LAYDE CONSULTING

Appropriate Assessment Screening & Natura Impact Statement

Proposed Regeneration Scheme, Dublin Street North, Monaghan

Client: Carlin Planning Ltd

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Specialist Environmental Consultancy Services

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1.0 INTRODUCTION

Layde Consulting was commissioned by Carlin Planning Ltd to present information which would enable Screening for an Appropriate Assessment (AA Screening) and the preparation of a Natura Impact Statement (NIS) in support of a proposed development on lands at Dublin Street North, Monaghan town, County Monaghan.

All EU Member States are obliged to establish a network of sites of conservation importance known as the Natura 2000 network. The network is made up of Special Areas of Conservation (SAC's) established under the EU Habitats Directive (92/43/EEC) and Special Protection Areas (SPA's) established under Directive (2009/147/EC). Under Article 6 (3) of the Habitats Directive, Member States are required to consider the potential effects of any project or plan on the conservation objectives of an SAC or SPA before a decision can be made to allow that project or plan to proceed,

As such, this report considers the implications and effects, if any, on European sites designated for nature conservation, also known as Natura 2000 Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA). This report considers the relevant conservation objectives of those sites and presents a scientific examination of evidence and data in order to identify and assess the implications of the proposed development for any European sites in view of the relevant conservation objectives. The information presented within this NIS report also considers the effects that the development may have on designation by itself, but also assess the in-combination effects associated with other committed plans or projects which could adversely affect the integrity of any European sites.

In reaching a conclusion in this regard, consideration is given to any mitigation measures which may be necessary in order to avoid or reduce any potential negative impacts that could be caused on designation, or support networks that prove a linkage to these designations.

1.1 Overview of Report

This report comprises of a two-stage process, whereby the first stage presents an Appropriate Assessment Screening exercise for the proposed development, in conjunction with relevant European Designations.

In the event that effects are unknown or cannot be screened out, then the second stage follows on from the AA Screening findings, whereby information is presented in the form of an NIS which is designed to assist the competent authority (in this case, Monaghan County Council) to carry out an Appropriate Assessment. Within the NIS the significance of effects should be considered in relation to the project itself, and also in-combination with other plans or projects, and subsequently provides information relating to the mitigation and control of impacts on identified designations.

1.2 Statement of Authority

This report has been prepared by John Laverty, Principal Environmental Scientist at Layde Consulting who holds a BSc (Hons) degree in Environmental Science and is a Full member of the Institute of Environmental Sciences. John has over 20 years of experience in the preparation of ecological impact assessments, and has worked with private and PLC companies, and local authorities over an extensive range of development and infrastructure projects.

1.3 Project Overview

The proposed development area (herein termed the 'site') incorporates lands to the rear of Dublin Street North, Monaghan (see Figure 1), and comprises of a mix of urbanised areas, external residential amenity areas, commercial land, and derelict lands comprising of scrub and treelines along St. Davnet's Row and the Old Infirmary. Under the development proposals it is intended to regenerate the site by demolishing the existing buildings within the site, and constructing a new public access road, car parking area and event space, and also enabling the provision of future development plots for commercial and residential purposes.

Figure 1- Proposed development area, lands to the rear of Dublin Street North

1.4 Project Description

Upon gaining planning permission and land ownership, the project will be carried out over a number of phases to include the following:

- Enabling works;
- Removal of vegetation and demolition of existing building structures;
- Grading of land by means of cut and fill processes;
- Construction of roadworks, hard standing areas, installation of utilities, drainage works and infrastructure works; and
- Finishing works, to include installation of final surfaces, utilities, services (such as lighting installations, ironworks) etc;

The enabling works will involve the installation of a construction compound, internal haulage and access roads, erection of site fencing and signage, installation of site offices etc. Once enabling works have been completed, then vegetation will be cleared as per the planning proposals. This will include vegetation around buildings, shrubs, clearance of scrub and felling of trees scheduled to be removed. Enabling works will require the use of excavators and HGV vehicles for removal of materials from site, along with hand tools (i.e. chainsaws, manual tools etc).

Once the site has been cleared and enabling works have been completed, then buildings which are scheduled to be removed will be demolished. Waste materials from the demolition processes will be sorted and exported offsite for onward treatment by the relevant waste management facilities. Removal of concrete slab materials may be undertaken by rock hammer, although this is likely to be limited. Similar to enabling works, the demolition of buildings will require the use of excavators and HGV vehicles for removal of materials from site, although plant equipment is likely to be minimal during this phase given the constraints of land, and as demolition works are generally slower to undertake than standard groundwork procedures.

Upon demolition and removal of scheduled buildings, then groundworks will take place whereby materials will be excavated from the site down to the required base levels. Site investigation works indicate that bedrock is unlikely to be encountered within the site at the base levels, therefor rock hammering of bedrock material will not be required. Ground works will also require the grading of lands through fill materials, both in terms of using soil materials within the site for regrading purposes, and also by means of importing clean materials (such as aggregates etc) to establish the final site levels, before surfacing and utility infrastructure works can be undertaken. This phase is likely to be the most intensive in terms of plant equipment and will likely require the use of several excavators and HGV vehicles at any given time.

Surfacing and finishing works will involve the installation of road materials, car parking, hardstanding and footpaths, and all finishing works such as the installation of lights, final fix of utilities, and landscaping within the amenity areas. Most the materials will be imported to the site by means of HGV vehicles, and installation will take place using asphalt spreaders, rollers and excavators.

1.5 Operational Phase of the Project

The development proposals effectively comprise of the construction of a new road and additional car parking spaces, pedestrian pathways, hardstanding and amenity greenspace areas. The site will also be used occasionally as an event space, and the proposals also include development plots for mixed use purposes. Therefore, the operational phase of the development involves the continued use for vehicles and pedestrian access, along with amenity usage. In addition, the operational phase also includes the continued maintenance of roads, pedestrian and amenity areas which will be undertaken by Monaghan County Council.

2.0 SCOPE OF ASSESSMENT

2.1 Legislation & Guidance

2.1.1 European Nature Directives (Habitats and Birds)

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation. Similarly, Special Protection Areas are classified under the Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) are referred to as the Natura 2000 network. In general terms, they are considered to be of exceptional importance for rare, endangered or vulnerable habitats and species within the European Community.

Under Article 6(3) of the Habitats Directive an Appropriate Assessment must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European sites. Article 6(3) establishes the requirement for Appropriate Assessment (AA), whereby it states:

"*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."

2.1.2 EC (Birds and Natural Habitats) Regulations 2011

Part 5 of the EC (Birds and Natural Habitats) Regulations 2011 sets out the circumstances under which an 'appropriate assessment' is required. Section 42(1) requires that '*a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site*.'

Section 42(2) expands on this, stipulating that a public authority must carry out a screening or Appropriate Assessment before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken. To assist a public authority to discharge its duty in this respect, Section 42(3)(a) gives them the authority to direct a third party to provide a Natura Impact Statement and Section 42(3)(b) allows them to request any additional information that is considered necessary for the purposes of undertaking a screening. A Natura Impact Statement has to include such information or data as the public authority considers necessary to enable it to ascertain if the plan or project will affect the integrity of a Natura 2000 site.

2.1.3 Other Guidance and Sources

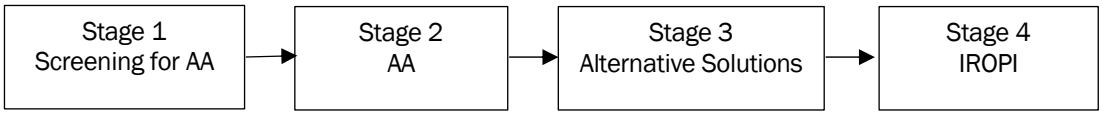
The following guidance documents and source material has also been reviewed (but not limited to) in the preparation of the Appropriate Assessment Screening process or preparation of the report:

- *Assessment of Plans and Projects in Relation to Affecting Natura 2000 sites*: Methodological Guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission 2021);

- *Managing Natura 2000 Sites*: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (European Commission 2019);
- Office of the Planning Regulator (2021). *Appropriate Assessment Screening for Development Management*. OPR Practice Note PN01;
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DoEHLG, 2010)

3.0 OVERVIEW OF APPROPRIATE ASSESSMENT (AA) STAGES

The Department of the Environment Heritage and Local Government Guidelines (DoEHLG, 2010, as revised) outlines the European Commission's methodological guidance (EC, 2002) which promotes a four-stage process in order to complete the Article 6 assessments and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether the next stage in the process is required. The four stages are summarised below:



Stages 1 and 2 present the screening and Appropriate Assessment findings as required under Article 6(3)/ In the event that significant effects are deemed unavoidable or that they require the precautionary principle to be applied, then Stage 3 should be carried out in order to determine if an alternative solution can be achieved for the project. Stage 4 is the main derogation step of Article 6(4).

3.1 Stage 1 – Appropriate Assessment Screening

The Screening process considers the source-pathway-receptor model for each potential effect that the project may have on identified European designations, and determines the likelihood of significant effects without mitigation or control measures in place. As part of the screening process, the following tests are applied:

I. whether a plan or project is directly connected to or necessary for the management of the site; and
II. whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

The outcome of these tests may demonstrate the requirement for the next stage of the AA process, namely for the competent authority to carry out an Appropriate Assessment. In order determine the requirement for an AA or supporting NIS, an AA screening exercise was undertaken for the proposed development. The findings of the AA Screening process are presented within this report, along with any further recommendations to undertake a NIS.

As part of the AA Screening process, EC (2001) states that "*project and plan proponents are often encouraged to design mitigation measures into their proposals at the outset. However, it is important to recognise that the screening assessment should be carried out in the absence of any consideration of mitigation measures that form part of a project or plan and are designed to avoid or reduce the impact of a project or plan on a Natura 2000 site*". This direction in the European Commission's guidance document is unambiguous in that it does not promote the inclusion of mitigation at screening stage.

In April 2018, the Court of Justice of the European Union issued a ruling in case C-323/17 that Article 6(3) of Directive 92/43/EEC must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site.

Therefore, the AA Screening undertaken as part of the development proposals have been assessed without specific mitigation or control being taken into account.

3.2 Stage 2 – Appropriate Assessment

The Appropriate Assessment stage considers whether the plan or project, alone or in combination with other projects or plans, is likely to have adverse effects on the integrity of European sites and their conservation objectives. If the AA process cannot discount potential effects, then the authority can request the applicant to carry out an NIS using a qualified and competent third party.

The interpretation of what constitutes an NIS is described under Part 1 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), as follows:
"*Natura Impact Statement" means a report comprising the scientific examination of a plan or project and the relevant European Site or European Sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment*".

In the event that the AA process considers that adverse effects have been identified, and if clear, effective and enforceable mitigation measures can be conditioned to a consent that would avoid, reduce or remedy any such negative impacts, then the project can be consented at that stage thereby avoiding the need to progress to Stage 3 for an alternative solution. However, should the AA process determine that the proposals are likely to have an adverse impact on designations, even in-combination with control and mitigation measures put in place (i.e. significant effects are unavoidable), then the process must proceed to Stage 3 for an alternative solution.

3.3 Stage 3 – Alternative Solutions

Should the AA process determine that impacts on designations are considered not to be acceptable, or non-significant levels by avoidance and/or mitigation, then the process must progress to Stage 3. This stage objectively assesses whether alternative solutions exist by which the objectives of the plan or project can be achieved, and while maintaining the integrity of the designation or it's conservation objectives. Explicitly, this means alternative solutions that have less or no negative impacts on the integrity of a European site. It should also be noted that EU guidance on this step of the process states that, '*other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria'* (EC, 2002).

This effectively means that should alternative solutions exist that have less or no negative impacts on European sites, then these solutions should be adopted regardless of economic considerations. The process must return to Stage 2, whereby the alternative solution should then be reassessed as per the AA process. In the event that no other reasonable alternatives exist, and that this has been robustly assessed in accordance with the AA Process, then the AA progresses to Stage 4 as Imperative Reasons of Overriding Public Interest (IROPI)/Derogation.

3.4 Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage of the process is undertaken when it has been sufficiently determined that negative impacts on the integrity of a European site will result from a plan or project, but that no alternatives exist which would prevent impact. At this stage of the AA process, it is the characteristics of the plan or project itself that will determine whether or not the public authority can allow it to progress. This process falls under the Imperative Reasons of Overriding Public Interest (IROPI)/Derogation.
It is important to note that in the case of European sites that include in their qualifying features 'priority' habitats or species, as defined in Annex I and II of the Directive, the demonstration of 'over-riding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed.

Stage 4 of the process defines and describes these compensation measures. The Commission must be informed of the compensatory measures, which must be practical, implementable, likely to succeed, proportionate and enforceable, and must be approved by the Minister.

4.0 METHODOLOGY

Guidance on the AA process was produced by the European Commission (EC, 2001; 2018), which was subsequently used to develop guidance for Ireland by the Department of Environment, Heritage and Local Government in 2009 (DEHLG, 2009), National Parks and Wildlife Service in 2018 (NPWS 2018) and the Office of the Planning Regulator (2021). These guidance documents set out a staged approach to complete the AA process and outline the methodology used to determine the likely significance of impact, but emphasise that each plan or project must be considered on a case-by-case approach. Therefore, as part of the AA process for this application, the following methodology was adopted.

4.1 Zone of Influence

The Zone of Influence (ZoI) for a project is the area over which ecological features may be subject to significant effects as a result of the 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 ZOI will vary for different ecological features depending on their sensitivity to an environmental change.

In accordance with the OPR Practice Note PN01, the ZoI should be established on a case-by-case basis using the Source-Pathway-Receptor model and not by arbitrary distances. It is noted that for some projects, the distance could be much less than 15km, and in some cases less than 100m. However, in accordance with the National Parks and Wildlife Service guidance (NPWS 2009), it is advised that each project 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.

In this case, given the potential hydrological source-pathway-receptor linkage via open water bodies, then the assessment of offsite (indirect) effects would require a wider assessment distance if deemed necessary. Therefore, given the potential hydrological linkage to protected sites, then a distance of 15km was adopted for the AA screening process.

4.2 Desk Study

A desk study was carried out to collate information available on Natura 2000 sites within the potential zone of influence of the site (See Figure 2), along with the respective conservation objectives for each designation. The site and the surrounding area were viewed using existing available satellite and street view imagery, and the National Parks and Wildlife Service (NPWS) (last accessed 30th August 2024) and National Biodiversity Data Centre (NBDC) (last accessed 30th August 2024) websites were accessed for information on Natura 2000 sites. GIS datasets were reviewed for all European sites within the potential zone of influence and overlaid with the site boundary, and the conservation objectives and site synopsis were obtained and reviewed as part of this screening assessment.

4.3 Site Visits

A number of site visits were carried out from April 2023 through to August 2024 during favourably dry weather conditions with low wind speeds. Site walkovers were carried out to map and assess the habitats present within the site, and to identify the presence of any habitats or species outlined within the conservation objectives for relevant European designations.

5.0 APPROPRIATE ASSESSMENT SCREENING

5.1 AA Screening Overview

The AA screening process follows the format outlined within Section 3, whereby assessment:

- Identifies all relevant Natura 2000 sites within the potential zone of influence of the development area;
- Identifies the features of interest of the Natura 2000 sites and review their conservation objectives and site synopsis, as required;
- Reviews whether there is potential for the features of interest to be affected by the proposed development works based on information relating to any identified Natura 2000 sites, and taking into consideration the proximity to the site and the nature, scale and scope of the works associated with the proposed development;
- Considers the likelihood of potential impacts occurring based on collated information, both in terms of the construction phase and the long-term operational phase of the development;
- Considers the likelihood of cumulative effects arising from the project in-combination with other plans and projects; and
- Identifies the likelihood of significant effects in the absence of mitigation, alone or in – combination, on Natura 2000 sites occurring because of the proposed development.

5.2 Designations within Zone of Influence

As previously discussed, the ZoI takes into consideration the potential for direct and indirect effects that the development may have on European designation sites. For the significance of effects to be determined, there must be at least a source-pathway-receptor model present between the effects of the development and the protected designation. The ZoI also takes into consideration the varying differences between ecological features depending on their sensitivity to an environmental change, and the likely influence on these features the development may have. Given the nature and scale of the proposed development, and potential hydrological links to European designations, a ZoI distance of 15 km from the site was adopted for this AA screening report. As such, a search was undertaken for all European designations within a 15km radius of the site, and the results of the findings are discussed further below.

5.3 Identification of Natura 2000 Sites within 15km

Based on GIS datasets from NPWS, the boundary locations of Natura 2000 designations within 15km radius of the site are illustrated in Figure 2. The boundary locations for protected designation which are not within the Natura 2000 schedule are also presented in Figure 3, which includes Natura Heritage Sites (NHA's) and proposed Natural Heritage Sites (pNHA's), as discussed in later sections of this report. Based on a 15km radius around the site, 1No. European designation was identified which fell within the ZoI of the site, as summarised below:

(004167) Slieve Beagh SPA

Slieve Beagh SPA is located approximately 10.5km to the west of the site at the closest boundary position, and no other SPA's or SAC's were noted within 15km of the site location. As part of the screening process, the qualifying interests and site synopsis of the SPA is considered further below in order to determine any potential source–pathway–receptors linkages to the development area.

5.4 Sites of conservation within 15km

In addition to Natura 2000 sites, a review was undertaken of the NPWS databases for other protected designations within close proximity to the site, in particular Proposed Natural Heritage Areas (pNHA) and Natural Heritage Areas (NHA). These sites were published on a non-statutory basis in 1995 although have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. Some of the NHA's and pNHAs are very small, such as a roosting place for rare bats, while others are much larger, such as a woodland or lake for example. Although not currently designated under statutory basis, it should be noted that designations for NHA's and pNHAs may proceed on a phased basis over the coming years. As such, NHA and pNHA located within close 15km of the site have been identified, as summarised below in Table 1.

Table 1. Summary of NHA's and pNHA's within 15km radius of the site.

Designation	Site ID	Site Name	Setback Distance (km)
pNHA	001612	Wright's Wood	1.75km west
pNHA	001602	Drumreaske Lough	3km northwest
pNHA	001784	Rosefield Lake And Woodland	3.9km west
pNHA	001611	Ulster Canal (Aghalisk)	3.6km west
pNHA	001783	Corcreeghy Lake And Woodland	5km southwest
pNHA	001785	Mullaghmore Lake (South)	6.4km northwest
pNHA	001837	Mullaglassan Lough	9.9km west
pNHA	001838	Kilcorran Lough	11km west
pNHA	001839	Kilcorran Lough	12.1km west
pNHA	001840	Lislannan Bog	12.8km west
pNHA	001781	Lisarilly Bog	11.2km southwest
pNHA	001606	Rafinny Lough	9km southwest
pNHA	000001	Dromore Lakes	13.4km south
pNHA	001268	Cordoo Lough	10.9km southeast
pNHA	001666	Tassan Lough	13.9km southeast
pNHA	000559	Glaslough Lake	8.2km northeast
pNHA	000562	Monmurray Grassland	11.5km northeast
pNHA	000558	Emy Lough	9.7km north
NHA	001603	Eshbrack Bog NHA	12.6km northwest

The closest protected designation to the site is Wright's Wood pNHA which is located approximately 1.75km to the west, however there were no identified feasible source-pathway-receptor linkages between the site proposals and any of the NHA or pNHA designations. As such, NHA's and pNHA's are not considered further within this report, and have been screened out as part of the AA screening process.

5.5 Natura 2000 Sites beyond 15km

Natura 2000 sites identified within 15km radius of the site have been considered in Section 5.3, however, a review of Natura 2000 sites beyond the 15km search area was also undertaken in order to identify any designations which may have a source-pathway-receptor linkage to the development area, and which may have a feasible linkage that could indirectly affect the integrity of the qualifying interests. The search results indicate Lough Neagh & Lough Beg SPA (UK9020091) is located approximately 39km NE. As such, the potential to impact upon these designations is considered further within the subsequent sections below.

5.6 Description of Natura 2000 Sites

5.6.1 (004167) Slieve Beagh SPA

Slieve Beagh SPA is a Special Protection Area (SPA) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive:

Qualifying Interests:
[A082] Hen Harrier (*Circus cyaneus*)

In accordance with the site synopsis, Slieve Beagh SPA comprises much of the eastern and south-eastern sectors of the Slieve Beagh upland area that extends from County Monaghan into Northern Ireland. Mountain blanket bog is well developed at the higher altitudes and especially at Eshbrack (peak of 365 m). The vegetation is largely dominated by Deergrass (*Scirpus cespitosus*), Ling Heather (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Hare's-tail Cottongrass (*Eriophorum vaginatum*), Common Cottongrass (E. *angustifolium*), Crowberry (*Empetrum nigrum*) and a range of mosses such as *Sphagnum capillifolium*, S. *papillosum*, S. *tenellum* and *Hypnum cupressiforme*. Elsewhere the bog is mostly cutover and there are also wet and dry heaths present. In total, bog and heath occupies 43% of the site. The mid-slopes are afforested (40% of site), with plantations of various ages (open canopy, closed canopy, clear-fell). The remainder of the site is rough or marginal grassland (16%). Some of the old field systems support species-rich wet grassland vegetation dominated by Soft Rush (*Juncus effusus*). Several small dystrophic lakes are present within the site. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier.

The site is one of the strongholds for Hen Harrier in the country. A survey in 2005 recorded four pairs, representing over 1.9% of the all-Ireland total. However, when the Northern Ireland sector of Slieve Beagh is considered, there was a total of 10 breeding pairs in 2005. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests. In Ireland, small birds and small mammals appear to be the most frequently taken prey.

The site also supports breeding Merlin, with two pairs recorded in 2002-03. Red Grouse is found in unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Red-listed. Peregrine nest in the Northern Ireland sector of Slieve Beagh and can be seen over the site at times. Slieve Beagh SPA is of ornithological importance because it provides excellent nesting and foraging habitat for breeding Hen Harrier and is one of the top sites in the country for the species. The presence of three species, Hen Harrier, Merlin and Peregrine, which are listed on Annex I of the E.U. Birds Directive is of note.

5.7 Conservation Objectives: Threats and Pressures

The conservation objectives set for Slieve Beagh SPA have been reviewed, along with the existing or predicted threats and pressures which may impact the integrity of each site, as summarised below in Table 2. The purpose of the conservation objectives are to restore favourable conditions for Hen Harrier (*Circus cyaneus*) within the Slieve Beagh SPA area.

Table 2. Conservation Objectives for Slieve Beagh SPA

Attribute	Measure	Target	Notes
Population size	Number of confirmed breeding pairs	Maintain numbers at or above 3–4 confirmed breeding pairs	The attribute 'confirmed breeding pairs' is based on standard survey methods (see Ruddock et al.,2016). The target for this SPA is informed by the first two national surveys of 1998–2001 (Norriss et al., 2002) and 2005 (Barton et al., 2006). For further information on this and all other attributes, please refer to the conservation objectives supporting document for breeding hen harrier (NPWS, 2022) for further details
Productivity rate	Number of fledged young per confirmed pair	Maintain at least 1.0–1.4 fledged young per confirmed pair	At the SPA level, the productivity rate can be highly variable in any given year. Generally, the setting of a minimum level of productivity to ensure a stable and/or increasing population at a given site ought to be informed by robust estimates of: post-fledging survival; adult survival; and immigration and emigration rates. Setting a single precise and robust rate is constrained by a lack of comprehensive Irish data. In order to frame this uncertainty, a threshold of 1.0–1.4 fledged young per confirmed breeding pair is set for this attribute. If population size of the SPA is not favourable, then the upper end of this productivity rate range is to be met. In order for estimates to be sufficiently representative of the SPA, they need to be of sufficient sample size and ideally over multiple years in order to account for inter-annual variability
Spatial utilisation by breeding pairs	Percentage	Maintain the spatial utilisation of the SPA by breeding pairs at 100%	Optimal resilience depends on breeding pairs utilising the SPA to the maximum extent possible. The spatial distribution of breeding pairs is expressed by the proportion of the SPA being used by them. Breeding pairs predominantly use the area within 5km of their nest site or centre of territory, though they can travel further (e.g. Irwin et al., 2012; Arroyo et al., 2014). Thus, the core area used by confirmed pairs can be broadly and generically estimated by calculating the portion that lies within 5km of all recorded nest sites. Ideally, the breeding population should be well dispersed around the SPA. The target range for this attribute for this SPA is informed by the first two national surveys of 1998– 2001 and 2005

Attribute	Measure	Target	Notes
Extent and condition of heath, bog and associated habitats	Hectares; condition assessment	Maintain the extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	Open heath and bog occur in mosaics and often with other semi-natural habitats (e.g. scrub). These habitats can provide important nesting and foraging resources for the breeding population providing they are in suitable condition. Based on the habitat mapping of Moran and Wilson-Parr (2015), the estimated total extent of these habitats in this SPA is 1,380ha. Qualitative aspects were not assessed by Moran and Wilson-Parr (2015), but some important aspects to consider are the habitats' structure, soil integrity and overall open habitat coherence
Extent and condition of low intensity managed grasslands and associated habitats	Hectares; condition assessment	Maintain extent and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	Low intensity managed grasslands occur in mosaics and often with other semi-natural habitats (e.g. scrub). These habitats can provide important foraging resources for the breeding population providing they are in suitable condition. Based on the habitat mapping of Moran and Wilson-Parr (2015), the estimated total extent of these habitats in this SPA is 106ha. Qualitative aspects were not assessed by Moran and Wilson-Parr (2015), but some important aspects to consider are the habitats' structure and overall open habitat coherence
Extent and condition of hedgerows	Kilometres; condition assessment	Maintain the length and quality of this resource to support the targets relating to population size, productivity rate and spatial utilisation	Hedgerows can be an important foraging resource for hen harrier throughout the year by providing food and refuge for prey animals i.e. small mammals and birds. Moran and Wilson-Parr (2015) quantified the hedgerow resource in this SPA with an estimated total linear extent of 64.3km, with two structural hedgerow types namely 'intact and dense' and 'boxed and moderate' accounting for 27.7km of that total. These combined types account for 43% of the total hedgerow resource of the SPA
Age and structure of forest estate	Percentage	Maintain an even and consistent distribution of age-classes across the forest estate	This attribute aims to define optimal forest age-class composition required to reduce the forest demographic bottleneck, as set out in NPWS (2015) and Wilson et al. (2006)
Disturbance to breeding sites	Level of impact	Disturbance occurs at levels that does not significantly impact upon breeding hen harrier	The impact of any significant disturbance on the SPA's breeding population will ultimately be manifested in the targets which relate to population demographics (i.e. population size, productivity rate) and the spatial utilisation of the SPA by breeding pairs. Factors such as intensity, frequency, timing and duration of a potentially disturbing activity need to be taken into account to determine its significance on breeding hen harrier in the SPA

5.7.1 (UK9020091) Lough Neagh & Lough Beg SPA

Lough Neagh is a large, shallow, eutrophic lake contained within Counties Antrim, Down, Londonderry and Tyrone. Lough Neagh is the largest freshwater lake in the UK and is one of the top ten sites in the UK for wintering waterfowl (based on annual mean numbers). The SPA also includes the smaller lakes, Lough Beg and Portmore Lough. The main habitats within the SPA are open water with beds of submerged aquatic vegetation, species-rich wet grassland, reedbed, islands, swamp, fen and carr woodland. The SPA supports internationally important numbers of wintering waterfowl and is internationally important for a number of wildfowl species including Whooper Swan, Bewick's Swan, Pochard, Tufted Duck, Scaup and Goldeneye. It is also internationally important for breeding Common Tern.

Lough Neagh & Lough Beg SPA is a Special Protection Area (SPA) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive:

Table 3. Summary of Qualifying Features – Lough Neagh & Lough Beg SPA

Feature Type	Feature	Description
Species	Common Tern	Breeding population
Species	Great Crested Grebe	Breeding population
Species	Great Crested Grebe	Passage population
Species	Whooper Swan	Wintering population
Species	Bewick's Swan	Wintering population
Species	Golden Plover	Wintering population
Species	Great Crested Grebe	Wintering population
Species	Pochard	Wintering population
Species	Tufted Duck	Wintering population
Species	Scaup	Wintering population
Species	Goldeneye	Wintering population
Assemblage Species	Little Grebe	Wintering population
Assemblage Species	Cormorant	Wintering population
Assemblage Species	Greylag Goose	Wintering population
Assemblage Species	Shelduck	Wintering population
Assemblage Species	Wigeon	Wintering population
Assemblage Species	Gadwall	Wintering population
Assemblage Species	Teal	Wintering population
Assemblage Species	Mallard	Wintering population
Assemblage Species	Shoveler	Wintering population
Assemblage Species	Coot	Wintering population
Assemblage Species	Lapwing	Wintering population
Waterfowl Assemblage	Waterfowl Assemblage wintering population (Component species: Whooper Swan, Bewick's Swan, Golden Plover, Great Crested Grebe (wintering) Pochard, Tufted Duck, Scaup, Goldeneye, Little Grebe, Cormorant, Greylag Goose, Shelduck, Wigeon, Gadwall, Teal, Mallard, Shoveler, Coot, Lapwing)	
Habitat[1]	Habitat Extent	
Habitat[1]	Roost site locations	

[1] Habitat is not a selection feature but is a factor and is more easily treated as if it were a feature. Habitat extent is also used for breeding birds reported as an area. Extent of swamp/tall fen will be used for breeding waterfowl

Although not recorded as qualifying features, the SPA overlaps with various designations to include ASSI selection features which support or include the qualifying features within the SPA. These are summarised below in Table 4.

Table 4. Additional ASSI selection features

Feature Type	Feature
Habitat	Purple Moor-grass and rush pastures (Lough Beg & Lough Neagh ASSI)
Habitat	Wet woodlands (Lough Neagh ASSI)
Habitat	Reed beds and swamps (Lough Neagh ASSI)
Habitat	Fens (Lough Neagh ASSI)
Species	Higher Plant Assemblage (Lough Beg and Lough Neagh ASSI)
Species	Breeding waterbird assemblage (Lough Beg and Lough Neagh ASSI)
Species	Breeding bird assemblage (wet woodland)
Species	Breeding wader assemblage
Species	Little Grebe wintering population
Species	Cormorant wintering population
Species	Greylag Goose wintering population
Species	Shelduck wintering population
Species	Wigeon wintering population
Species	Gadwall wintering population
Species	Teal wintering population
Species	Mallard wintering population
Species	Shoveler wintering population
Species	Coot wintering population
Species	Lapwing wintering population
Species	Mute Swan wintering population
Species	Freshwater and Estuarine fish (Lough Neagh ASSI)
Species	Invertebrate assemblage (Lough Neagh ASSI)
Earth Science	Coastal processes - refers to near-shore sand complexes (Lough Neagh ASSI)

The conservation objectives have been updated for Lough Neagh & Lough Beg SPA in 2015, which provide detailed information for population trends, management considerations, threats and pressures which may impact the site features.

5.8 Potential Impacts and Likelihood of Significant Effects

All information relating to identified Natura 2000 designations, NHA's and pNHA's within the 15km ZoI was reviewed in order to assess the likely significance of effects which may be caused by the development proposals. In addition, the likely significance of effects on Lough Neagh and Lough Beg SPA have also been included within this review.

In order for a negative impact to be possible, there must be a source–pathway–receptor framework in place which would enable either a direct or indirect impact to be possible for any given designation. The likelihood of impacts occurring are established in light of the type and scale of the proposed development, the location of the proposed development with respect to Natura 2000 sites and the relevant features of interest.

5.8.1 Direct Impact

In terms of direct impact potential, this relates to the immediate development area and land uptake within the proposed planning boundary. Direct impacts may be in the form of habitat loss or from land-take requirements for development or agricultural purposes. Direct impacts can be a result of change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment or the introduction of new activities such as aquaculture.

5.8.2 Indirect Impact

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 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 or indirectly through noise, vibration and increased activity associated with construction and operational phases of the development.

5.9 Demolition and Enabling Works

Enabling and demolition works will not directly impact any protected designations, as the closest designation is more than 10km from the site, and outside of the development area.

The enabling works and the demolition phase of the development will involve the removal of onsite vegetation, demolition of existing building structures and exporting of waste materials from the site. This process will require the use of HGV haulage vehicles within the site, along with excavators, and will likely result in the exposure of soil and subsoil materials particularly when demolishing any floor slabs or foundation structures, or through the removal of vegetation.

In terms of indirect impacts, there needs to be a source-pathway-receptor model to exist between the demolition and enabling works, and the protected designation. In this case, the only potential source-pathway-receptor model for indirect impacts to occur would be from site runoff which has the potential to drain towards a local watercourse (i.e. the River Shambles), and which would then outflow into a protected designation. Degradation of surface water quality could potentially damage some supporting habitats of the Qualifying Features which are associated with the SPA. Other possible indirect effects could be dust generation as part of the demolition and enabling works phase, or air quality impacts which may arise from construction and demolition plant equipment.

In terms of pollutant sources, these would effectively be limited to silt laden runoff during storm events during the demolition and enabling works, and also any accidental spillage of oils or fuel from onsite plant equipment. Airbourne pollutants would be in the form of dust generated by construction and demolition works (i.e. atmospheric dust deposition and soiling), and NO_2 or PM_{10} concentrations generated by plant machinery.

It is noted that the only Natura designation within the 15km search radius was identified to be Slieve Beagh SPA, which is more than 10km away, with the Qualifying Interest being Hen Harrier populations and supporting habitats. However, this designation has no hydrological connection to the site, either in the form of surface waters or groundwaters, and is well beyond the possible influence from dust deposition or airbourne pollutants which are likely to be generated by the site. Any accidental spillage or sedimentation in the absence of mitigation would have no possible source-pathway-receptor linkage to the site, therefore there would be no possibility of indirect impacts on the Slieve Beagh SPA designation.

In terms of the Lough Neagh and Lough Beg SPA, the site drains generally southwards towards properties along Dublin Street North, and also southeast towards Old Cross Square. While most of the site drainage is captured within the local stormwater system, a portion of lands within the southeast of the site could potentially drain towards the River Shambles. That said, there also remains a buffer of commercial land which exists between the site and the River Shambles.

The site development area within Monaghan town forms part of the regional Blackwater (Lough Neagh-Lower Bann) catchment, whereby the River Shambles flows into the Monaghan Blackwater, which subsequently flows into the Cor River south of Glaslough. The Cor River crosses the border and flows into the Annaghroe Blackwater to the east of Glaslough, which eventually continues towards Lough Neagh.

Although the site is technically hydrologically linked to the Lough Neagh catchment by means of the River Shambles and subsequent tributary links, nevertheless the overall setback distance between the site and Lough Neagh & Lough Beg SPA is more than 38km, and involves a minimum of three tributary segments, each with increasing flows before draining into Lough Neagh. Given the small volumes of fuel or oils ever likely to be contained within onsite plant machinery, and given that sedimentation typically has a settlement fallout range of up ~1km, then it is considered that the development site has negligible potential to impact upon the Lough Neagh & Lough Beg SPA designation during small spillage events, both in terms of qualifying features and supporting habitats, and even in the absence of specific mitigation. In addition, the land buffer between the site and River Shambles reduces this potential even further. However, for larger spillage events then the effects on Lough Neagh & Lough Beg SPA cannot be screened out and degradation of surface water quality could potentially damage some supporting habitats of Qualifying Features which are associated with the SPA. As such, a Natura Impact Statement (NIS) would be required to consider the significance of effects along with appropriate mitigation measures which would prevent impacts from occurring.

The proposals will not result a reduction of catchment area, with flow regimes remaining the same as pre-development conditions during the enabling and demolition works. Lough Neagh & Lough Beg SPA is well beyond the possible influence from dust deposition or airbourne pollutants which are likely to be generated by the site.

In terms of other protected sites such as NHA's and pNHA's, the same principle applies whereby there are no established source-pathway-receptor linkages between the site development area and the protected designation. Therefore, impact upon these designations is not possible.

5.10 Groundworks and Excavation Phases

Groundworks and excavations for cut/fill grading activities will not directly impact any protected designations, as the closest designation is more than 10km from the site area.

The groundworks and excavations phase of the development will involve the removal of soil and subsoil materials to the required topographical level, and exporting of materials from the site. In addition, portions of ground will need to be graded up to the required level by means of clean imported materials. This process will require HGV haulage vehicles within the site, along with excavators, and will likely result in the exposure of soil and subsoil materials particularly during the excavation to base levels.

As such, surface water runoff from site during the groundworks phase may have silt laden run-off from excavated materials or from accidental spills of oils, hydrocarbons etc. from plant and machinery equipment. However, as previously discussed, Slieve Beagh SPA has no hydrological connection to the site, either in the form of surface waters or groundwaters, and is well beyond the possible influence from dust deposition or airbourne pollutants which are likely to be generated by the site. Therefore, any accidental spillage or sedimentation in the absence of mitigation would have no possible impact on the Slieve Beagh SPA designation.

In terms of the potential to impact upon Lough Neagh and Lough Beg SPA during the ground works and excavation phase, this is effectively the same as the enabling and demolition works, whereby the overall setback distance between the site and Lough Neagh & Lough Beg SPA is more than 38km, and involves a minimum of three tributary segments, each with increasing flows before draining into Lough Neagh. Given the small volumes of fuel or oils ever likely to be contained within onsite plant machinery, and given that sedimentation typically has a settlement fall out range of ~1km, then it is considered that the development site has negligible potential to impact upon the Lough Neagh & Lough Beg SPA during smaller spillage events, both in terms of qualifying features and supporting habitats. However, for larger spillage events then the effects on Lough Neagh & Lough Beg SPA cannot be screened out, and degradation of surface water quality could potentially damage some supporting habitats of Qualifying Features which are associated with the SPA. As such, a Natura Impact Statement (NIS) would be required to consider the significance of effects along with appropriate mitigation measures which would prevent impacts from occurring.

No reduction of catchment area is being proposed, with flow regimes remaining the same as pre-development conditions during the enabling and demolition works. It is also noted that the SPA designation is well beyond the possible influence from dust deposition or airbourne pollutants which are likely to be generated by the site, and no other indirect source-pathway-receptors linkages exist for the groundworks and excavation phase.

In terms of other protected sites such as NHA's and pNHA's, the same principle applies whereby there are no established source-pathway-receptor linkages between the site development area and the identified NHA's and pNHA's designations. Therefore, impact upon these protected areas is not possible.

5.11 Construction Phase

The construction phase of the development will involve the same plant equipment and construction techniques which will be used within the enabling and demolition works, and also for the groundworks and excavation phases. The same source-pathway-receptor principles apply, therefore the same conclusions can be made that no impact will occur on Slieve Beagh SPA during the construction phase, or protected sites such as NHA's and pNHA's, either from direct or indirect effects even in the absence of mitigation.

However, impacts upon Lough Neagh & Lough Beg SPA as a result of larger petrochemical spillage events cannot be screened out during the construction phase, and degradation of surface water quality could potentially damage some supporting habitats of Qualifying Features which are associated with the SPA. Therefore, it is considered that appropriate mitigation and a NIS would be required for this phase.

5.12 Operational Phase

The operational phase of the development will effectively comprise of road traffic along the new road layout, although it is noted there will be a negligible increase in overall volumes of traffic generated within Monaghan town as a result of the development. In addition, the operational phase will include pedestrian activity, and occasional usage of the site as an outdoor event space.

Pedestrian activity has negligible potential to cause pollution or negative impacts on any of the identified Natura 2000 or protected sites. However, road traffic usage has the potential to generate NO_2, NO_x and PM_{10} concentrations which are associated with the combustion process of vehicle engines. Road traffic vehicles also have the potential for causing accidental spillages of oils and fuels, although volumes are likely to be minimal.

However, even in the absence of specific mitigation put in place, and discounting the fact that that the proposals will cause negligible differences in the overall volume of road tariff within Monaghan town, the same principles apply whereby a source-pathway-receptor model must exist between the development area and Natura 200 designations. As previously stated for the construction and demolition phases, there are no feasible source-pathway-receptor models existing between the site development area and Slieve Beagh SPA, which is the only Natura 2000 designation identified within 15km of the site.

When considering designations beyond the 15km radius of the site, Lough Neagh & Lough Beg SPA is the only designation that has the potential for a source-pathway-receptor model to exist, however this designation is more than 38km, and involves a minimum of three tributary segments, each with increasing flows before draining into Lough Neagh.

Given the minimal volumes of fuel or oils likely to be involved during the operational phase of the development, and based on the overall setback distance of more than 38km of rivers and tributaries, then it is considered that the development site has negligible potential to impact upon the Lough Neagh & Lough Beg SPA designations during smaller spillage events, both in terms of qualifying features and supporting habitats. It is also noted that the SPA designation is well beyond the possible influence from airbourne pollutants (such as NO_2, NO_x and PM_{10}) which are likely to be generated by the site, and no other indirect source-pathway-receptors linkages exist. However, impacts upon Lough Neagh & Lough Beg SPA as a result of larger petrochemical spillage events cannot be screened out during the operational phase, and any degradation of surface water quality could potentially damage supporting habitats of Qualifying Features which are associated with the SPA. Therefore, it is considered that appropriate mitigation and a NIS would be required for this phase.

In terms of protected sites such as NHA's and pNHA's which are not part of the Natura 2000 designation status, there are no established source-pathway-receptor linkages between the site development area and the identified NHA's and pNHA's designations. Therefore, impact upon these protected areas is not possible.

5.13 AA Screening - Cumulative Impact Effects

In terms of cumulative loading from existing or current planning applications, and committed development sites, a review was undertaken through the Monaghan County Council planning portal (last accessed 2nd September 2024) in order to identify applications which may have the potential to impact upon designations in cumulation with the development proposals.

The identified projects for the most part included minor amendments to existing properties, or involve projects which are unlikely to have in-combination effect with the proposed development. Known projects include the South Dublin Street and Backlands regeneration project, the Monaghan Town Active Travel Scheme, and the Civic Offices development scheme.

Based on the source-pathway-receptor models outlined within this report, and taking into consideration known schemes within Monaghan Town, it is concluded that the cumulative impacts in-combination with the development proposals are unlikely to increase the significance of effect beyond what the development proposes intend when considered in isolation.

6.0 SUMMARY OF AA SCREENING

Only one Natura 2000 site (Slieve Beagh SPA) was identified within 15km radius of the development area, however, no source-pathway-receptor model exists between the development area and Slieve Beagh SPA. Lough Beagh and Lough Neagh SPA was the only identified Natura 2000 designation beyond the 15km search radius that had any possible source-pathway-receptor model, due to the hydrological connection between the River Shambles and the Lough Neagh and Lough Beg SPA. However, there is a significant setback distance of more than 38km between the development area to the closest boundary of the SPA, involving a minimum of three tributary segments with each tributary increasing in flows before draining into Lough Neagh.

Following a review of the source-pathway-receptor model and site development proposals, it is considered that in the absence of specific mitigation measures, the demolition and enabling works, groundworks and excavation phases, and the construction and operational phases of the development may have the potential to impact upon the Lough Neagh and Lough Beg SPA during larger spillage events, and in the absence of suitable mitigation. Degradation of surface water quality could potentially damage supporting habitats of Qualifying Features which are associated with the SPA. In terms of protected sites such as NHA's and pNHA's, which are not part of the Natura 2000 designation status, there are no established source-pathway-receptor linkages between the site development area and the identified NHA's and pNHA's designations. Therefore, impacts upon the identified NHA's and pNHA's designations would not be possible.

On the basis of the information provided above, it is considered that impacts on surface water quality associated with the Lough Neagh and Lough Beg SPA cannot be screened out. Therefore, a Natura Impact Statement (NIS) would be required for this application, and as such, has been carried out within the following sections of this report.

7.0 NATURA IMPACT STATEMENT

The impact of a project or plan on the integrity of the Natura 2000 site, either alone or in combination with other projects or plans, is considered with respect to the conservation objectives of the site, and to the designations structure and function. On the basis of the AA Screening process, it was deemed necessary to carry out a Natura Impact Statement (NIS) which provides information that will aid the competent authority (in this case Monaghan County Council) in carrying out an Appropriate Assessment for the development proposals, and with respect to the identified Natura 2000 designations.

The Stage 1 Appropriate Assessment Screening concluded that there was potential for the Lough Neagh and Lough Beg SPA to be affected by the project during the enabling works, ground works and construction phase of the development, and also during the operational phase, due to the potential for sediment run off and/ or pollution from the site to enter local water bodies which feed into the SAC / SPA areas.

Therefore, the objective of the NIS is to outline the specific mitigation measures which would ensure that the integrity of the qualifying features and habitats of each respective designation is maintained, and to ensure that the conservation objections can be achieved with the development in place, but also in addition to the in-combination effects associated with other plans or projects.

7.1 Assessing Potential Significant Effects

When assessing the significance of effects on identified Natura 2000 sites, and to determine the level of mitigation required, the following elements are taken into consideration:

Direct and Indirect Impacts - An impact can be caused either as a direct or as an indirect consequence of a Plan/Project.

Magnitude - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.

Extent - The area over which the impact occurs – this should be predicted in a quantified manner.

Duration - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated; and
- Permanent: The effects would take 60+ years to be mitigated.

Likelihood – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted; and
- Extremely Unlikely: <5% chance as occurring as predicted.

Ecologically Significant Impact - An impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area.

Integrity of a Site - The coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

The EC Habitats and Bird Directives require the focus of the assessment at this stage to be on the integrity of the site as indicated by its Site-Specific Conservation Objectives (SSCO's). Generally, many SSCO's share the common aim to maintain, restore or improve the qualifying interests and features of the designation, and which set out specific objectives which need to be achieved for these sites. For each of the SSCOs, there are a series of attributes, measures and targets. This allows the assessment to focus upon the relationship between the targets of the SSCO and the results of implementing the proposed project, either alone, or in-combination with other committed plans or projects. If the two are in conflict, then there may be a risk of loss of integrity in the event that the SSCO target cannot be reached.

According to the EU Habitats Directive, conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, is stable or increasing.
- 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.
- 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

7.2 Types of Potential Effects

The assessment of potential impacts on identified Natura 2000 sites has been carried using the source-pathway-receptor model, meaning that a linkage must exist between the proposed plan or project, and the European destination. The types of effects that the proposed load diversion project can have on these designations is as follows:

- ***Loss/reduction of habitat area*** - habitat loss is caused where there is complete removal of a habitat type, for example as a result of land uptake directly within the designation;
- ***Habitat or species fragmentation*** - resulting from the incremental loss of small patches of habitat from within a larger designated site. Fragmentation can also result from impediments to the natural movements of species within a given designation. This is particularly relevant where important corridors for movement or migration are likely to be disrupted, such as along river corridors. Habitat degradation results in the diminishment of habitat quality and a loss of important habitat functions. It can arise from the introduction of invasive species, or from direct or indirect contamination or physical alteration of habitats resulting from the proposed plan or project;
- ***Disturbance to key species*** - disturbance to the species supported within the European designation is likely to increase where there is an increase in activity or noise levels from the proposed development. It is particularly important that known sensitive areas, such as those supporting breeding birds, otter, salmonids and otter feeding grounds are taken into consideration during the investigation or design stage of any proposal prior to the seeking of planning permission, where applicable;
- ***Reduction in species density*** – this relates to the influence that a project can have on the behaviours of species over time, and how the project can result in an increase or decrease in species population at any given period, or over a trendline; and
- ***Changes in key indicators of conservation value (water quality etc.)*** - alteration to water quality: This can be through direct or indirect contamination to surface water or groundwater resources, or to the chemical composition of water within the identified European designation. The hydrological connection to any European designation should be clearly understood in terms of impacts on water quality via point source or diffuse pollution on open water bodies (hydrology), or on subsurface (hydrogeological) pathways.

7.3 Impact Prediction

The AA Screening process identified only one Natura 2000 sites within a 15km radius of the proposed development area, which was screened out on the basis of being setback at a sufficient distance from the development area, but also due to there being no potential source-pathway-receptor framework being identified. In terms of predicted impacts on the Lough Neagh and Lough Beg SPA designation which is beyond the 15km radius, these have been reviewed using the type and significance of effects criteria which has been discussed within the preceding sections of this report and are summarised below in Table 5.

Table 5. Summary of impact prediction matrix for Lough Neagh and Lough Beg SPA

Type of effect	Magnitude	Extent	Likelihood	Duration	Ecologically Significant Impact	Integrity of a Site
Lough Neagh and Lough Beg SPA (UK9020091)						
Loss / reduction of habitat area	*Negligible*	*Negligible*	*Certain*	*N/A*	*None*	*Likely to be maintained*
Habitat or species fragmentation	*Negligible*	*Negligible*	*Certain*	*N/A*	*None*	*Likely to be maintained*
Disturbance to key species	*Low-medium*	*Limited to surface water dependant habitats associated with the River Shambles and subsequent downstream tributaries*	*Unlikely to occur (less than 50% chance)*	*Temporary*	*Negative impact on key vegetation species, and fish stock*	*Likely to be maintained with mitigation*
Reduction in species density	*Low-medium*	*Impacts upon surface water quality and supported habitats may reduce the QI species populations*	*Unlikely to occur (less than 50% chance)*	*Temporary*	*Negative impact on bird habitats and subsequent population densities*	*Likely to be maintained with mitigation*
Changes in key indicators	*Low-medium*	*Limited to surface water quality within the River Shambles and subsequent downstream tributaries*	*Unlikely to occur (less than 50% chance)*	*Temporary*	*Negative impact on water quality (surface water)*	*Likely to be maintained with mitigation*

8.0 MITIGATION MEASURES

8.1 Construction Environmental Management Plan (CEMP)

Mitigation refers to "*measures taken to avoid or reduce negative impacts and effects*", and are considered necessary to minimise any identified environmental impacts that may be associated with the proposed development. Avoiding and/or minimising negative impacts is best achieved through consideration of potential impacts of the proposed project from the initial stages, and should be incorporated into an overall Construction Environmental Management Plan (CEMP). The CEMP will take into consideration factors such as noise, surface water management, and waste management requirements throughout all stages of the development.

The CEMP should be developed as the primary document by which all other site-specific mitigation and environmental management should be detailed for the construction phase, and should be considered as a 'live' document throughout the entire construction phase. The CEMP will be developed prior to the commencement of construction, and will provide detailed information regarding the implementation of mitigation measures, what to do in the event of emergencies or accidental spillages, will be made available to the relevant regulatory bodies and contractors.

8.2 Construction Mitigation Measures

As previously outlined within this report, appropriate mitigation measures should be implemented throughout the enabling and ground works, and throughout the entire demolition and construction phases along with the operational phase of the proposed development. A summary of the required mitigation measures is outlined in Appendix 1.

9.0 RESIDUAL ADVERSE EFFECTS

Following the implementation of appropriate mitigation measures, it is anticipated that no residual adverse effects will occur, either directly or indirectly on any of the identified Natura 2000 designations, nor in isolation or in-combination with other plans or projects.

10.0 CONCLUSION OF NIS

The Appropriate Assessment Screening for the proposed Dublin Street North project concluded that there was potential for the Lough Neagh and Lough Beg SPA to be affected by the proposed project during the construction phase, if left unmitigated.

The risks to safeguarding the integrity of the qualifying interests of the Natura 2000 sites have been assessed, along with the respective conservation objectives specific to each site. Based on this information, a series of mitigation measures have been outlined within this Natura Impact Statement in order to address and reduce any potential impacts that the development may have on the Lough Neagh and Lough Beg SPA Natura 2000 designation.

It is therefore considered in light of the above objectives, that when the above mitigation measures are implemented, the project, individually or in combination with other plans and projects, will not have an adverse effect on the integrity of any of the European Sites listed above, in view of their conservation objectives and in view of best scientific knowledge.

It is therefore considered that the information presented within this NIS should enable the competent authority to carry out the Appropriate Assessment.

FIGURES

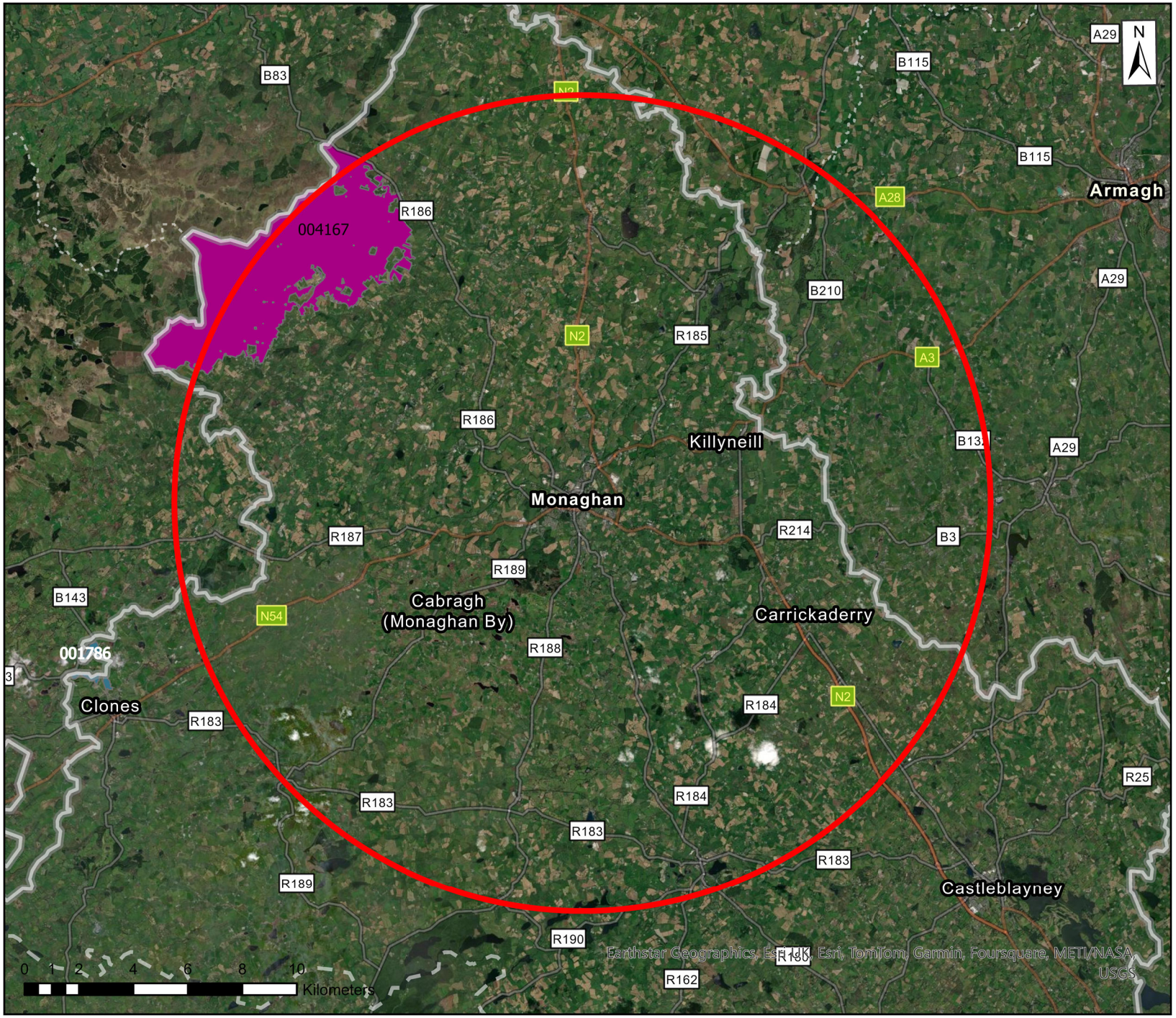


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Figure 2: Search Results for Natura 2000 Sites

Protected Designations
- 15km Search Radius
- SPA
- SAC

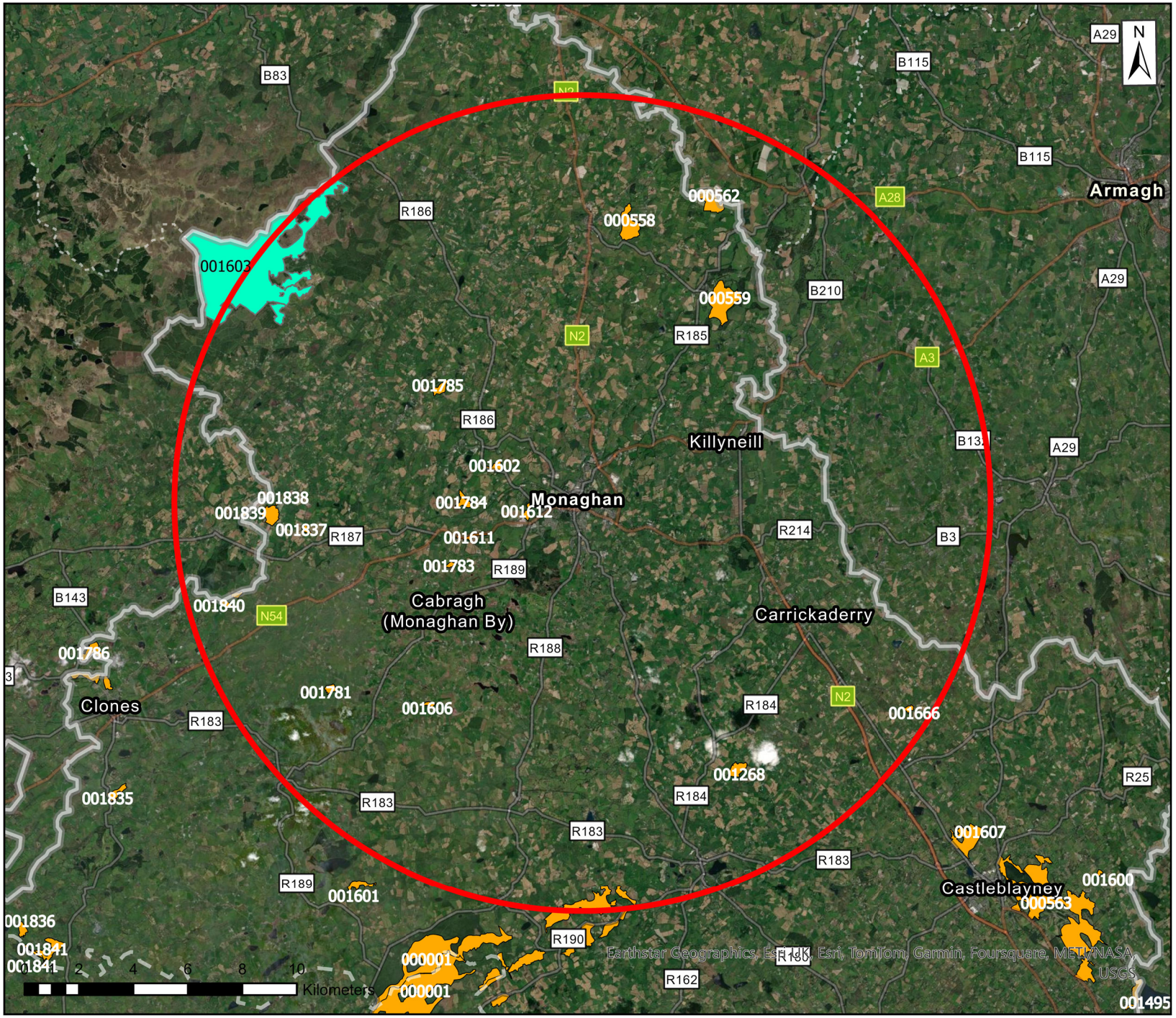

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Figure 3: Search Results for NHA & pNHA Designations

Protected Designations
- 15km Search Radius
- pNHA
- NHA

APPENDIX 1

Appendix 1. Specific Mitigation for Enabling, Demolition, Construction and Operational Phases

Type of Potential Effect	Phase / Source	Form of Mitigation
Loss/reduction of habitat area	Construction & Operational: direct removal of habitat	All identified European designations will remain intact, given that the development proposals do not intend to directly affect or remove lands within a designated site, and are unlikely to affect any supporting habitats directly. Indirect measures are considered further within the subsequent sections, along with the relevant mitigation measures.
Habitat or Species Fragmentation	Construction & Operational: direct removal of habitat (such as foraging route etc), or fragmentation of habitat	As with the previous section, it is intended that all identified European designations will remain intact, given that the development proposals do not intend to directly affect or remove lands within a designated site, and are unlikely to affect any supporting habitats directly. In terms of habitat or species fragmentation, although this is highly unlikely to occur as a result of indirect effects, mitigation to prevent impacts upon supporting habitats as a result of surface water quality is considered further below.
Disturbance to key species	Construction & Operational Activities	The closest European designation to the site is located more than 10km away, therefore there is no potential to disturb key species or Qualifying Interests. The closest Natural Heritage Area is located more that 1.75km away, therefore the same principle applies, with negligible potential for disturbance to key species. No further mitigation is required.
Change in Key Indicators: Surface Water Quality	Enabling Works & Demolition Phase	Prior to the construction phase, site vegetation and building structures must be cleared throughout lands to the rear of residential properties along Dublin Street North. Demolition requires the teardown of building components such as roof materials, electrical and plumbing (if present) and the removal of timber, steel, and stone or brickwork. Concrete floor slabs may be present, therefore limited hydraulic hammering may be required. Mitigation during the enabling and demolition phase should include: **Sediment Control** ➢ Prior to works commencing, sedimentation control measures should be put in place, to include silt fencing along the eastern edge of site, closest to the River Shambles, and in accordance with the mitigation drawings outlined within the CEMP; The location of silt fencing should be shown clearly within the CEMP and accompanying drawings; ➢ The silt fencing will consist of a geotextile filter fabric positioned along the contour of the site boundary. The geotextile fabric will be supported by vertical posts and anchored in the soil by establishing a shallow trench at the base of the fencing. The base of the geotextile fabric will line the shallow trench, i.e. turned upwards, and the excavated lose soil backfilled on the geotextile fabric; ➢ Materials and machinery will not be stored immediately adjacent to the silt fencing, which may cause the silt fencing not to function effectively. The silt fencing layout must allow for the movement of machinery within the site and ease of maintenance; ➢ Silt fencing should be monitored throughout the day in order to ensure that they are performing as required, and have not become clogged with sediment. The silt fence integrity will be inspected daily to ensure it intercepts surface water runoff within the site, captures sediment contained in surface water runoff and reduces velocity runoff. If defects in the fencing are observed, these will be repaired and/ or rectified immediately; ➢ Any soil, demolition materials or overburden storage areas should be marked out, and kept as far from the eastern boundary as possible; ➢ Excavated materials should be removed off-site as soon as possible, in order to prevent excessive suspended solids loading during rainfall periods and surface water runoff. In the event that stockpiled or excavated soil and demolition materials are to be kept overnight, then the materials should be covered by a tarpaulin (or equivalent covering) and surrounded by silt fencing, which should be installed according to manufacturers guidelines;

Type of Potential Effect	Phase / Source	Form of Mitigation
		➢ Whenever practically possible, site clearance or demolition works should not to be undertaken during wet conditions, when rainfall of more than 0.5 mm/hour is forecast within the next 24 hours; ➢ As soon as practically possible, any damaged or cut ground should be reinstated to reduce suspended solids loading during rainfall runoff; ➢ All site traffic should pass through a wheel wash and bath with tyre agitator before leaving the site, and plant equipment should be washed and maintained in accordance with the CEMP and ISMP measures. **Hydrocarbon / Contamination** Hydrocarbon use during the enabling and demolition phase may lead to potential pollution of waterways. Examples of potential threats include spillages during re-fuelling operations, leaks in poorly maintained plant and machinery equipment. In order to reduce or mitigated against accidental spillage of hydrocarbons or contamination, the following should be adhered to: ➢ Fuelling of machines will be carried out away from all watercourses, and fuelled at a safe location with all machines provided with spill kits. Vehicles being used to deliver fuels should be certified in accordance with relevant regulations and double bunded; ➢ Wherever possible, no fuels should to be stored on site; ➢ In the event that fuels are necessary to be stored onsite, then all fuels, lubricants and hydraulic fluids should be kept in secure bunded areas as far away from all watercourses as practically possible. The bunded area will accommodate 110% of the total capacity of the containers within it; ➢ All fuel or oil storage containers will be properly secured to prevent unauthorised access and misuse. ➢ An effective spillage procedure should be put in place. Site operatives should be provided emergency spill kits which should be stored on-site during the construction period at all times. Such kits should contain absorbent materials (such as absorbent granules, booms or mats). Operatives responsible for handling chemicals, fuels or oils, or for plant refuelling, should be trained in the use of this kit; ➢ Any waste oils or hydraulic fluids should be collected, stored in appropriate containers and disposed of off-site in an appropriate manner. ➢ Where appropriate, drip-trays should be used. Vehicles should never be left unattended during re-fuelling; ➢ All vehicles should be regularly maintained and checked to prevent hydrocarbon leaks; ➢ Where open gullies or channels have the potential to lead directly to open watercourses or drainage channels, then gully covers will be used in the roads in order to prevent surface water runoff; ➢ All stationary machinery such as generators should be placed on drip trays in order to collect and contain any hydrocarbon spillages. These trays should be checked regularly, and rainwater removed to maintain their effectiveness; ➢ Wherever possible, hydraulically operated machinery to be used within 50m of the river should utilize synthetic biodegradable hydraulic oil;
Change in Key Indicators: Surface Water Quality	Excavation and Construction Phases	The excavation and construction phases require significant volumes of materials to be excavated and exported from site, and also importing of materials to raise lands to the required levels. Therefore the excavation and construction phases should incorporate the following mitigation and control measures: **Sediment Control** ➢ Prior to works commencing, sedimentation control measures should be put in place (if removed following the enabling and demolition works), to include silt fencing along the eastern edge of site, closest to the River Shambles, and in accordance with the mitigation drawings outlined within the CEMP; The location of silt fencing should be shown clearly within the CEMP and accompanying drawings;

Type of Potential Effect	Phase / Source	Form of Mitigation
		➢ The silt fencing will consist of a geotextile filter fabric positioned along the contour of the site boundary. The geotextile fabric will be supported by vertical posts and anchored in the soil by establishing a shallow trench at the base of the fencing. The base of the geotextile fabric will line the shallow trench, i.e. turned upwards, and the excavated lose soil backfilled on the geotextile fabric; ➢ Materials and machinery will not be stored immediately adjacent to the silt fencing, which may cause the silt fencing not to function effectively. The silt fencing layout must allow for the movement of machinery within the site and ease of maintenance; ➢ Silt fencing should be monitored throughout the day in order to ensure that they are performing as required, and have not become clogged with sediment. The silt fence integrity will be inspected daily to ensure it intercepts surface water runoff within the site, captures sediment contained in surface water runoff and reduces velocity runoff. If defects in the fencing are observed, these will be repaired and/ or rectified immediately; ➢ Any soil, demolition materials or overburden storage areas should be marked out, and kept as far from the eastern boundary as possible; ➢ Excavated materials should be removed off-site as soon as possible, in order to prevent excessive suspended solids loading during rainfall periods and surface water runoff. In the event that stockpiled or excavated soil and demolition materials are to be kept overnight, then the materials should be covered by a tarpaulin (or equivalent covering) and surrounded by silt fencing, which should be installed according to manufacturers guidelines; ➢ Whenever practically possible, site clearance or demolition works should not to be undertaken during wet conditions, when rainfall of more than 0.5 mm/hour is forecast within the next 24 hours; ➢ As soon as practically possible, any damaged or cut ground should be reinstated to reduce suspended solids loading during rainfall runoff; ➢ All site traffic should pass through a wheel wash and bath with tyre agitator before leaving the site, and plant equipment should be washed and maintained in accordance with the CEMP and ISMP measures. **Hydrocarbon / Contamination** Hydrocarbon use during the enabling and demolition phase may lead to potential pollution of waterways. Examples of potential threats include spillages during re-fuelling operations, leaks in poorly maintained plant and machinery equipment. In order to reduce or mitigated against accidental spillage of hydrocarbons or contamination, the following should be adhered to: ➢ Fuelling of machines will be carried out away from all watercourses, and fuelled at a safe location with all machines provided with spill kits. Vehicles being used to deliver fuels should be certified in accordance with relevant regulations and double bunded; ➢ Wherever possible, no fuels should to be stored on site; ➢ In the event that fuels are necessary to be stored onsite, then all fuels, lubricants and hydraulic fluids should be kept in secure bunded areas as far away from all watercourses as practically possible. The bunded area will accommodate 110% of the total capacity of the containers within it; ➢ All fuel or oil storage containers will be properly secured to prevent unauthorised access and misuse. ➢ An effective spillage procedure should be put in place. Site operatives should be provided emergency spill kits which should be stored on-site during the construction period at all times. Such kits should contain absorbent materials (such as absorbent granules, booms or mats). Operatives responsible for handling chemicals, fuels or oils, or for plant refuelling, should be trained in the use of this kit; ➢ Any waste oils or hydraulic fluids should be collected, stored in appropriate containers and disposed of off-site in an appropriate manner. ➢ Where appropriate, drip-trays should be used. Vehicles should never be left unattended during re-fuelling; ➢ All vehicles should be regularly maintained and checked to prevent hydrocarbon leaks;

Type of Potential Effect	Phase / Source	Form of Mitigation
		➢ Where open gullies or channels have the potential to lead directly to open watercourses or drainage channels, then gully covers will be used in the roads in order to prevent surface water runoff; ➢ All stationary machinery such as generators should be placed on drip trays in order to collect and contain any hydrocarbon spillages. These trays should be checked regularly, and rainwater removed to maintain their effectiveness; ➢ Wherever possible, hydraulically operated machinery to be used within 50m of the river should utilize synthetic biodegradable hydraulic oil;
Change in Key Indicators: Surface Water Quality	Operational Phase	The operational phase of the development will result in road traffic usage throughout a significant portion of the site. As such, ongoing road traffic has the potential to cause accidental spillage of oils and fuels, and also limited siltation of surface water runoff from the site. Therefore, the operational phase should incorporate the following mitigation and control measures: **Sediment Control** ➢ All runoff from hardstanding areas and road surfaces should be directed towards a surface water drainage system; ➢ Road gullies should be designed to control surface water runoff, and direct stormwaters towards the local drainage network; ➢ The development proposals intend to install a new surface water drainage system which will connect the Russell Row with the existing drainage network at Old Cross Square. The drainage design will also include capacity for future surface water drainage systems associated with the development plots. Within this system it is intended to install a series of grit traps and service manholes at key locations in order to mitigate the risk of contaminants entering the existing surface water drainage network; ➢ The proposals intend to introduce rain gardens and planting schemes as part of the SuDS measures, which will further reduce the potential for silt laden surface water runoff from entering the drainage system; ➢ All drainage networks should be regularly cleaned and maintained in order to prevent excessive build up of sedimentation, and to ensure the system continues to operate as designed. **Hydrocarbon / Contamination** In order to reduce or mitigated against accidental spillage of hydrocarbons or contamination, the following should be adhered to: Petrol Interceptors /. ➢ All runoff from hardstanding areas and road surfaces should be directed towards a surface water drainage system; ➢ The development proposals intend to install a new surface water drainage system which will connect the Russell Row with the existing drainage network at Old Cross Square; ➢ Petrol / Oil interceptors will be installed at key locations within the development in order to mitigate the risk of petrochemical contaminants from entering the existing surface water and stormwater drainage networks; ➢ The drainage design will also include capacity for future surface water drainage systems associated with the development plots; ➢ All drainage networks should be regularly cleaned and maintained in order to prevent excessive build up of petrochemical contaminants, and to ensure the system continues to operate as designed.
General	Construction: General works & principles	➢ All construction works should be carried out in accordance with the Construction Environmental Management Plan (CEMP) or surface water management plans contained therein;

Type of Potential Effect	Phase / Source	Form of Mitigation
		➢ All construction staff will be informed of best practice methodologies to be employed on site via the dissemination of a tool-box talk. This shall include the requirement for protection of aquatic habitats and the sensitivity of the adjacent River Shambles and its connectivity to European sites; and ➢ There shall be no vehicular or personnel access to the channel of the River Shambles.
Spread of Invasive Species	Construction: General works & principles	➢ All construction works should be carried out in accordance with the Invasive Species Management Plan (ISMP) and mitigation or control measures contained therein.