepare a CEMP and implement standard construction control measures to minimise noise level dust levels and interaction with the general population. It is anticipated that there will be no significant negative impact on densely populated areas during construction. The creation of the cycleway will reduce the volume of vehicular traffic using the route will improve air quality and noise levels and provide additional social and recreational infrastructure. It is considered therefore that the proposed project will potentially have a significant positive impact on this densely populated area during the operational phase.

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

Refer to 3.3.2 under 'A Description of the Location of the Proposed Development, with Particular Regard to the Environmental Sensitivity of Geographical Areas Likely to be Affected (Schedule 7A(1)(b)).'

The proposed project will be constructed entirely within the footprint of the existing Doughiska Road (south) . According to the Galway City Development plan the end of Doughiska Road (south) is a view of special amenity value and interest

Policy 4.5.3 Community Spaces: Protected Views of Special Amenity Value and Interest within the Galway City Development Plan 2017-2013 states the following objectives:

- 'Protect views and prospects of special amenity value and interest, which contribute significantly to the visual amenity and character of the city through the control of inappropriate development.
- Require landscaping schemes as part of planning applications to have regard to such views and limit any planting which could have a detrimental impact on the value of protected views.'

The proposed project will adhere to and comply with this policy, as the pedestrian and cycleway will attract people to the viewing areas. It is considered that due to the nature and scale of the works there will be no significant impact on landscapes and sites of historical, cultural or archaeological significance from the proposed project.

3.3.3 Types and characteristics of potential impacts (Schedule 7(3))

The likely significant effects on the environment of the proposed project have been evaluated taking into account the following specific criteria.

The magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected) (Schedule 7(3)(a))

The spatial extent of potential impacts is limited to the localised footprint of the proposed project (refer to Figure 1-1). Based on the location, current site setting, and the nature of the proposed project, any potential impacts (during the installation and operational phases) are not likely to be significant in magnitude.

The nature of the impact (Schedule 7(3)(b))

There will be no significant impact on the receiving environment arising from the proposed project (during the construction or operational phases).

The transboundary nature of the impact (Schedule 7(3)(c))

There is no potential for transboundary impacts as a result of the proposed project (during the construction or operational phases).

The intensity and complexity of the impact (Schedule 7(3)(d))

There will be no significant impact on the receiving environment arising from the proposed project (during the construction or operational phases).

The probability of the impact (Schedule 7(3)(e))

The probability of impacts on the receiving environment is low given the following considerations:

- The receiving environment is not considered to be at risk of significant impact due to the nature and scale of the proposed project;
- The Contractor will be obliged to implement standard best practice procedures prior to commencement of the proposed project including all environmental control measures for the onsite management of any pollution / nuisance issues which could arise during the construction phase;
- The Contractor will be obliged to prepare a project specific CEMP prior to commencement of the proposed project which will clearly set out all environmental control measures for the onsite management of any pollution / nuisance issues, which could arise during the construction phase;
- The Contractor will be obliged to prepare and implement a Traffic Management Plan for the construction phase in order to minimise impacts on the local traffic routes as far as possible during the construction phase; and,
- The Contractor will be obliged to prepare a project specific Construction and Demolition (C&D) Waste Management Plan (WMP) prior to commencement of the proposed development in accordance with the relevant guidelines 'Best Practise Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects' prepared by the DoEHLG.

The expected onset, duration, frequency and reversibility of the impact (Schedule 7(3)(f))

The probability of impacts on the receiving environment is considered to be low, as previously outlined. Therefore, there shall be no requirement for the reversibility of the impacts caused by this project (during the construction or operational phases).

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 (Schedule 7(3)(g))

As previously detailed no significant cumulative impacts associated with the project (during the construction or operational phases) have been identified, arising from other existing and/or approved projects. Refer to Section

3.3.1 under '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 (Schedule 7(1) (b)).

The possibility of effectively reducing the impact (Schedule 7(3)(h))

Significant effects on the receiving environment are not anticipated as a result of the provision of the proposed project (during the construction or operational phases). A project specific CEMP will be prepared by the appointed Contractor prior to the works commencing which will clearly set out all environmental control measures for the onsite management of any pollution / nuisance issues which could arise during the construction phase.

3.4 Potential for Significant Effects on the Receiving Environment

All relevant information as required under Schedule 7A has been provided on behalf of Galway City Council and is presented within Section 3.1 of this screening report. The potential for this project to pose a significant impact to the receiving environment has also been evaluated in accordance with criteria listed in the Planning & Development Regulations, 2001 and EIA Planning and Development Regulations 2018 (Schedule 7), as presented within Section 3.2 of this screening report.

Based on the information provided within Section 3.3.1- 3.3.3 of this report, and summarised below, it is considered that due to the size, nature, and characteristics of the proposed development, no significant effects on the receiving environment are expected; hence the preparation of a sub-threshold EIAR is not required.

3.5 Screening Conclusion

This EIA screening report has been carried out in accordance with the Planning and Development Regulations as amended 2001- 2021 (which give effect to the provisions of EU Directive 2014/52/EU), and the Roads Acts 1993-2021. The report assessed the impact of the Galway Cycle Network Phase 1 Pedestrian and Cycleway project Work Package 02, in conjunction with committed developments in the surrounding area.

Based on all available information, and taking account of the scale, nature and location of the proposed project it is our opinion that the preparation of an EIAR is not a mandatory requirement (under Section 50 of the Roads Acts 1993-2021). The project is deemed a sub-threshold development; hence the potential for significant environmental effects arising as a result of the proposed project has been evaluated, in accordance with the requirements of Schedule 7A and Schedule 7 of the Planning and Development Acts 2001-2021.

Key findings are summarised as follows;

- Due to the limited nature of the works it is considered that there will be no significant cumulative impacts with other developments in the general area;
- Limited noise, vibration and dust emissions may be generated during construction; however, this is anticipated to be minimal in effect and will cause no significant impact;
- Soil and waste may be generated during construction; however, this is not anticipated to have significant effect;
- There will be no significant impact on biodiversity, groundwater, surface water or traffic; and,
- There will be no impact on recorded monuments or historic features;

In summary, no significant adverse impacts to the receiving environment will arise as a result of the proposed project.

Accordingly, we consider that the preparation of an EIAR is not required for the Galway Cycle Network Phase 1 Work Package 02 (Doughiska Road (South)).

4 References

- Atkins (2021). Screening for Appropriate Assessment
- CIRIA (2001). Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors
- Department of the Environment, Community & Local Government. (2013), Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.
- Department of the Environment, Heritage and Local Government (2003) Guidance for Consent Authorities regarding sub-threshold Development. Published by the Stationery Office.
- Department of Housing, Planning and Local Government, (2018), Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment.
- Environmental Protection Agency (EPA), 2019. 'Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous'.
- Environmental Protection Agency (EPA), 2017. 'Revised Guidelines on the Information to be contained in Environmental Impact Assessment Reports – Draft'
- European Commission, (2015) Environmental Impact Assessment – EIA, Overview, Legal context.
- European Council Directive (EU) 2014/52/EU of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.
- European Council Directive (EC) 97/11/EC of 3 March 1997 amending Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment.
- European Council Directive (EU) 2009/31/EC on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006.
- European Council Directive (EU) 2011/92/EU on the assessment of the effects of certain public and private projects on the environment
- European Council Directive (EC) 85/337/EU of 1985 on Environmental Impact Directive.
- Environmental Resources Management (2001) Guidance on EIA Screening. Published by the European Commission
- Galway City Council Development Plan 2017-2013
- Galway City Council (2016). Galway Transport Strategy
- Geological Survey of Ireland (GSI) 2021. <https://www.gsi.ie/en-ie/Pages/default.aspx>.
- Health and Safety Executive. Notified Seveso Establishments
https://www.hsa.ie/eng/Your_Industry/Chemicals/Legislation_Enforcement/COMAH/List_of_Establishments/ (Consulted 18/05/2021).
- Fossette, J. (2000). A Guide to habitats in Ireland. The Heritage Council.
- Local Government (Planning and Development Act) 1963.
- National Inventory of Architectural Heritage (2021). www.buildingsofireland.com-
- National Monuments Service, Historic Environment Viewer <http://webgis.archaeology.ie/historicenvironment/>- (Consulted 18/05/2021).
- National Parks & Wildlife Service. <https://www.npws.ie/protected-sites/spa>. (Consulted 18/05/2021).
- NPWS (2014) Conservation Objectives: Great Island Channel SAC 001058. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NRA (2009). Guidelines for Assessment of Ecological Impacts on national road schemes. Published by National Roads Authority.
- NRA (2011) Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes. Published by the National Roads Authority

- NRA (2014) Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes. Published by the National Roads Authority
- Office of Public Works (2009). 'The Planning System and Flood Risk Management; Guidelines for Planning Authorities'.
- Office of Public Works (2021). OPW National Flood Hazard Mapping Web Site. Available at: - <http://www.floodmaps.ie/> (Consulted 18/05/2021)
- Statutory Instrument S.I. No. 349/1989. European Communities (Environmental Impact Assessment) Regulations, 1989.
- Statutory Instrument S.I. No. 600 of 2001. Planning and Development Regulations 2001.
- Statutory Instrument S.I. No. 296 of 2018. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018.
- Water Framework Directive (2021)
http://watermaps.wfdireland.ie/NsShare_Web/SessionTimeout.aspx?Culture=&UICulture=&Theme=GeocortexEssentials&referrer=http%3A%2F%2Fwatermaps.wfdireland.ie%2FNsShare_Web%2FViewer.aspx%3FSite%3DNsShare%26ReloadKey%3DTrue (Consulted 18/05/2021)

Appendices

Appendix A. Drawings

[refer to Section 38 Report - Appendix A]

WS Atkins Ireland Limited

Atkins House
150 Airside Business Park
Swords
Co. Dublin
K67 K5W4

Tel: +353 1 810 8000

© WS Atkins Ireland Limited except where stated otherwise

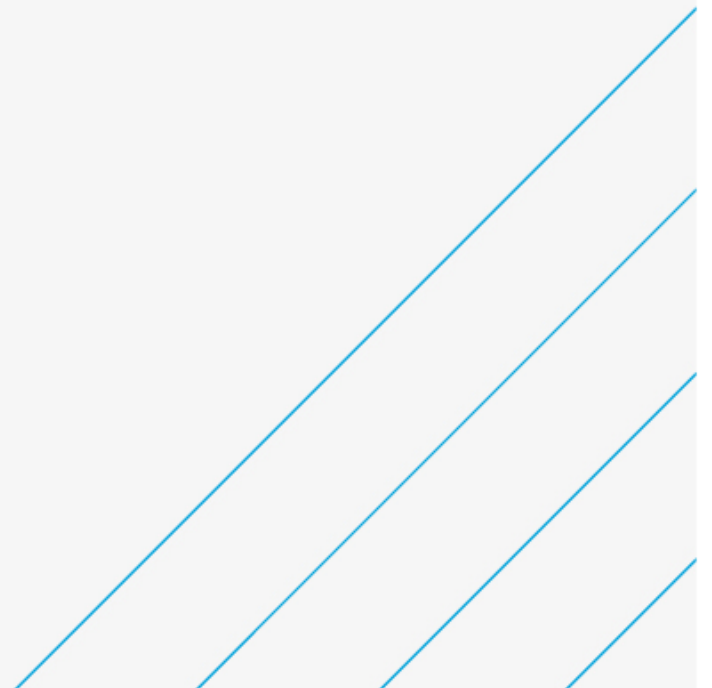
Appendix C. Screening for Appropriate Assessment Report

Galway Cycle Network Phase 1

WP-02 Doughiska Road (South) - AA Screening

Galway County Council

15/06/2021



Notice

This document and its contents have been prepared and are intended solely as information for Galway County Council and use in relation to Galway Cycle Network Phase 1 – Work Package 2 Doughiska Road (South).

WS Atkins International Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 0.0	Draft for Comment	CW	CW	POD	ST	25/05/2021
Rev 1.0	For submission	CW	CW	POD	ST	02/06/2021
Rev 2.0	For submission	CW	CW	POD	ST	15/06/2021

Client signoff

Client	Galway County Council
Project	Galway Cycle Network Phase 1
Job number	5193732
Client signature / date	

Contents

Chapter	Page
1. Introduction	4
1.1. Project details	4
1.2. Link Design	6
1.3. Construction Details	6
2. Scope of Study	9
2.1. Aims of the Report	9
2.2. Legislative Context	9
2.3. Appropriate Assessment Process	9
3. Methods	11
3.1. Guidance documents	11
3.2. Desk Study	11
3.3. Site Visit	12
3.4. Statement of Authority	12
4. Existing Environment	13
5. Appropriate Assessment Screening	15
5.1. Connectivity of Works Area to European Sites	15
5.2. Likelihood of Potential Impacts on European Sites	27
5.3. Identification of Potential Impacts on European Sites	27
5.4. In-combination Impacts	31
5.5. Likelihood of Significant Effects on European Sites	32
5.6. Consideration of Findings	32
6. Appropriate Assessment Screening Matrix	33
7. References	36
Appendices	37
Appendix A. Project Site Extents	38

Tables

Table 5-1	European sites within potential Zone of Influence of the proposed project.
Table 5-2	Screening of SAC qualifying habitats for Galway Bay Complex SAC.
Table 6-1	Screening Matrix.

Figures

Figure 1-1	Proposed Galway Cycle Network Phase 1 Routes with Route 2B – Doughiska Road (South).
Figure 1-2	Shared Street Cross Section.
Figure 1-3	Raised Cycle Track Cross Section.
Figure 2-1	Appropriate Assessment Process (Source: DEHLG, 2009).
Figure 5-1	SACs within potential zone of influence of the project.
Figure 5-2	SPAs within potential zone of influence of the project.

Plates

Plate 4-1	Doughiska Road; southern end of route.
Plate 4-2	Doughiska Road / Railway junction.
Plate 4-3	Doughiska Road; mid-section of route.
Plate 4-4	Doughiska Road; northern end of route.

1. Introduction

Galway City Council (GCC) propose to deliver several high-quality cycle routes within the east side of Galway City. The proposed Galway Cycle Network Phase 1 scheme will aim to deliver a minimum level of service in line with the National Cycle Manual (NCM).

Atkins were commissioned to develop routes for the scheme by Galway City Council (GCC) in October 2019 under the National Transport Authority's (NTA) Consultancy Services Framework (2016). The proposed routes were developed in line with current GCC policies included in the Galway Transport Strategy (GTS) (August 2016).

The Galway Cycle Network Phase 1 scheme is proposed to be constructed in a number of Work Packages, which includes Work Package 02 Doughiska Road (South).

Galway City Council appointed Atkins (Ireland) Ltd. to prepare a Screening for Appropriate Assessment report for the following developed route of the proposed scheme; Galway Cycle Network Phase 1 – Work Package 02 Doughiska Road (Route 2B).

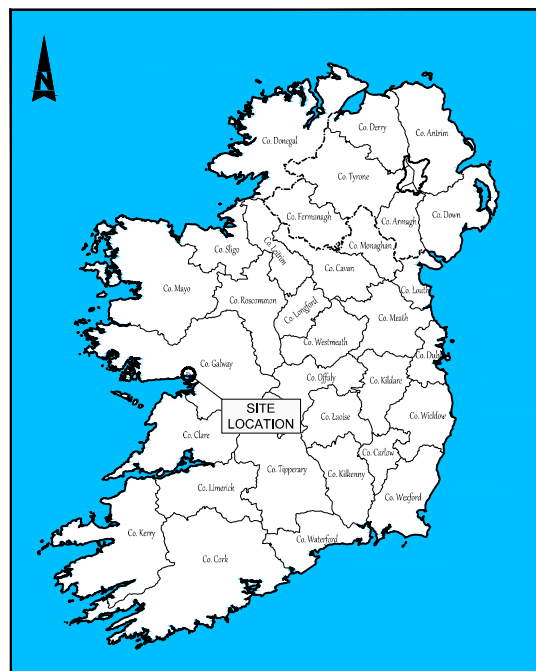
1.1. Project details

The Galway Cycle Network Phase 1 consists of 5 routes located to the east of Galway City, as shown in Figure 1-1 below. These routes are corridors along existing roads and have been identified within the GTS and within the scope of the scheme as follows:

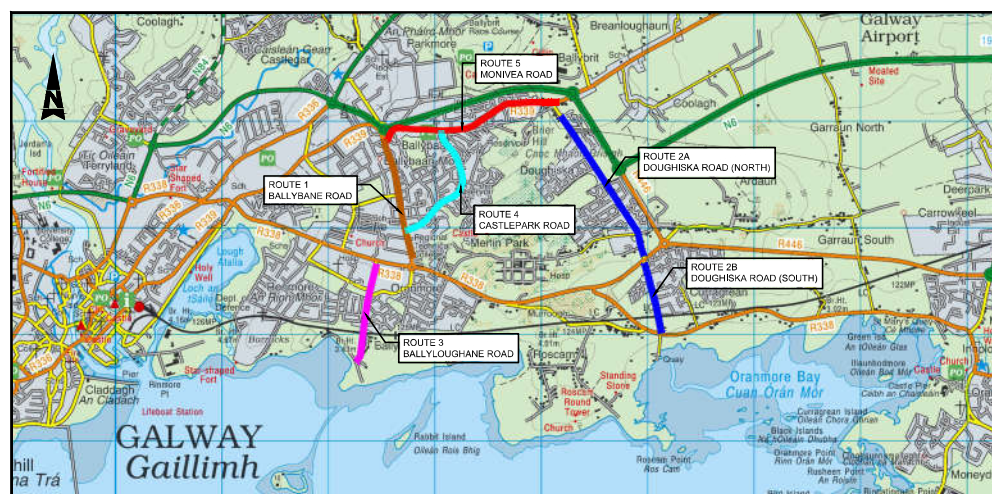
- Route 1 – Ballybane Road: between Skerrit Roundabout and Monivea Road junction, excluding the N6 and Dublin road junctions.
- **Route 2 (A and B) – Doughiska Road (excludes Dublin Road junction):**
 - 2A extends between the start of the Sean Bhaile estate (north end of route) to Old Dublin Road (south end of route).
 - **2B extends between Old Dublin Road (north end of route) to Coast Road (south end of route).**
- Route 3 – Ballyloughane Road: full extent excluding the junction with the Dublin Road
- Route 4 – Castlepark Road: full extent
- Route 5 – Monivea Road: full extent between Ballybane Road and terminating at the start of the ghost island junction to the west of the Clayton Hotel entrance.

The purpose of this report is to assess Work Package 02 (WP-02) of the Galway Cycle Network Phase 1 Scheme which is Route 2B – Doughiska Road.

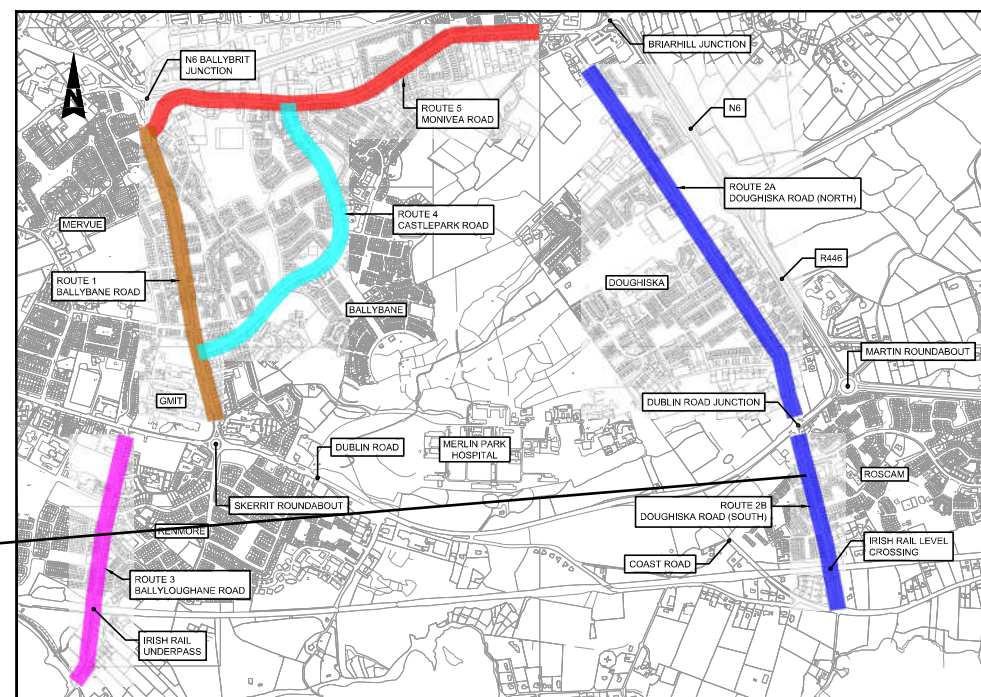
The alignment of Route 2B – Doughiska Road (South), as shown in Blue, is illustrated in Figure 1-1 below.



IRELAND LOCATION MAP

Scale at A1 1:2,000,000
Scale at A3 1:4,000,000Work Package 2 - Route 2B
Doughiska Road (south)

SITE MAP - GALWAY CYCLE NETWORK

Scale at A1 1:25,000
Scale at A3 1:50,000

SITE PLAN - GALWAY CYCLE NETWORK

Scale at A1 1:2500
Scale at A3 1:5000© ORDNANCE SURVEY IRELAND LICENSE No. AR 008252L
ORDNANCE SURVEY IRELAND & GOVERNMENT OF IRELAND

Rev	Description	By	Date	Chk'd	Auth
-	FOR INFORMATION	DB	16.08.20	ST	KB



Adkins House, 150-155 Airside
Business Park, Swords, Co. Dublín
Tel: (+353) 01 810 8000
Fax: (+353) 01 810 8001

Unit 2B, 2200 Cork Airport
Parkmore Technology Park, Galway
Tel: (+353) 091 788 990
Fax: (+353) 091 779 830

1st Floor Technology House
Parkmore Technology Park, Galway
Tel: (+353) 091 788 990
Fax: (+353) 091 779 830

Client
GALWAY CITY COUNCILProject
GALWAY CYCLE NETWORK
PHASE 1Purpose
INFORMATIONTitle
SITE LOCATION PLAN

Original Scale	Design/Drawn	Checked	Authorised
AS	DB	ST	KB
SHOWN	Date 19.08.20	Date 19.08.20	Date 19.08.20
Status	Drawing Number	Rev	
I	5193732 / HTR / DR / 0002	-	

DRAFT

A1

DO NOT SCALE

File: 5193732_HTR_DR_0002.dwg
Date: Aug 19, 2020 - 12:28m
Printed by: libran

1.2. Link Design

The proposed cycle network scheme consists of various cycle path or link types; raised adjacent cycle tracks, raised cycle lanes and shared street facilities.

The link types for Route 2B – Doughiska Road (South) is as follows: -

Route 2B – Doughiska Road (South) (700m)

The proposed cycle scheme along this route is to consist of a raised adjacent cycle lane north of the level crossing and a shared street facility south of the level crossing.

The shared street option includes narrowing the existing carriageway to 6m and the provision of a minimum 2m wide footpath either side of the road. This solution is acceptable in low speed and low traffic volume environments. A typical cross section of this is shown in Figure 1-2.

The raised cycle lane option includes a 50mm high vertical kerb segregation between the carriageway and cycle lane and a 50mm high vertical kerb segregation between the cycle lane and adjacent footpath. A typical cross section of this is shown in Figure 1-3.

Figure 1-2 Shared Street Cross Section.

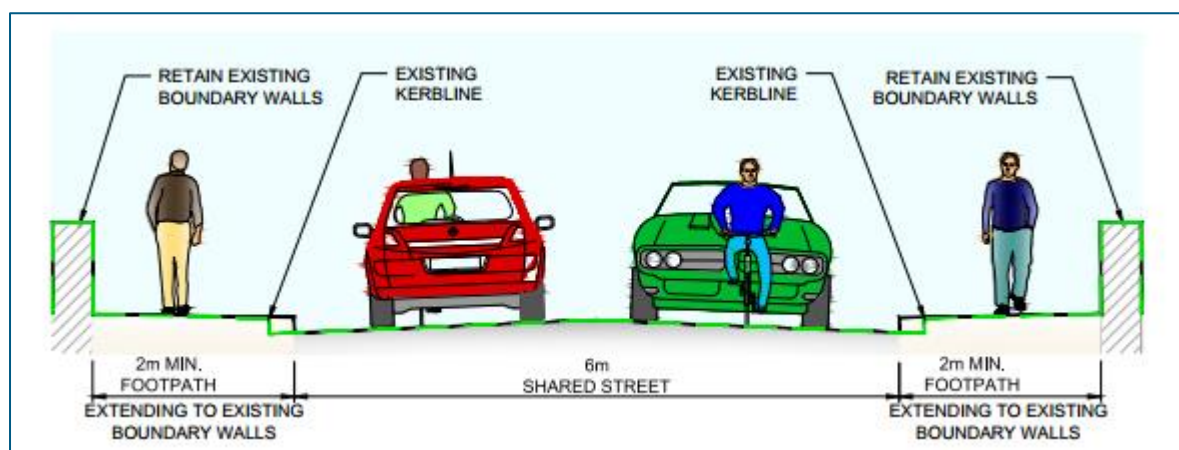
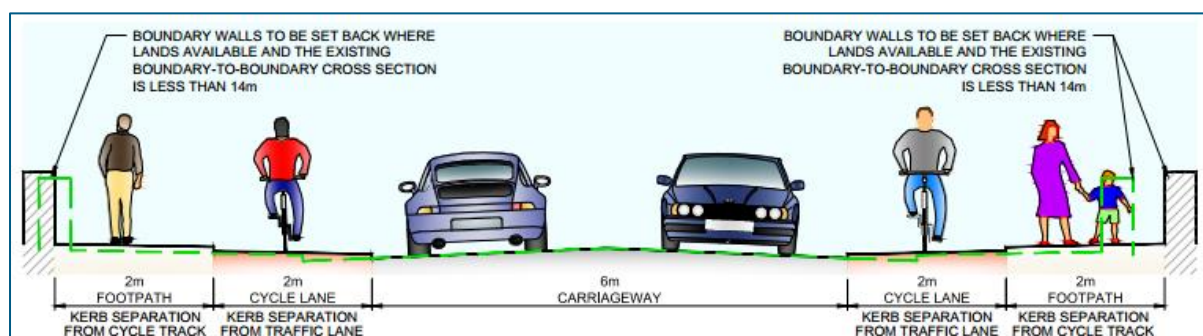


Figure 1-3 Raised Cycle Track Cross Section.



1.3. Construction Details

The construction period for Route 2B – Doughiska Road (South) is estimated to be undertaken within 4 months (dependent on the procurement strategy) and can be summarised as follows: -

- Prior to the commencement of the works, the Contractor will be required to develop a Temporary Traffic Management Plan. To allow the construction phase to proceed as safely and efficiently as possible, temporary traffic management measures will be required where the work will cross or run adjacent to local public roads. The temporary traffic management measures will be designed carefully to enable the works to progress and to manage the safety of workers and the passing public, and to minimise disruption to the general public;
- The Contractor will commence the construction phase by mobilising the construction team on site. This will involve setting up a site compound in an area which will minimise potential impacts to the environment and public, whilst providing a suitable location from a construction logistics and safety viewpoint;
- Works will commence with clearing and removing (off site) all redundant items such as road signage, boundary treatment, and the temporary storage of topsoil. The works will be completed using a combination of operatives using hand tools and also mechanical excavators, dumper trucks and other plant typical to road construction schemes;
- To facilitate the main works, underground utilities which conflict with the main works will be uncovered using mechanical excavators (and hand digging where appropriate) and identified.
- Site compound location – Location to be confirmed at Tender/Construction stage; there could be multiple satellite compounds for each route as each Work Package progresses given the ‘spread out’ nature of the overall cycle network scheme. While the location of the site compound is not known, the works compound for Route 2B – Doughiska Road (South) is to be located outside the SAC and approved by GCC at Construction Stage prior to acceptance. The Contractor will establish the site area, including site compound, set down area for vehicles, works areas, temporary set-down areas for material removed etc. prior to commencing work on the project. The Contractor will determine an appropriate location for the site compound in agreement with GCC. The compound will provide for parking, welfare facilities, canteen, site offices, storage areas and temporary utilities / services. These areas will be fenced to keep the public out of the work area and secured as appropriate to prevent pollution risk. Once appointed the Contractor will be obliged to take account of the content of this report when deciding on the fixed location of the site compound. The compound will be located away from sensitive areas such as designated conservation areas (such as Galway Bay European sites), ecologically sensitive areas (such as Merlin Park Woodlands), watercourses, hedgerows / treelines which are considered important wildlife corridors, archaeological / architectural features, identified Japanese knotweed locations (*Fallopia japonica*) (outside of the red line boundary) and adjacent private properties. Accordingly, the positioning of the site compound will be chosen so as to have no adverse environmental impacts during the construction phase. The temporary construction compound will be removed upon completion of the construction phase. Such areas are to be reinstated and all construction waste and / or scrapped building materials are to be removed from site on completion of the construction phase. Oil, fuel etc. storage areas are to be decommissioned on completion of the construction phase. Any remaining liquids are to be removed from site and disposed of at an appropriately licenced facility.
- With the utilities safely identified and diverted (if required), the initial construction phase will be ready to commence in that area. This will include removal of existing kerbs, footways and road pavement (where required), and the excavation and removal of soil to proposed design levels along the scheme – which are envisaged to be minor in nature for this scheme and will predominantly involve regrading work. The excavation will be largely undertaken by mechanical excavator, with spoil arisings loaded into HGV tipper trucks for removal off site or reuse on the scheme where testing confirms its suitability;
- Pavement construction will be undertaken by mechanical means, using excavators to lay sub-base, graders, rollers and pavement laying machines for asphalt materials;

- Road sign poles will be erected to carry the scheme road signage. This will include statutory signage, warning signage and information signage. With the poles erected, the signs will be mounted by hand and cleaned to complete the signage installation;
- The finished surface course will be swept using a mechanical road sweeper and immediately followed by the application of road markings, which are likely to be applied using a vehicle mounted road marking machine. The individual Stop, Yield and cycle markings are likely to be laid by hand.

1.3.1. Drainage

All drainage for the cycle routes will utilise the existing road drainage network. Drainage for the routes will be provided using new gullies and existing or new storm drainage pipes where appropriate. The new facilities will generally slope towards the road in order to minimise the need for additional drainage collection measures. In some areas, where this may not be possible, additional channels or measures will be required.

2. Scope of Study

The purpose of this Screening for AA is to determine the likelihood of significant effects, if any, that the proposed project could have on European sites (aka Natura 2000 sites).

2.1. Aims of the Report

The aim of this report is to provide supporting information to assist the competent authority to carry out a Screening for Appropriate Assessment with respect to the proposed project.

2.2. Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the 'Habitats Directive' provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 – 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservations of an EU-wide network of sites known as Natura 2000 sites or European sites. European sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects that could potentially affect European sites. Article 6(3) establishes the requirement for Appropriate Assessment: -

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6 (4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan or project will adversely affect a European site. Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures need to be addressed in this case. Article 6(4) states: -

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

2.3. Appropriate Assessment Process

Guidance on the AA process was produced by the European Commission (EC, 2001), which was subsequently used to develop guidance for Ireland by the Department of Environment, Heritage and Local Government in 2009 (DEHLG, 2009). These guidance documents set out a four-staged approach to complete the AA process and outlines the issues and tests at each stage.

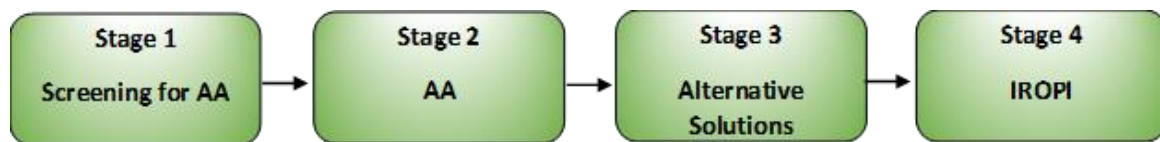


Figure 2-1 Appropriate Assessment Process (Source: DEHLG, 2009).

The stages outlined below are taken from the guidance document Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DEHLG, 2009).

2.3.1. Stage 1 – Screening for Appropriate Assessment

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3): -

- a. Whether a plan or project is directly connected to or necessary for the management of the site, and
- b. Whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, then the process must proceed to Stage 2 (AA).

2.3.2. Stage 2 – Appropriate Assessment

This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, the alternative solutions need to be considered and the process proceeds to Stage 3.

2.3.3. Stage 3 - Alternative Solutions

This stage examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a European site. The process must return to Stage 2 as alternatives will require appropriate assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected, it is necessary to progress to Stage 4.

2.3.4. Stage 4 – IROPI

Stage 4 examines whether there are imperative reasons of overriding public interest for allowing a plan or project that will have adverse effects on the integrity of a European site to proceed in cases where it has been established that no less damaging alternative solution exists. Compensatory measures must be proposed and assessed, of which the Commission must be informed.

The AA process only progresses through each of the four stages for certain plans and projects. For example, for a project not connected with the management of a site and where no likely significant effects on a European site in view of its conservation objectives are identified, the process stops at Stage 1, Screening for AA. Throughout the process the precautionary principle must be applied, which requires that the conservation objectives of European should prevail where there is uncertainty (EC, 2001). This report is for Stage 1 of the process, Screening for Appropriate Assessment whereby this report provides supporting information to the competent authority in their AA decision.

3. Methods

3.1. Guidance documents

The Screening for Appropriate Assessment was prepared with reference and due consideration to the following documents and case law, including but not limited to: -

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna (Habitats Directive);
- Statutory Instrument No. 477/2011 — European Communities (Birds and Natural Habitats) Regulations 2011;
- European Commission (2018). Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC;
- European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC;
- European Commission (2007). Guidance document on Article 6(4) of the 'Habitats Directive' 92/49/EEC; clarification of the concepts of: Alternative solutions, Imperative reasons of overriding public interest, Compensatory Measures, Overall Coherence, Opinion of the Commission;
- Department of the Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities; and,
- Case C-323/17 People Over Wind & anor. V. Coillte.
- Office of the Planning Regulator (2021), Appropriate Assessment Screening for Development Management, OPR Practice Note PN01.

3.2. Desk Study

A desk study was carried out to collate information available on European sites in the vicinity of the proposed project. These areas were viewed using Google Earth, Google maps¹ and Bing maps² (last accessed on 09/04/2021).

The National Parks and Wildlife Service (NPWS) and National Biodiversity Data Centre (NBDC) online databases were reviewed concerning European sites and their features of interest in the vicinity of the proposed project.

The Environmental Protection Agency (EPA) mapping³ system was used to identify any hydrological connection between the proposed project and European sites.

Locations and boundaries of all European sites within 15km of the proposed projects were identified and reviewed using the NPWS online map viewer. Boundary shapefiles were also downloaded from this site to facilitate the preparation of project graphics.

Desktop information on relevant European sites were reviewed on the NPWS website, including the site synopsis for each SAC/SPA, the conservation objectives, the site boundaries as shown on the

¹ <https://www.google.ie/maps>

² <http://www.bing.com/maps/>

³ <https://gis.epa.ie/EPAMaps/>

NPWS online map viewer, the standard Natura 2000 Data Form for the SAC/SPA which details conditions and threats of the sites, and published information and unpublished reports on the relevant European sites.

Relevant planning information for the surrounding area was reviewed using the planning enquiry systems of Galway City Council. Search criteria were implemented to determine whether such projects or plans would be relevant to this study and this information was used to determine potential cumulative impacts from other plans / projects with the proposed project.

3.3. Site Visit

Site visits were undertaken along the alignment of the route during May 2021. The findings of site surveys have been used to inform this report. Site photographs are presented below.

3.4. Statement of Authority

The Screening for Appropriate Assessment report was prepared by Colin Wilson and Paul O'Donoghue provided peer review and support.

Colin Wilson (Atkins Dublin) has a BSc (Hons) in Environmental Science. He has over 12 years working in the fields of ecology and environmental management. He is a Senior Ecologist with experience in ecological surveying, environmental assessment, on-site ecological supervision and mitigation. He has experience on multiple road projects regarding all elements of surface and groundwater management, monitoring, sampling and associated reporting. Colin also has a broad range of experience in invasive species management, biosecurity and control. Colin has prepared AA screening reports, Natura Impact Statements and has also been involved in the development of Environmental Operating Plans and Construction Environmental Management Plans for a number of national infrastructure projects.

Paul O'Donoghue has a BSc (Zoology), MSc (Behavioural Ecology) and a PhD in avian ecology and genetics. Paul is a chartered member of the Society for the Environment (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Paul has over 18 years' experience in ecology; including extensive experience in the preparation of Habitat Directive Assessments / Natura Impact Statements (i.e. Appropriate Assessment under Article 6(3) of the EU Habitats Directive). Paul carried out the technical review of this report.

4. Existing Environment

The proposed cycle route is located entirely within the existing footprint of the road network to the east of Galway City Centre. These lands have historically been sub-urban in nature and have continued to expand as urban development areas within recent times. Route 2B Doughiska Road (South) of the cycle network is aligned entirely along roadways and associated pathways and does not encroach into any protected habitats.

The proposed project is within the Water Framework Directive (WFD) Carrowmoneash [Oranmore] subcatchment (SC_010). All surface hydrological features within the vicinity of the project are assumed to follow topography and flow in a general southern direction towards the coast. A review of geological features⁶ identified a number of karst formations within the wider area, however, none are within or adjacent to the alignment of the route.

The project site was reviewed for the presence of watercourses or surface water features. A review of EPA datasets⁴ did not identify any watercourses within the project site.

Merlin Park Woodlands covers a large area ca. 500m west of Doughiska Road and this park contains a wide range of habitats including native oak-ash-hazel woodland, mixed broadleaf woodland, conifer woodland, limestone pavement, wet grassland and scrub⁶. Lesser Horseshoe bats (*Rhinolophus hipposideros*) have been recorded within Merlin Park. The proposed Route 2B Doughiska Road does not intersect with this area of urban woodland and as such impacts on the habitats found within the woodlands are not anticipated. There will be no significant changes to street lighting levels along the proposed route nor within the vicinity of Merlin Park (some light poles positions may be moved within existing footpaths to accommodate the cycle path) and as such no significant impact on foraging routes of bats is anticipated.

A review of Annex I habitat within the study area⁵ details Limestone pavements [8240], Lowland hay meadows [6510] and Semi-natural dry grasslands [6210] are found to the east of the cycle network routes (Ardaun area). Route 2B Doughiska Road is remote from these annexed habitats, and there is no direct or indirect connectivity, and as such impacts on these protected sites are not anticipated.

The proposed project site was surveyed for invasive plant species listed on the third schedule of the EC (Birds and Natural Habitats) Regulations 2011 S.I. No. 477/ 2011. Species surveyed for included Japanese knotweed (*Fallopia japonica*) and associated hybrids. Surveys were undertaken during May 2021 which is within the seasonally appropriate window to assess the project site for the presence of invasive plant species. No evidence of third schedule invasive plant species were recorded within the extents of the project site.

Plates 4-1 to 4-4 below depict the site of the proposed Doughiska Road (South) cycleway.

⁴ <https://gis.epa.ie/EPAMaps/>

⁵ ARUP (2015) Annex I Habitat Mapping. N6 Galway City Transport Project.



Plate 4-1 Doughiska Road; southern end of route.



Plate 4-2 Doughiska Road / Railway junction.



Plate 4-3 Doughiska Road; mid-section of route.



Plate 4-4 Doughiska Road; northern end of route.

5. Appropriate Assessment Screening

5.1. Connectivity of Works Area to European Sites

The ‘*zone of influence*’ (Zol) for a project is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2019).

A distance of 15km is currently recommended, in the case of plans or projects, as a potential zone of influence and this distance is derived from UK guidance (Scott Wilson et al, 2006). For some projects, the distance could be much less than 15km, and in some cases less than 100m, but National Parks and Wildlife Service guidance⁶ advises that this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.

Thus, given the nature, scale and extent of the proposed project, the potential zone of influence will consider European sites with regard to the location of a European site, the QIs of the site and their potential mobility outside that European site, the Cause-Pathway-Effect model and potential environment effects of the proposed project.

The proposed project site does not lie within any European site. Route 2B Doughiska Road (South), at its southern extent, terminates on the Coast Road ca. 180m from the boundary of Galway Bay Complex SAC and Inner Galway Bay SPA.

There are 12 no. European sites within the potential zone of influence of the project; 8 no. SACs and 4 no. SPAs.

Table 5-1 details the European sites that are within the potential Zol of the proposed project, which lists their associated qualifying interests and specifies if the European site is within the Zol of the proposed project or not.

Figures 5-1 and 5-2 illustrate the locations of the European sites within the potential Zol of the proposed project.

⁶ DoEHLG (2009). *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*. Department of Environment, Heritage and Local Government, Dublin, Ireland.

Table 5-1 European sites within potential Zone of Influence of the proposed project.

Site Name and Code	Approximate distance from project	Features of Interest	Within the Zol
Galway Bay Complex SAC (000268)	180m	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Coastal lagoons [1150] • Large shallow inlets and bays [1160] • Reefs [1170] • Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Turloughs [3180] • <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] • Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] • Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae [7210] • Alkaline fens [7230] • Limestone pavements [8240] • <i>Lutra lutra</i> (Otter) [1355] • <i>Phoca vitulina</i> (Harbour Seal) [1365] 	<p>Yes</p> <p>The proposed project starts / ends on the coastline of Galway Bay and therefore is adjacent to the Galway Bay Complex SAC.</p> <p>This site is discussed further below.</p>
Lough Corrib SAC (000297)	5.5km	<ul style="list-style-type: none"> • Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110] • Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130] • Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140] • Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] • Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] 	<p>No</p> <p>There is no direct overlap between the proposed works and Lough Corrib SAC nor is there any hydrological link between the project site and this SAC.</p> <p>The qualifying interest species; Lesser horseshoe bats are highly mobile and have the potential to range outside of the SAC site extents. Impacts of bat species associated with the SAC are not anticipated as the cycle paths are aligned along the existing road network and there will be no changes to lighting levels along these urban roadways.</p>

Site Name and Code	Approximate distance from project	Features of Interest	Within the ZoI
		<ul style="list-style-type: none"> • Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) [6410] • Active raised bogs [7110] • Degraded raised bogs still capable of natural regeneration [7120] • Depressions on peat substrates of the Rhynchosporion [7150] • Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae [7210] • Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] • Alkaline fens [7230] • Limestone pavements [8240] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • Bog woodland [91D0] • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Austropotamobius pallipes</i> (White-clawed Crayfish) [1092] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Salmo salar</i> (Salmon) [1106] • <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] • <i>Lutra lutra</i> (Otter) [1355] • <i>Drepanocladus vernicosus</i> (Slender Green Feather-moss) [1393] • <i>Najas flexilis</i> (Slender Naiad) [1833] 	<p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats and species for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats and species.</p> <p>This site is not considered further.</p>
Rahasane Turlough SAC (000322)	12.5km	<ul style="list-style-type: none"> • Turloughs [3180] 	<p>No</p> <p>There is no direct overlap between the proposed works and Rahasane Turlough SAC nor is there any hydrological or hydrogeological link between the project site and this SAC.</p> <p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>

Site Name and Code	Approximate distance from project	Features of Interest	Within the ZoI
Lough Fingall Complex SAC (000606)	10.7km	<ul style="list-style-type: none"> Turloughs [3180] Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] Limestone pavements [8240] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] 	<p>No</p> <p>There is no direct overlap between the proposed works and Lough Fingall Complex SAC nor is there any hydrological or hydrogeological link between the project site and this SAC.</p> <p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats and species for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats and species.</p> <p>This site is not considered further.</p>
Castletaylor Complex SAC (000242)	13.1km	<ul style="list-style-type: none"> Turloughs [3180] Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Limestone pavements [8240] 	<p>No</p> <p>There is no direct overlap between the proposed works and Castletaylor Complex SAC nor is there any hydrological or hydrogeological link between the project site and this SAC.</p> <p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
Kiltarnan Turlough SAC (001285)	13km	<ul style="list-style-type: none"> Turloughs [3180] 	<p>No</p> <p>There is no direct overlap between the proposed works and Kiltarnan Turlough SAC nor is there any hydrological or hydrogeological link between the project site and this SAC.</p> <p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
Ardrahan Grassland SAC (002244)	14.1km	<ul style="list-style-type: none"> Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] 	<p>No</p> <p>There is no direct overlap between the proposed works and Ardrahan Grassland SAC nor is there any hydrological or hydrogeological link between the project site and this SAC.</p>

Site Name and Code	Approximate distance from project	Features of Interest	Within the ZoI
		<ul style="list-style-type: none"> Limestone pavements [8240] 	<p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>
East Burren Complex SAC (1926)	14.8km	<ul style="list-style-type: none"> Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. [3140] Turloughs [3180] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Alpine and Boreal heaths [4060] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] <i>Calaminarian</i> grasslands of the <i>Violetalia calaminariae</i> [6130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [6510] Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] Alkaline fens [7230] Limestone pavements [8240] Caves not open to the public [8310] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0] <i>Euphydryas aurinia</i> (Marsh Fritillary) [1065] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] <i>Lutra lutra</i> (Otter) [1355] 	<p>No</p> <p>There is no direct overlap between the proposed works and East Burren Complex SAC nor is there any hydrological or hydrogeological link between the project site and this SAC.</p> <p>The location, scale and duration of proposed project is such that they will not contribute to direct, indirect or in-combination impacts on habitats for which the SAC has been designated and do not have the potential to affect the conservation objectives of these habitats.</p> <p>This site is not considered further.</p>

Site Name and Code	Approximate distance from project	Features of Interest	Within the ZOI
Inner Galway Bay SPA (004031)	180m	<ul style="list-style-type: none"> • Great Northern Diver (<i>Gavia immer</i>) [A003] • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Grey Heron (<i>Ardea cinerea</i>) [A028] • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Shoveler (<i>Anas clypeata</i>) [A056] • Red-breasted Merganser (<i>Mergus serrator</i>) [A069] • Ringed Plover (<i>Charadrius hiaticula</i>) [A137] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Dunlin (<i>Calidris alpina</i>) [A149] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Redshank (<i>Tringa totanus</i>) [A162] • Turnstone (<i>Arenaria interpres</i>) [A169] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Common Gull (<i>Larus canus</i>) [A182] • Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] • Common Tern (<i>Sterna hirundo</i>) [A193] • Wetland and Waterbirds [A999] 	<p>Yes.</p> <p>The Inner Galway Bay SPA is designated for a range of wintering waterbirds and wildfowl that frequent wetland habitats.</p> <p>This SPA is located immediately adjacent to the termination point of Route 3 Ballyloughane Road and therefore the bird species for which this site has been designated could be negatively impacted by the proposed project.</p> <p>Potential impacts on this European site will be discussed below.</p>
Cregganna Marsh SPA (004142)	3.4km	<ul style="list-style-type: none"> • Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] 	<p>No.</p> <p>The Cregganna Marsh SPA is designated for Greenland White-fronted Goose. This species can feed within arable and grassland fields in the wider landscape (i.e. away from the SPA), however, the proposed project is aligned within the footprint of the existing road network and associated verges (and occasional private garden) and as such there are no suitable habitats that would provide for suitable field foraging sites for geese.</p> <p>This site is not considered further.</p>

Site Name and Code	Approximate distance from project	Features of Interest	Within the ZOI
Rahasane Turlough SPA (004089)	12.7km	<ul style="list-style-type: none"> Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999] 	<p>No.</p> <p>Rahasane Turlough SPA is designated for a range of wintering waterbirds and wildfowl that frequent estuarine and coastal habitats.</p> <p>There is no direct overlap between the proposed project and the SPA. There is no connectivity in the form of hedgerows, treelines or watercourses between the project site and this SPA. The works area is sufficiently remote that there is no risk of disturbance to waders and wildfowl using the SPA.</p> <p>The location, scale and operation of the proposed project is such that they will not contribute to direct, indirect or in-combination impacts on the wintering waterbird species for which the SPA has been designated and does not have the potential to affect the conservation objectives of this species.</p> <p>This site is not considered further.</p>
Lough Corrib SPA (004042)	7.3km	<ul style="list-style-type: none"> Gadwall (<i>Anas strepera</i>) [A051] Shoveler (<i>Anas clypeata</i>) [A056] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Common Scoter (<i>Melanitta nigra</i>) [A065] Hen Harrier (<i>Circus cyaneus</i>) [A082] Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Common Tern (<i>Sterna hirundo</i>) [A193] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999] 	<p>No.</p> <p>Lough Corrib SPA is designated for a range of wintering waterbirds and wildfowl that frequent estuarine and coastal habitats.</p> <p>There is no direct overlap between the proposed project and the SPA. There is no connectivity in the form of hedgerows, treelines or watercourses between the project site and this SPA. The works area is sufficiently remote that there is no risk of disturbance to waders and wildfowl using the SPA.</p> <p>The location, scale and operation of the proposed project is such that they will not contribute to direct, indirect or in-combination impacts on the wintering waterbird species for which the SPA has been designated and does not have the potential to affect the conservation objectives of this species.</p> <p>This site is not considered further.</p>

Figure 5-1 SACs within potential zone of influence of the project.

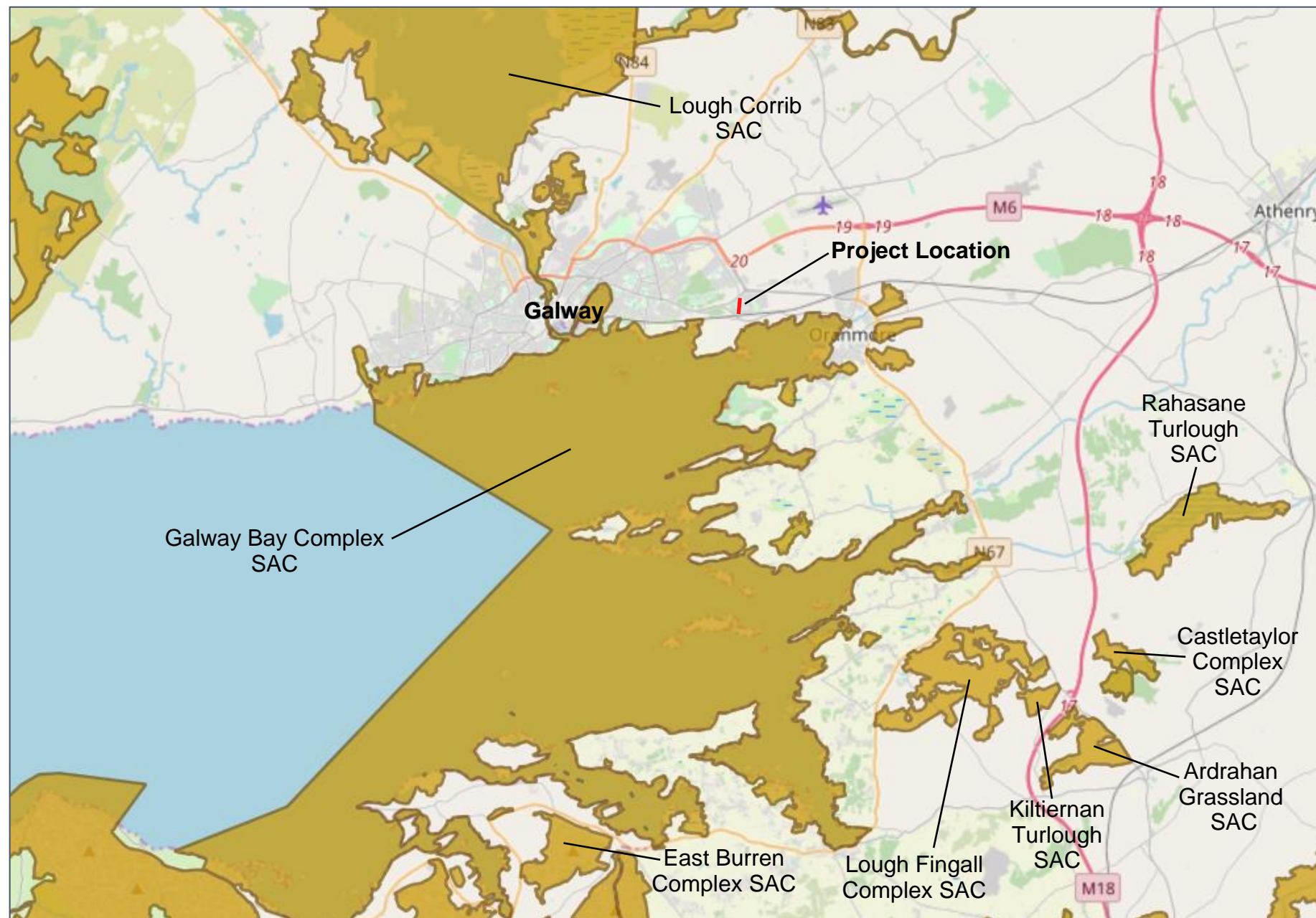
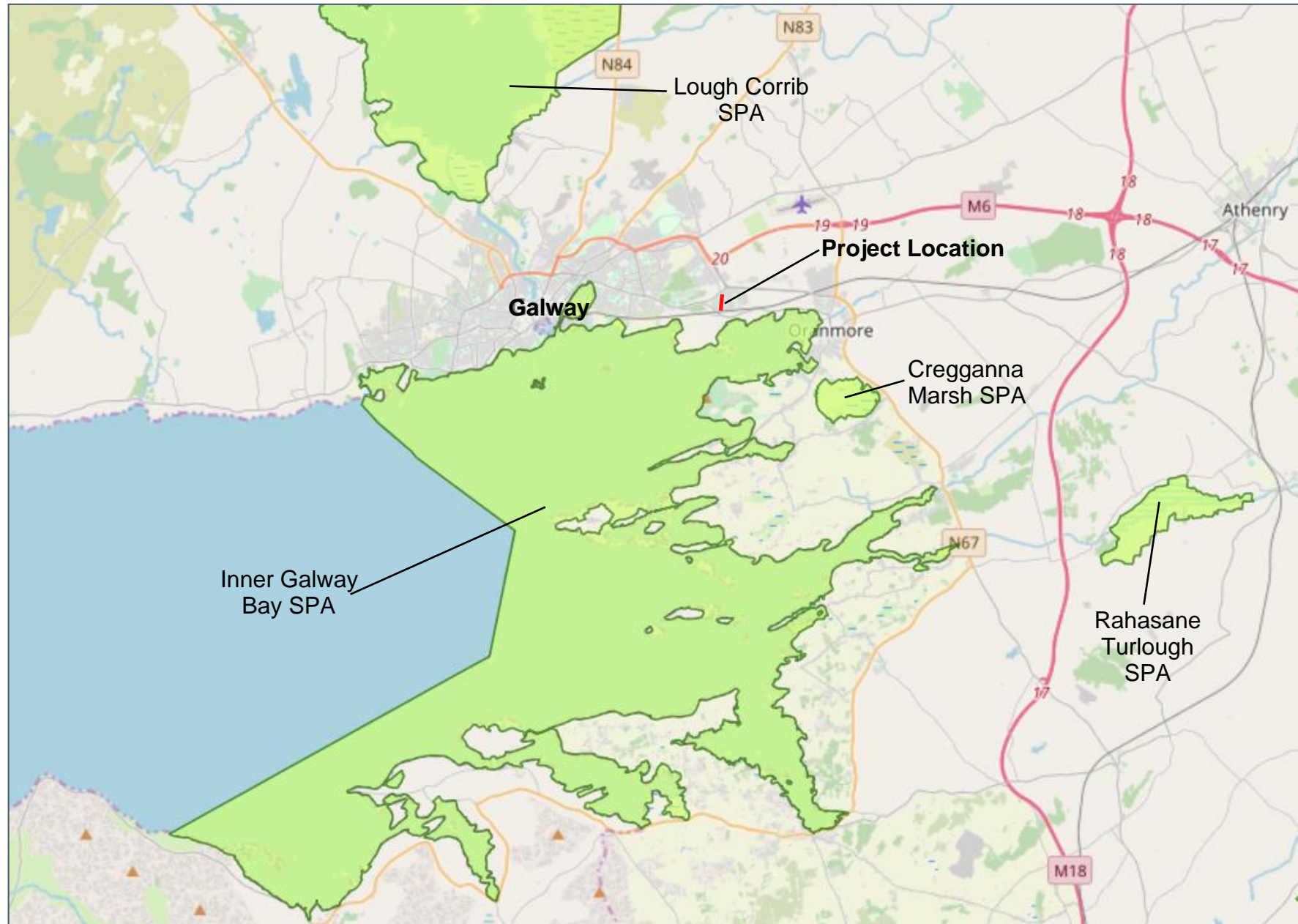


Figure 5-2 SPAs within potential zone of influence of the project.



5.1.1. Brief Description of Galway Bay Complex SAC

A synopsis of the SAC, as detailed by NPWS, is as follows ⁷: -

“The Galway Bay Complex is a very large, marine-dominated, site situated on the west coast of Ireland. The inner part of the south bay is protected from exposure to Atlantic swells by the Aran Islands and Black Head. Subsidiary bays and inlets (e.g. Poul-na-clough, Aughinish and Kinvara Bays) add texture to the patterns of water movement and sediment deposition, which lends variety to the marine habitats and communities. The terraced Carboniferous (Visean) limestone platform of the Burren sweeps down to the shore and into the sublittoral. West of Galway city, the bedrock geology is granite. The long shoreline is noted for its diversity, with complex mixtures of bedrock shore, shingle beach, sandy beach and fringing salt marshes. Other habitats which occur in small amounts include lagoon, fen, turlough, dry grassland, wet grassland and deciduous woodland.

The site has very important and good quality examples of large shallow inlets and bays, intertidal mud and sandflats, and reefs. The area has the country's only recorded example of the littoral community characterized by Fucus serratus with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrata. Sublittorally, the area has Ireland's only reported piddock bed, an extensive maerl bed of Phymatolithon calcareum, an oyster bed, and seagrass beds. A host of rare marine organisms occur, including the sea urchin Paracentrotus lividus, the sponge Mycale contarenii, the red algae Phyllophora sicula and Rhodomenia delicatula. Lagoons are particularly well represented and varied in type, size and salinity. Of especial importance are the rare karstic rock lagoons, of which the site holds all but one of the examples known from the mainland of Ireland. Good quality salt marshes of both Atlantic and Mediterranean types are well represented and occur along with perennial vegetation of stony banks. A very good, though limited, example of calcareous grassland rich in orchids occurs, and there are examples of alkaline fen and Juniperus communis scrub of moderate quality. Two Red Data Book stoneworts occur, Chara canescens and Lamprothamnium papulosum, and also two Red Data Book vascular plants - Crambe maritima and Hyoscyamus niger. The site has one of the largest populations of Phoca vitulina in the country and provides optimum habitat for Lutra. Galway Bay is a very important ornithological site, with an internationally important wintering population of Branta bernicla hrota and regular nationally important populations of a further 16 species, including Gavia immer, Gavia arctica, Pluvialis apricaria and Limosa lapponica. Breeding birds of note are Phalacrocorax carbo, Sterna sandvicensis and Sterna hirundo.”

5.1.1.1. Conservation Objectives

The Habitats Directive defines when the conservation status of the listed habitats and species is considered as favourable. The definitions it uses for this are specific to the Directive. In summary, they require that the range and areas of the listed habitats, and the range and population of the listed species, should be at least maintained at their status at the time of designation. Site-specific conservation objectives aim to define favourable conservation conditions for a particular habitat or species at that site.

Article (1) of the Habitats Directive (92/43/EEC) describes favourable conservation status for habitats and species as follows.

Favourable conservation status of a habitat is achieved when: -

- Its natural range, and area it covers within that range, are stable or increasing, and

⁷ <https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF000268.pdf>

- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when: -

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objectives for Galway Bay Complex SAC, to maintain the favourable conservation for each of the qualifying interests of the site, were published by NPWS (2013) Version 1.0; 16/04/2013.

5.1.2. Brief Description of Inner Galway Bay SPA

A synopsis of the SPA, as detailed by NPWS, is as follows⁸: -

“Galway Bay SPA is a very large, marine-dominated, site situated on the west coast of Ireland. The inner bay is protected from exposure to Atlantic swells by the Aran Islands and Black Head. Subsidiary bays and inlets (e.g. Poul-na-clough, Aughinish and Kinvarra Bays) add texture to the patterns of water movement and sediment deposition, which lends variety to the marine habitats and communities. The terraced Carboniferous (Viséan) limestone platform of the Burren sweeps down to the shore and into the sublittoral. The long shoreline is noted for its diversity, with complex mixtures of bedrock shore, shingle beach, sandy beach and fringing salt marshes. Intertidal sand and mud flats occur around much of the shoreline, with the largest areas being found on the sheltered eastern coast between Oranmore Bay and Kinvarra Bay. Seagrass beds lie off Finavarra Point. A number of small islands composed of glacial deposits are included, such as Deer Island, along with some rocky islets.

Galway Bay is one of the most important ornithological sites in the western region. It supports internationally important wintering populations of Gavia immer and Branta bernicla hrota and regularly occurring nationally important populations of an additional 16 species, most notably Mergus serrator (6.7% of national total), Charadrius hiaticula (3.3% of total), Anas clypeata (2.9% of total) and Limosa lapponica (2.5% of total). It supports the largest and the most regular population of Gavia arctica in the country. The bay is an important wintering site for gulls and is of national significance for at least Larus canus. Breeding birds of note are Phalacrocorax carbo, Sterna sandvicensis and Sterna hirundo. The site provides both feeding and roost sites for most of the species, though some birds commute to areas outside of the site. The birds of Galway Bay have been monitored annually since 1980/81. The site has one of the largest populations of Phoca vitulina in the country.”

5.1.2.1. Conservation Objectives

The Conservation Objectives for Inner Galway Bay SPA are to maintain the favourable conservation condition of the bird species as Special Conservation Interests for this SPA.

⁸ <https://www.npws.ie/sites/default/files/protected-sites/natura2000/NF004031.pdf>

The favourable conservation status of a species is achieved when: -

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats,
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The conservation objectives for non-breeding birds of Inner Galway Bay SPA are summarised in Table 5-3 below.

Table 5-3 Conservation Objectives for Inner Galway Bay SPA.

Objective 1: To maintain the favourable conservation condition of the non-breeding waterbird Special Conservation Interest species listed for the SPA, which is defined by the following list of attributes and targets:			
Parameter	Attribute	Measure	Target
Population	Population Trend	Percentage change as per population trend assessment using waterbird count data collected through the Irish Wetland Bird Survey and other surveys	The long-term population trend should be stable or increasing.
Range	Distribution	Range, timing or intensity of use of areas used by waterbirds, as determined by regular low tide and other waterbird surveys	There should be no significant decrease in the range, timing or intensity of use of areas by the waterbird species of Special Conservation Interest other than that occurring from natural patterns of variation.
Objective 2: To maintain the favourable conservation condition of the wetland habitat at the SPA as a resource for the regularly-occurring migratory waterbirds that utilise it, which is defined by the following list of attributes and targets:			
Parameter	Attribute	Measure	Target
Area	Wetland habitat	Area (Ha)	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 13,267 Ha, other than that occurring from natural patterns of variation.

5.2. Likelihood of Potential Impacts on European Sites

The available information on the European Sites within the potential ZOI of the proposed project was reviewed to establish whether or not the proposed Galway Cycle Network project is likely to have a significant effect on the conservation objectives of these SACs/SPAs. The likelihood of impacts on the features of interest of European Sites identified in this report is based on information collated from the desk study, site plans and other available existing information.

The likelihood of impacts occurring are established in light of the type and scale of the proposed works, the location of the proposed works with respect to European sites and the features of interest and conservation objectives of the European sites.

This screening report is prepared following the Cause – Pathway – Effect model. The potential impacts are summarised into the following categories for screening purposes.

- Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be as a result of a change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment.
- Indirect and secondary impacts do not have a straight-line route between cause and effect. It is potentially more challenging to ensure that all the possible indirect impacts of the plan/project – in combination with other plans and projects - have been established. These can arise, for example, when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as an indirect consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact. Disturbance to fauna can arise directly through the loss of habitat (e.g. displacement of roosting bats) or indirectly through noise, vibration and increased activity associated with construction and operation.

5.3. Identification of Potential Impacts on European Sites

The Galway Bay Complex SAC covers a significant geographical area and the qualifying habitats and species for which they are designated are also spread widely throughout. An Appropriate Assessment screening, under Article 6(3) of the Habitats Directive, should be appropriate to assess the potential level of impact, the likely receptors, and in the case of water quality, connectivity between the site and the SAC. Therefore, designated SAC features which have no potential of being impacted by the proposed project, either because they do not occur within the area likely to be affected or because of distance from the works areas of the proposed project, are listed as such below. Table 5-2 below presents an overview of the potential for impacts on the habitats and species listed as features of interest within the SAC.

Inner Galway Bay SPA is designated for a range of wintering waterbirds and wildfowl that frequent estuarine and coastal habitats. There is no overlap of the proposed cycle route with the Inner Galway Bay SPA site and as such direct impacts on the foraging or roosting sites within the SPA are not anticipated. The proposed footprint of the cycle network does not accommodate suitable foraging habitats, such as open waters, sand flats or mudflats, which the majority of the SPA bird species forage within.

Certain bird species associated with the SPA, such as Light-bellied Brent Geese and Lapwing, do on occasion feed in arable and grassland fields within the wider landscape; however the proposed project is located within the existing footprint of the road network in Galway City and as such there are no greenfield sites within the project site suitable for field foraging bird species. Bird species; Common tern and Sandwich tern have nesting colonies within Galway Bay which are remote from the alignment of the routes and as such no impacts on SPA nesting birds is anticipated.

Where the route of the proposed project comes in closest proximity to Inner Galway Bay SPA is at the southern extents of Route 2B Doughiska Road (South) (Figure 1-1). Route 2B Doughiska Road (South) terminates at the R338 Coast Road and at this point is ca. 180m from the coastline and as such impacts on bird species foraging or roosting within the SPA site extents are not anticipated during either the construction or operation of Route 2B.

There is the potential for Qualifying Interest (QI) bird species associated with Galway Bay SPA to use the fields located between the southern end of the project site and the bay's shoreline for foraging or roosting and as such construction activities could result in disturbance to QI species in this area. Project works in this area are estimated to last 2-3 weeks and the heavily utilised and busy R338 Coast Road separates the southern extents of the project site from the fields systems bordering Galway Bay, as such significant disturbance related impacts on SPA waterbird species are considered unlikely.

It is considered that the location, scale and operation of the proposed cycle route is such that they will not contribute to impacts on bird species for which the Inner Galway Bay SPA has been designated.

Galway Bay Complex SAC is designated for the protection of a range of estuarine and coastal habitats such as intertidal mudflats, sand flats, coastal lagoons, inlets, bays, reefs and areas where halophytic vegetation has colonised the mud, sand (salt meadows and *Salicornia*). The SAC is also designated for the protection of terrestrial habitats which include limestone pavements, turloughs, grasslands and wetlands. There are also 2 no. of protected species detailed as the qualifying interest of the SAC; Otter and Harbour Seal.

The NPWS Conservation Objective documentation for the SAC was reviewed to determine the location of qualifying interest habitats, such as Perennial vegetation on stony banks [1220], within the vicinity of Ballyloughane Strand and site documentation does not record any qualifying interest habitats within the SAC near Doughiska Road/Coast Road junction.

The proposed cycleway route alignment actively avoids intersecting with Galway Bay Complex SAC. The alignment of the proposed cycleway route does not encroach into any of the qualifying interest habitats associated with the SAC nor does it encroach on habitats that would be utilised by otters or seals. As such there will be no direct impacts, such as loss of SAC habitat, as a result of the construction of the cycleway on the qualifying interest habitats and species of the SAC.

The construction of the cycle route will result in an increase in numbers of cyclists trafficking the coastal area of Galway Bay, this increase in numbers of people in the general area of the project site is considered unlikely to have any significant impact on the SAC as the route is remote from any qualifying interest habitats.

Surface water drainage from the hard standing areas of the cycleway will utilise the existing road drainage network. The alignment of the cycleway is along existing roadways and footpaths (with occasional land take of roadside grass verges) and as such significant impacts on surface water drainage flows are not anticipated from the construction of the cycle route. Similarly, no significant pollution related impacts are anticipated on the road drainage system from cycle (or pedestrian) usage of the cycle route. The proposed project is located within the Clarinbridge groundwater body (EPA Code: IE_WE_G_0008). However, the excavations associated with the construction of the cycleway will be relatively shallow (ca. <500mm) and therefore no significant impacts on groundwater are likely. As such there are no indirect impacts through hydrological or hydrogeological pathways anticipated, either during the construction or operation of the cycleway route, on Galway Bay Complex SAC.

The construction of the route will involve shallow excavations (ca <500mm) to facilitate path formation and as such significant impacts on local groundwater are not anticipated, therefore impacts on Galway Bay through hydrogeological pathways is precluded.

Given the nature, scale and location of the proposed cycleway route it is considered that the construction and operation of the proposed project will not have a likely significant effect on the qualifying interest habitats and species of Galway Bay Complex SAC and Inner Galway Bay SPA.

Table 5-2 Screening of SAC qualifying habitats for Galway Bay Complex SAC.

Habitat / Species	Comment	Screening Statement
Galway Bay Complex SAC		
<ul style="list-style-type: none"> Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Perennial vegetation of stony banks [1220] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] 	<p>The alignment of the proposed cycle route is dominated by hard standing areas such as roadways and pathways.</p> <p>Coastal and Estuarine habitats do not occur with the proposed sites for the cycle route.</p> <p>Given the nature, scale and location of the proposed project, it is not considered likely that the proposed project will impact either directly or indirectly on these habitats.</p>	Screened out.
<ul style="list-style-type: none"> <i>Juniperus communis</i> formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (*important orchid sites) [6210] Limestone pavements [8240] 	<p>The alignment of the proposed cycle route is dominated by hard standing areas such as roadways and pathways.</p> <p>Grassland and pavement habitats do not occur with the proposed sites for the cycle route.</p> <p>Given the nature, scale and location of the proposed project, it is not considered likely that the proposed project will impact either directly or indirectly on these habitats.</p>	Screened out.
<ul style="list-style-type: none"> Turloughs [3180] Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae [7210] Alkaline fens [7230] 	<p>The alignment of the proposed cycle route is dominated by hard standing areas such as roadways and pathways.</p> <p>Wetland habitats do not occur with the proposed sites for the cycle route.</p> <p>Given the nature, scale and location of the proposed project, it is not considered likely that the proposed project will impact either directly or indirectly on these habitats.</p>	Screened out.
<ul style="list-style-type: none"> <i>Lutra</i> (Otter) [1355] 	<p>The alignment of the proposed cycle route is dominated by hard standing areas such as roadways and pathways.</p> <p>There are no watercourses capable of accommodating otters within the project site.</p> <p>Given the nature, scale and location of the proposed project, it is not considered likely that the proposed project will impact either directly or indirectly on otters.</p>	Screened out.
<ul style="list-style-type: none"> <i>Phoca vitulina</i> (Harbour Seal) [1365] 	<p>The alignment of the proposed cycle route is dominated by hard standing areas such as roadways and pathways.</p>	Screened out.

	<p>There are no waterbodies within the project site.</p> <p>Given the nature, scale and location of the proposed project, it is not considered likely that the proposed project will impact either directly or indirectly on seals.</p>	
Inner Galway Bay SPA		
<ul style="list-style-type: none"> • Great Northern Diver (<i>Gavia immer</i>) [A003] • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Grey Heron (<i>Ardea cinerea</i>) [A028] • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Shoveler (<i>Anas clypeata</i>) [A056] • Red-breasted Merganser (<i>Mergus serrator</i>) [A069] • Ringed Plover (<i>Charadrius hiaticula</i>) [A137] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Dunlin (<i>Calidris alpina</i>) [A149] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Redshank (<i>Tringa totanus</i>) [A162] • Turnstone (<i>Arenaria interpres</i>) [A169] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Common Gull (<i>Larus canus</i>) [A182] • Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] • Common Tern (<i>Sterna hirundo</i>) [A193] • Wetland and Waterbirds [A999] 	<p>The alignment of the proposed cycle route is dominated by hard standing areas such as roadways and pathways.</p> <p>There are no sites within the alignment of the routes suitable as foraging or nesting sites for bird species associated with the SPA.</p> <p>Given the nature, scale and location of the proposed project, it is not considered likely that the proposed project will impact either directly or indirectly on the qualifying interest bird species of Inner Galway Bay SPA.</p>	Screened out.

5.4. In-combination Impacts

Galway City Development Plan (GCDP) 2017-2023 sets out policies and objectives for the development of Galway City. The Plan aims to promote the sustainable development and improvement of the economic, environmental, cultural and social aspects of Galway. Throughout the preparation of the GCDP, the Appropriate Assessment process was integrated into the various stages of the plan process and has guided preparation of development scenarios for the city. A Natura Impact Report accompanied the Draft GCDP and addressed Stage 1 Appropriate Assessment and Stage 2 Natura Impact Report.

The findings of the NIR are as follows: -

'The NIR findings are that the Plan implementation has the potential to result in impacts to the integrity of European sites, if unmitigated. The risks to safeguarding the integrity of the qualifying interest and conservation objectives of the European sites have been addressed by the inclusion of measures that will prioritise the avoidance of impacts in the first place and the mitigation of impacts where they cannot be avoided. In addition, all lower level plans and projects arising through the implementation of the Plan will be themselves be subject to the Appropriate Assessment process.'

An assessment of the potential cumulative impacts and in-combination effects of the Draft Plan concluded that through the implementation of the overarching policies and objectives of the Plan no negative in-combination effects for other plans and projects to European sites are expected through the implementation of the Plan. Having incorporated the mitigation measures, the NIR concluded that it is considered that the GCDP 2017-2023 will not have a significant adverse effect on the integrity of European sites.'

Ardaun is an area to the east of Galway City and the Draft Ardaun Local Area Plan 2018-2024 outlines as a strategic goal; 'to create a high quality, mixed use, urban village that will support a strong and sustainable neighbourhood and facilitate access to a range of services and community facilities'. The Draft Plan was subject to the Appropriate Assessment process which concludes; '...based on objective scientific information, the proposed Ardaun LAP, individually or in combination with other plans or projects, will not have a significant effect on any European sites'.

The Galway Cycle Network Phase 1 is to be undertaken in a phased basis with different cycleway routes being constructed at separate times on separate roadways. Outside of Doughiska Road (South), the remaining routes forming Phase 1 of the Galway Cycle Network are scheduled to be constructed subsequent to the proposed project. The proposed project will likely be in operation whilst construction of these other cycleway network routes is being progressed. These other sections of cycleways are entirely along the urban roadways of Galway City. Given the nature, scale and location of these other proposed cycleway projects, and as no impacts on any European site are anticipated from the proposed project, it is considered the proposed Route 2 Doughiska Road (South) project will not act in combination to give rise to any cumulative impacts on any European site.

The N6 Galway City Ring Road scheme and the Port of Galway Redevelopment project were also considered. The aforementioned projects are subject to the appropriate assessment process and are remote from the proposed cycleway route and as such it is considered they will not act in combination with the proposed cycleway route to give rise to in-combination impacts on the European sites associated with Galway Bay.

A search of the Galway City Council Planning Finder was conducted in April 2021 to determine if there are any granted developments within the vicinity of the proposed project which could act in combination with the proposed project to create cumulative impacts. This search identified in excess of 100 no. granted developments since 2015, the majority of which are small scale developments such as single residential properties, and extension works. A number of granted developments within vicinity of the proposed project include: -

- JLH Property Holding Company. Construction of 51 no. residential developments (1995). Granted 26/6/2019. This project will be construction north of the Old Dublin Road, is located ca. 300m from the proposed project.
- Bayhill Park Ltd., Construction of 14no. residential developments (15319). Granted 4/5/2016. This project will be constructed 110m from the proposed project.
- DWK Developments Ltd., Permission for minor amendments to previously granted planning – amendments of change of house type (17109). Granted 20/6/2017. This project will be constructed adjacent to the proposed project and will be accessed of the road along which the proposed project will be aligned.

Given the scale and nature of the proposed cycleway project and the fact that significant impacts are not anticipated on any European site, the proposed project will not act in combination with these granted developments to create significant impacts.

NPWS site documents outline the main high threats and pressures on the European sites within the Zol of the proposed project as being from shipping lanes, ports, marine constructions, pollution to surface waters from household sewage, waste waters, agricultural and forestry activities, sea defence or coast protection works, tidal barrages, industrial ports, discharges, urbanised areas, human habitation and reclamation of land from sea, estuary or marsh. It is considered unlikely that the proposed cycleway project will act in combination with the threats and pressures identified in the NPWS site documents to give rise to significant effects on the European sites within the Zol of the proposed project.

Thus, in summary, no proposed projects or plans were identified that would, in-combination with the proposed project, have likely significant effects on the European sites within the Zol of the proposed project, or any other European site.

5.5. Likelihood of Significant Effects on European Sites

Due to the scope and nature of the proposed project, it is considered that the proposed project, either alone or in combination with other plans or projects, will not result in likely significantly effects on the Galway Bay Complex SAC or Inner Galway Bay SPA, or any other European site, in view of their conservation objectives.

5.6. Consideration of Findings

This Screening for Appropriate Assessment report is based on the best available scientific information. It is concluded by the authors of this report that the proposed Galway Cycle Network Phase 1 – Work Package 02 Doughiska Road (South) project, either alone or in combination with other plans or projects, does not pose likely significant effects on European sites.

Thus, it is recommended that is it not necessary for the proposed project to proceed to Appropriate Assessment.

Should the scope, nature or extent of the proposed project change, a new Screening for Appropriate Assessment report shall be required.

6. Appropriate Assessment Screening Matrix

Table 6-1 Screening Matrix.

1. Description of the project or plan	
Location	Galway Bay Complex SAC Inner Galway Bay SPA
Distance from designated site	Adjacent to the proposed project
Brief Description of the project or plan	See Section 1.1
Is the plan directly connected with or necessary to the site management for nature conservation?	No

2. Brief Description of the European site(s)	
Name	Galway Bay Complex Inner Galway Bay
Site designation status	SAC SPA
Qualifying interests	See Table 4-1
Unit size	14402.77ha (89.58% Marine) 13267.57ha (94.23% Marine)

3. Assessment Criteria	
Other plans or projects which may have a cumulative impact	There are no likely impacts arising from the proposed works on the European sites and there are no other plans or projects ongoing at the same time that would contribute to a cumulative impact on the European sites. Therefore, cumulative impacts with other projects will not occur.
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the European sites.	See Section 1.1 for description of the proposed project.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the European site by virtue of: Size and scale	The location and scale of the proposed project is such that direct or indirect impacts are not considered likely.

3. Assessment Criteria	
<p>Land-take</p> <p>Distance from European site or key features of the site</p> <p>Resource requirements</p> <p>Emissions</p> <p>Excavation requirements</p> <p>Transportation requirements</p> <p>Duration of construction, operation etc.</p> <p>Others</p>	
<p>Describe any likely changes to the site arising as a result of:</p> <p>Reduction of habitat area</p> <p>Disturbance of key species</p> <p>Habitat or species fragmentation</p> <p>Reduction in species density</p> <p>Changes in key indicators of conservation value</p> <p>Climate change</p>	<p>There are no likely changes to the site as a result of the proposed works.</p> <p>There shall be no reduction of habitat area within European sites as a result of the proposed project.</p> <p>There shall be no habitat or species fragmentation or reduction in species density as a result of the works.</p>
<p>Describe any likely impacts on the European site as a whole in terms of:</p> <p>Interference with the key relationships that define the structure of the site</p> <p>Interference with key relationships that define the function of the site.</p>	<p>There are no likely changes to the site as a result of the proposed project works with respect to the key relationships that define the structure or function of the SAC/SPA.</p>
<p>Provide indicators of significance as a result of the identification of effects set out above in terms of:</p> <p>Loss</p> <p>Fragmentation</p> <p>Disruption</p> <p>Disturbance</p> <p>Change to key elements of the site</p>	<p>There is no potential for impact to qualifying interests of the SAC/SPA given the nature and scale of the works.</p>
<p>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.</p>	<p>No significant impacts are likely as a result of the proposed works.</p>

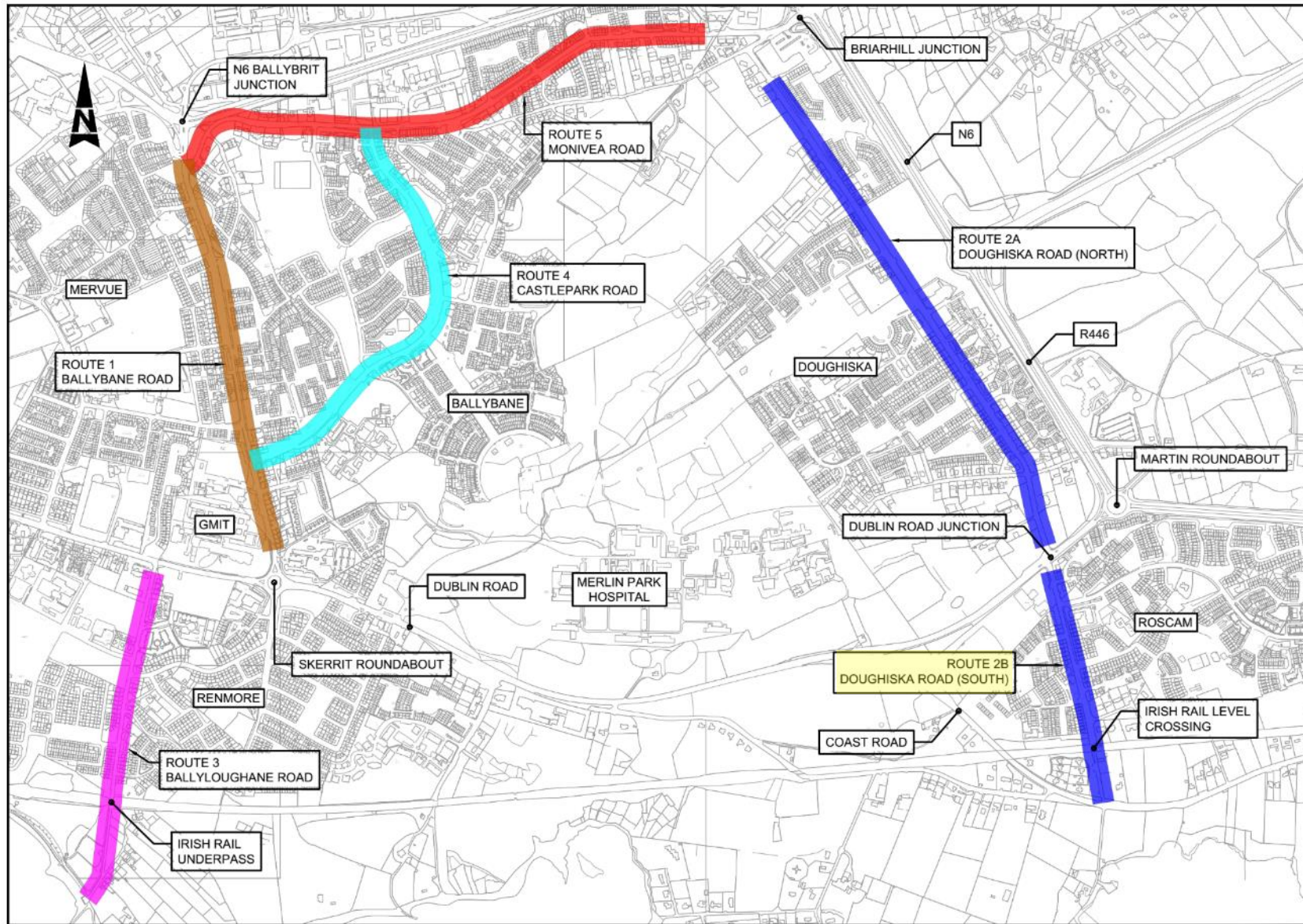
Data collected to carry out the assessment			
Who carried out the assessment	Sources of data	Level of assessment completed	Where can the full results of the assessments be accessed and viewed?
Atkins 150 Airside Business Park Swords Co. Dublin	Desktop data derived from the NPWS – Natura 2000 form, site synopsis, SAC/SPA reports etc. National Biodiversity Data Centre online data. EPA Envision Mapping system; Google maps; Bing Maps etc. Galway City Council Planning Enquiry System	Screening	Atkins 150 Airside Business Park Swords Co. Dublin

7. References

- CIEEM (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.
- Department of the Environment, Heritage and Local Government (2009). *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*.
- European Commission (2018). *Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*.
- European Commission (2001). *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC*.
- European Commission (2007). *Guidance document on Article 6(4) of the 'Habitats Directive' 92/49/EEC; clarification of the concepts of: Alternative solutions, Imperative reasons of overriding public interest, Compensatory Measures, Overall Coherence, Opinion of the Commission*.
- Fossitt, J. (2000). *A Guide to Habitats in Ireland*. The Heritage Council.
- Scott Wilson and Levett-Therivel, (2006). *Appropriate Assessment of Plans*. Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants.
- Galway City Council Planning Department – Online Planning System. <https://www.galwaycity.ie/online-planning-system>.
- Galway City Council (2017). *Galway City Development Plan 2017-2023*.
- Galway City Council (2017). *Galway City Development Plan 2017-2023 – Appropriate Assessment, Natura Impact Report*, RPS Group Ltd, 2016.
- NPWS (2013). *Conservation Objectives: Galway Bay Complex SAC 000268*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013). *Conservation Objectives: Inner Galway Bay SPA 004031*. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2014). *Site Synopsis. Inner Galway bay SPA (004031)*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2015). *Site Synopsis. Galway Bay Complex SAC (000268) Rev 15*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2017). *Natura 2000 – Standard Data Form (2017). Galway Bay Complex SAC, Site Code IE0000268*.
- NPWS (2017). *Natura 2000 – Standard Data Form (2017). Inner Galway bay SPA, Site Code IE0004031*.

Appendices

Appendix A. Project Site Extents



WS Atkins International Limited

Atkins House
150 Airside Business Park
Swords
Co. Dublin

Tel: +353 1 810 8000

Fax: +353 1 810 8001

© WS Atkins International Limited except where stated otherwise

WS Atkins Ireland Limited
Atkins House
150 Airside Business Park
Swords
Co. Dublin
K67 K5W4

© WS Atkins Ireland Limited except where stated otherwise