



Project Number: P2970

**STAGE 1: APPROPRIATE ASSESSMENT
SCREENING AND STAGE 2: NATURA IMPACT
STATEMENT**

Cavan Regional Sports Campus

Client: McAdam Design

Issued: Feb 2024

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CONTENTS

SUMMARY	4
1.0 INTRODUCTION	5
1.1 Site Description	5
2.0 RATIONALE	7
2.1 Natura 2000	7
2.2 Stage 1: Screening for Appropriate Assessment	7
2.3 Stage 2: Appropriate Assessment and Natura Impact Statement	8
3.0 PROPOSED SITE FOR DEVELOPMENT APPLICATION REVIEW	9
3.1 Bridge Design	10
4.0 POLICY CONTEXT	10
4.1 County Development Plan	10
4.2 Recent Planning Permissions	12
5.0 METHODOLOGY	12
5.1 Identified Designations	13
6.0 SITE IDENTIFICATION AND SCREENING	13
6.1 Designated Sites Conservation Objectives	14
6.2 Screening Matrix	19
7.0 SCREENING MATRIX	23
7.1 Screening Conclusion	27
8.0 STAGE 2: APPROPRIATE ASSESSMENT AND NIS	28
8.1 Impact Statement	28
8.2 Design Stage Mitigation (Avoidance)	29
8.3 Construction Stage Mitigation	29
8.4 Operational Stage Mitigation	37
9.0 CONCLUSION	38
10.0 REFERENCES	39

FIGURES

Figure 1: Site Location 5
Figure 2: Site boundary 6
Figure 3: Distance between Site and Lough Oughter SAC/SPA 22
Figure 4: Cavan River bordering proposed development site and Breffni Park 40
Figure 5: Cavan River 40

TABLES

Table 1: Relevant County Development Plan objectives relating to Natura 2000 sites 10
Table 2: Relevant County Development Plan Policies relating to Natura 2000 sites 12
Table 3: Recent planning permissions within the vicinity over the last 5 years 12
Table 4: Designations within 15km of Site Location 13
Table 5: Lough Oughter SAC conservation objectives 17
Table 6: Lough Oughter SPA conservation objectives 18
Table 7: Stage 1 Test of Likely Significance (TOLS) Lough Oughter SAC & SPA 23

APPENDICES

- CFA Piling Vibrations
- Designated Sites Within Zone of Influence

SUMMARY

MCL Consulting Ltd (MCL) was appointed by McAdam to undertake an Appropriate Assessment on behalf of McAdam Design for Cavan County Council for the proposed development of a sports campus to be located on lands north, south and west of Royal School Cavan and west of Breffni Park GAA grounds, County Cavan.

The site is not located within any sites that are nationally or internationally designated for their nature conservation importance. However, the proposed development site is located approximately 3.69km south-east of the Lough Oughter SPA and Lough Oughter and Associated Loughs SAC. There are no Proposed Natural Heritage Areas within 15km of the site with the nearest designated Proposed Natural Heritage Areas, Lough Oughter and Associated Loughs pNHA and Drumkeen House Woodland pNHA, located approximately 3.69km north-west / west and 3.02km north respectively. However, due to the scale of the site, other development works either currently on-going or recently finished and historic species records identifying key species such as otters which are qualifying features for one of the close designated sites, it is considered that there is a risk of significant impact both direct and indirect due to hydrological links with the Cavan River and as such an appropriate screening assessment was required.

Detailed silt and pollution prevention mitigation measures are to be installed, including silt traps and onsite soakaways / SuDS, to ensure negligible impacts from the construction phase on water quality.

An ecological clerk of works will be present and supervising works in relation to potential presence of otter. Mitigation such as CFA piling to minimise disturbance and inclusion of mammal ledges on newly proposed bridges and sympathetic lighting schemes are proposed in order to minimise impacts to otter during construction and operational phases.

Operational Phase controls/mitigation – drainage systems and discharges to Cavan River (SuDS soakaways, infiltration trenches, flow attenuation measures, interceptors), lighting, connection to public foul sewer, compensation etc. Provided the detailed mitigation within this report is adhered to there are not considered to be any residual likely significant effects on the nearby designated sites.

1.0 INTRODUCTION

MCL Consulting Ltd (MCL) was appointed by McAdam on behalf of Cavan County Council to undertake an Appropriate Assessment and Natura Impact Statement for a proposed development of a sports campus to be located on lands north, south and west of Royal School Cavan and west of Breffni Park GAA grounds, County Cavan.

1.1 Site Description

The proposed project relates to circa 28ha situated to the Southwest of Cavan Town, located between Kingspan Breffni Park and the Royal School, Cavan. The site incorporates existing sporting facilities used by the Royal School for physical education; this including one shale gravel hockey pitch and adjoining soccer field. The remainder of the development lands are undeveloped. The site also includes lands to the southwest of Breffni Park. A site location map is presented in Figure 1.



Figure 1: Site Location



Figure 2: Site boundary

2.0 RATIONALE

2.1 Natura 2000

A 15km buffer zone of influence (Zol) has been chosen as a precautionary measure, to ensure that all potentially affected European Sites are included in the screening process, which is in line with Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG, 2009, rev. 2010).

Natura 2000 sites are those designated under the terms of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the ‘Habitats Directive’ and Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (codified version of Directive 79/409/EEC as amended) commonly known as the ‘Birds Directive’.

There are two types of Natura 2000 site designations, the Special Area of Conservation (SAC) and the Special Protection Area (SPA).

- Special Areas of Conservation (SACs) – sites designated for flora, fauna and habitats of Community interest under the EU Habitats Directive.
- Special Protection Areas (SPAs) – sites designated for rare, vulnerable or migratory birds under the EU Birds Directive.

2.2 Stage 1: Screening for Appropriate Assessment

Under the Habitats Directive 92/43/EEC Article 6(3) any plan or project that is not directly linked with the conservation of Natura 2000 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.

The Commission’s methodological guidance (EC, 2002) promotes a four-stage process to complete the AA 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 a further stage in the process is required.

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

1. whether a plan or project is directly connected to or necessary for the management of the site, and
2. 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.

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

2.3 Stage 2: Appropriate Assessment and Natura Impact Statement

This stage of the assessment considers the method and scope of the assessment and the potential impact on any Natura 2000 site which may be affected by the plan, either alone or in combination with other plans or programmes, as identified in the AA Screening stage. This information is obtained using data and information on the site and project presented in the form of a Natura Impact Statement (NIS).

Outcomes from Stage 2:

- No Natura 2000 site will be integrally affected by the plan; therefore, no further assessment is required or
- It cannot be certain that there will be no effect from the plan (precautionary principle); therefore, commence derogation steps of Article 6(4).

Stages 3 and 4 as outlined in Article 6(4) are unlikely to be relevant to this project. They provide methodology for further assessment in the case of uncertainty of impacts to designated sites as outlined above.

This report has been prepared in accordance with the European Commission guidance document Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive

92/43/EEC (EC, 2001) and the Department of the Environment's Guidance on the Appropriate Assessment of Plans and Projects in Ireland (Amended 2010).

3.0 PROPOSED SITE FOR DEVELOPMENT APPLICATION REVIEW

The development proposal includes an athletic track and football playing field with spectators stand at the northwest area of the site. Immediately north of the main school campus is to be an open sports pitch with a path that leads to the main Dublin Road to the Northeast. West of the main campus is a covered arena with associated accommodation and sports hall with vehicle parking. South of this covered arena is another open sports pitch with the main area of parking for the sports campus located east of this, south from the main campus building. At the southern end of the site there are a further 4 open sports pitches proposed with a GAA Centre of excellence structure located at the north side of these pitches and associated hard standing/car parking. The area west of the sports hall is to be a wildlife zone with habitat and artificial sett created for badgers identified as being present on site.

The development comprises the following components:-

- Indoor sports complex to include sports halls with spectator seating, fitness studios, changing facilities, reception, café and ancillary accommodation.
- 7 no. outdoor sports pitches.
- Covered sports arena with playing pitch, spectator seating and other ancillary accommodation.
- Ancillary sporting facilities include 8 lane athletics track and cricket practice nets.
- New vehicular access / junction and closure of Park Lane/Dublin vehicular junction, relocation of existing Breffni Park turnstiles to facilitate reconfiguration of Park Lane, bridge structure, internal roads, cycle/pedestrian paths, associated car/bus/cycle parking, electric charge points and streetlighting.
- Pedestrian access points of Kilnavarragh Lane and Dublin Road.
- Hard and soft landscaping including acoustic fencing, wildlife habitat area/corridors, artificial badger-sett, walking trails and other ancillary works such as spectator stands, retaining walls, fencing and ball stop fencing, team shelters, toilet block, floodlighting, signage, drainage infrastructure including attenuation tanks, SuDs and culverting of a

minor watercourse, storage space, ESB Substation, ancillary accommodation and all associated site works to accommodate the development.

3.1 Bridge Design

The proposed bridge is a single span integral reinforced concrete bridge, supported on piled foundations.

4.0 POLICY CONTEXT

4.1 County Development Plan

In the context of this proposal, we considered the policy in the County Development Plan. The County Cavan Development Plan, 2022-2028 aims to conserve and protect the counties natural heritage by implementing objectives and policies. Below shows the relevant policies and objectives relating to Natura 2000 sites and Appropriate assessments.

Table 1: Relevant County Development Plan objectives relating to Natura 2000 sites

Objectives
NHDS1: Protect and conserve Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas and proposed Natural Heritage Areas.
NHDS 2: Ensure an Appropriate Assessment is carried out in respect of any plan or project not directly connected with or necessary for the management of the site but likely to have a significant effect on the integrity of a European Site(s), either individually or in-combination with other plans or projects, in view of the site's conservation objectives.
NHDS3: Ensure that any plan or project that could have an adverse impact on a NHA, pNHA, SAC, SPA (either by themselves or in combination with other plans and projects) or upon the conservation objectives of the site or would result in the deterioration of any habitat or any species reliant on that habitat will be subject to the requirements of Article 6(3) and Article 6(4) of the Habitats Directive.
NHDS4: Ensure an Appropriate Assessment (AA) in accordance with Article 6(3) and Article 6(4) of the Habitats Directive, and in accordance with the Department of the Environment, Heritage and Local Government Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009 and relevant EPA and European Commission guidance documents, is carried out in respect of any Plan or Project likely to have significant effect on a Natura 2000 site(s), either individually or in combination.
NHDS5: Require an ecological appraisal for development not directly connected with or necessary to the management of Natura Sites, or a proposed Natura Site and which are likely to have

significant effects on that site either individually or cumulatively.

NHDS6: Support the development of a Strategic Habitat Map for the Cuilcagh Lakelands UNESCO Global Geopark in consultation with National Parks and Wildlife Service and relevant stakeholders.

NHDS7: Promote the maintenance and as appropriate, achievement of favourable conservation status of habitats and species and to improve the ecological coherence of the Natura 2000 network, by maintaining and where appropriate, developing features in the landscape which are of major importance for wild fauna and flora.

NHDS8: Ensure that new development proposals affecting designated sites have regard to the sensitivities identified in the SEA Environmental Report prepared in respect of this plan.

NHDS9: Have regard to the views of the National Parks and Wildlife Service in respect of proposed development where such development may have an impact on a designated National or European site or proposed site for designation.

NHDS10: Consult with National Parks and Wildlife Service (NPWS) in regard to any developments (those requiring planning permission and those not requiring planning permission) which the council proposes to carry out within pNHAs, NHAs, SACs, SACs, SPAs, SPAs and other important ecological sites.

NHDS11: Maintain the conservation value of Council owned land within NHAs and pNHAs and promote the conservation value of Council owned land adjoining NHAs.

NHDS12: Continue to undertake surveys and collect data that will assist Cavan County Council in building its knowledge base and meeting its obligations under Article 6 of the Habitat Directives.

NHDS 13: Projects giving rise to adverse effects on the integrity of European sites (cumulatively, directly or indirectly) arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall not be permitted except as provided for in Article 6(4) of the Habitats Directive, viz there must be: (a) no alternative solution available, (b) imperative reasons of overriding public interest for the plan to proceed; and (c) adequate compensatory measures in place.

NHDS 14: Contribute towards the protection and enhancement of biodiversity and ecological connectivity where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones.

Table 2: Relevant County Development Plan Policies relating to Natura 2000 sites

Policies
NHP 01: Protect conserve and enhance biodiversity, natural heritage, amenity and landscape in order to provide economic, social and well-being benefits for current and future generations of Cavan’s citizens and its visitors.

4.2 Recent Planning Permissions

Table 3: Recent planning permissions within the vicinity over the last 5 years

Reference number	Development proposal
21395 Cavan CoCo (2021)	For replacement windows to the front and rear elevations of the former kitchen block, together with all associated site works. These proposed works are in the curtilage of a Protected Structure Ref. NO 62 as part of the Cavan Town and Environs Development Plan 2017 - 2020
18204 (Cavan CoCo) (2018)	For new external lighting along existing avenue and student walkways, together with all associated site works. These proposed works are in the curtilage of a Protected Structure Ref. No. 62 as part of the Cavan Town & Environs Development Plan 2014-2020
19293 (Cavan CoCo) (2019)	To erect fully serviced single storey gym and all associated works
18233 (Cavan CoCo) (2018)	To retain works at residence as follows 1. Detached domestic garage to rear of dwelling, 2. Entrance position, 3. Front boundary wall position & amended site boundaries from previously permitted plans (PL. Reg. 8011557 relates)
17507 (2018)	To develop 2 No. training pitches, spectator stand, fencing, form new roadway and access bridge from existing carpark and also alterations to including widening existing access route and all associated works

5.0 METHODOLOGY

A full list of SACs and SPAs within 15km radius of the site, including their qualifying features, were collated with results presented in Table 4 and discussed subsequently. The information was obtained from National Parks and Wildlife Services (NPWS) Map Viewer

and GIS information, NPWS documentation and from the N2K network information portal. Ancillary information was also obtained through the Joint Nature Conservation Committee (JNCC) databases.

Wherever applicable, the associated conservation objectives have also been listed for the identified SACs and SPAs and are presented within Appendix I, along with the most recent condition assessment results.

5.1 Identified Designations

The results of the GIS mapping for all identified designations are presented in Figure 3 and are summarised in Table 4 below. In addition, a descriptive summary for each site has been paraphrased from the NIEA designated sites website.

Table 4: Designations within 15km of Site Location

Designation	Name	Distance	Summary of Features	Site zone of influence
Special Protection Areas	Lough Oughter SPA 004049	3.69km north- west / west by land	The Lough Oughter Complex SPA is of ornithological importance for its wintering waterbird populations. Of particular note is the internationally important population of Whooper Swan that is based in the area. The site also supports nationally important populations of a further two wintering species. Two of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan and Greenland White-fronted Goose. Lough Oughter is a Ramsar Convention site and a Wildfowl Sanctuary.	No Land take but hydrological links through the Cavan River
Special Area of Conservation	Lough Oughter And Associated Loughs SAC 000007	3.69km north- west / west by land	The Lough Oughter area contains important examples of two habitats listed on Annex I of the E.U. Habitats Directive and supports a population of the Annex II species, Otter. The site as a whole is the best inland example of a flooded drumlin landscape in Ireland and has many rich and varied biological communities. Nowhere else in the country does such an intimate mixture of land and water occur over a comparable area, and many of the species of wetland plants, some considered quite commonplace in Lough Oughter and its associated loughs, are infrequent elsewhere	No Land take but hydrological links through the Cavan River and extended territorial range of qualifying features for designated site (Eurasian Otter)

6.0 SITE IDENTIFICATION AND SCREENING

This section provides background information on the Natura 2000 sites which have been screened to require assessment and the underlying reasoning behind this.

Following a search of the NPWS GIS databases for protected and designated areas, it was found the application site is not located within any sites that are nationally or internationally designated for their nature conservation importance. However, the proposed development site is located approximately 3.69km south-east of the Lough Oughter SPA and Lough Oughter and Associated Loughs SAC. Other designations are at a far enough setback distance to not be of concern.

6.1 Designated Sites Conservation Objectives

The overall aim of the habitat's directive is to maintain or restore the favourable conservation status of habitats and species of community interest. SACs and SPAs are designated to afford protection to the most vulnerable of them. A site-specific conservation objective aims to define favourable conservation for a habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable

The favourable conservation status of a species is achieved when:

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

Lough Oughter SAC 000007

Distance: 3.69km north-west / west

Summary:

Lough Oughter and its associated loughs occupy much of the lowland drumlin belt in north and central Cavan between Upper Lough Erne, Killeshandra and Cavan town. The site is a maze of waterways, islands, small lakes and peninsulas including some 90 inter-drumlin lakes and 14 basins in the course of the Erne River. The area lies on Silurian and Ordovician strata with Carboniferous limestone immediately surrounding. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive:

- [3150] Natural Eutrophic Lakes
- [91D0] Bog Woodland (priority)
- [1355] Otter (*Lutra lutra*)

As well as the habitats and species listed above, the site also contains areas of dry woodland, marsh, reedbed and wet pasture. Drainage within the area is inefficient and the water levels are prone to natural fluctuation as a result. The regularly flooded areas still accommodate a variety of specialist plant species such as Amphibious Bistort (*Polygonum amphibium*) and Marsh Foxtail (*Alopecurus geniculatus*), as well as rarer species such as Needle Spike-rush (*Eleocharis acicularis*) and Lesser Marshwort (*Apium inundatum*). The lakes and basins are shallow, and the water well mixed and nutrient rich (eutrophic). The aquatic flora is varied with several pondweed species such as Bluntleaved Pondweed (*Potamogeton obtusifolius*), Shining Pondweed (*Potamogeton lucens*), Broad-leaved Pondweed (*Potamogeton natans*), Reddish Pondweed (*Potamogeton alpinus*) and Various-leaved Pondweed (*Potamogeton gramineus*). Typical in the zone of aquatic plants are Yellow Water-lily (*Nuphar lutea*), Canadian Pondweed (*Elodea canadensis*), Mare's-tail (*Hippuris vulgaris*), Water Milfoil (*Myriophyllum spicatum*), Brooklime (*Veronica beccabunga*), Water-dropwort species (*Oenanthe spp.*) and Waterstarwort (*Callitriche sp.*). The aquatic community includes species of limited distribution in Ireland such as the Duckweed species *Lemna gibba* and *Spirodela polyrhiza*.

Around much of the shoreline there are well developed swamp and marsh communities, typically with a zone of Common Club-rush (*Scirpus lacustris*) in front of a zone of Common Reed (*Phragmites australis*) which is in turn backed by a more species-rich zone of sedges,

grasses and herbs, particularly Bottle Sedge (*Carex rostrata*), Common Sedge (*Carex nigra*), Creeping Bent (*Agrostis stolonifera*), Meadowsweet (*Filipendula ulmaria*), Water Plantain (*Alisma plantago-aquatica*), Rough Horsetail (*Equisetum hyemale*), Water Horsetail (*Equisetum fluviatile*) and Wild Angelica (*Angelica sylvestris*). Less widespread species also occur on the wet lake margins; species such as Marsh Helleborine (*Epipactis palustris*), Water Dock (*Rumex hydrolapathum*), Greater Water-parsnip (*Sium latifolium*), Cowbane (*Cicuta virosa*), Tufted-sedge (*Carex elata*), Water Soldier (*Stratiotes aloides*), Arrowhead (*Sagittaria sagittifolia*), Flowering Rush (*Butomus umbellatus*) and Greater Spearwort (*Ranunculus lingua*) may be locally prominent.

The site supports a substantial population of water birds including internationally important numbers of Whooper Swan (average peak 231) and nationally important numbers of Tufted Duck (average peak 247) and Cormorant (average peak 130), as well as important numbers of species such as Greenland White-fronted Goose, Great Crested Grebe, Wigeon, Teal and Pochard. Lapwing, Snipe and Golden Plover also utilise the wet grassland areas. Wildfowl Sanctuaries exist at Inchin Lough, Derrygid Lough, Farnham Lough, Derrybrick Lough, Derrinishbeg Lough and Annagh Lough. Part of the site is designated a Special Protection Area (SPA) under the E.U. Birds Directive.

Otter, a species listed on Annex II of the E.U. Habitats Directive, occurs at the site. Irish Hare has also been recorded. Both of these species are listed in the Irish Red Data Book and are legally protected under the Wildlife Act, 1976.

The main threats to the quality of the site are water polluting activities (such as run-off from fertiliser and slurry application, and sewage discharge) which have raised the nutrient status of some lakes to hypertrophic.

The Lough Oughter area contains important examples of two habitats listed on Annex I of the E.U. Habitats Directive and supports a population of the Annex II species, Otter. The site as a whole is the best inland example of a flooded drumlin landscape in Ireland and has many rich and varied biological communities. Nowhere else in the country does such an intimate mixture of land and water occur over a comparable area, and many of the species of wetland plants, some considered quite commonplace in Lough Oughter and its associated loughs, are infrequent elsewhere.

Conservation Objectives:

Table 5: Lough Oughter SAC conservation objectives

Code	Qualifying Interest	Conservation Objectives
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	To restore the favourable conservation condition of Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation in Lough Oughter and Associated Loughs SAC
91D0	Bog Woodland*	To maintain the favourable conservation condition of Bog woodland* in Lough Oughter and Associated Loughs SAC
1355	Otter (Lutra lutra)	To maintain the favourable conservation condition of Otter (Lutra lutra) in Lough Oughter and Associated Loughs SAC

Lough Oughter SPA 004049

Distance: 3.69km north-west / west

Summary:

Lough Oughter and its associated loughs occupy much of the lowland drumlin belt in north and central Co. Cavan between Belturbet, Killashandra and Cavan town. This area comprises a maze of waterways, islands, small lakes and peninsulas. Lough Oughter, the largest lake in the site, is relatively shallow (maximum depth of 10 m) and considered to be a naturally eutrophic system. Its main inflowing rivers are the River Erne and the Annalee River, whilst the main outflow is the River Erne, which connects the lake to Upper Lough Erne and Lower Lough Erne to the north. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Crested Grebe, Whooper Swan, and Wigeon. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The Lough Oughter Complex is of importance for a range of wintering waterfowl. Of particular note is an internationally important population of Whooper Swan that is based in

the area and which uses the lakes as a roost. A population of Greenland White-fronted Goose of regional importance also roosts on the lakes and feeds mainly on agriculturally improved grassland nearby. The site supports nationally important wintering populations of two species, Great Crested Grebe and Wigeon. Other species which occur regularly include Mute Swan, Teal, Mallard, Pochard, Tufted Duck, Goldeneye, Lapwing, Curlew, Little Grebe, Cormorant and Black-headed Gull. A small colony of Common Tern also occurs at this site.

Lough Oughter is at the centre of the Irish breeding range of Great Crested Grebe and the site supports in excess of 10% of the estimated national breeding total of this species. The Lough Oughter Complex SPA is of ornithological importance for its wintering waterbird populations. Of particular note is the internationally important population of Whooper Swan that is based in the area. The site also supports nationally important populations of a further two wintering species. Two of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan and Greenland White-fronted Goose. Lough Oughter is a Ramsar Convention site and a Wildfowl Sanctuary.

Conservation Objectives:

Table 6: Lough Oughter SPA conservation objectives

Code	Qualifying Interest	Conservation Objectives
A999	Wetland and Waterbirds	To maintain or restore the favourable conservation condition of the wetland habitat at Lough Oughter Complex SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.
A050	Wigeon (<i>Anas penelope</i>)	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation interests for this SPA
A038	Whooper Swan (<i>Cygnus cygnus</i>)	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA

A005	Great Crested Grebe (<i>Podiceps cristatus</i>)	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
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Summary of Designations:

In summary, there are x2 designations located within ~15km proximity to the site, and include: Lough Oughter SAC and Lough Oughter SPA. Lough Oughter SAC and SPA have the potential to be affected through site runoff in the form of hydrocarbons, debris and silt as well as impacts on transient qualifying feature species. All other designations are located at a great enough setback distance to be unaffected by the development proposals; they do not impact upon them through habitat loss, degradation, or disturbance to any protected or priority species.

6.2 Screening Matrix

The proposed project may impact on **Lough Oughter SAC and SPA** through a hydrological pathway; therefore, a screening matrix has been applied to assess the following potential impacts of the proposal.

All other designations are located at a great enough setback distance to be unaffected by the development proposals. Their qualifying features will not be impacted through habitat loss, degradation, or disturbance to any protected or priority species. No source-pathway receptor mechanism can be identified for these sites.

Therefore, a screening matrix has been applied to this project to identify potential impacts on the qualifying features of Lough Oughter SAC and SPA.

6.2.1 Potential impacts

Lough Oughter SAC

Habitat loss - There will be no habitat loss from the SAC and no works will be undertaken within the designated site.

Habitat fragmentation - The proposal is located outside of the SAC (3.69km); therefore, the proposed works will not result in any fragmentation of habitat in the designations.

Hydrological Connection - The proposal is hydrologically connected to the designated site, there is the potential of site run off, debris and silt introduction to the water course, hydrocarbon spills and leaks if not properly managed.

Disturbance of Qualifying Features – potential for disturbance to qualifying features due to extended territorial ranges of Eurasian Otters and impacts to qualifying feature habitats down stream from potential risk of silt, debris and hydrocarbons due to hydrological links and from proposed lighting for the proposed developments lighting scheme on nearby Cavan River which is hydrologically linked to the designated site.

Air dispersal – Activities will not amount to any notable increase in dispersal of pollutants than already occurring.

Lough Oughter SPA

Habitat loss - There will be no habitat loss from the SAC and no works will be undertaken within the designated site.

Habitat fragmentation - The proposal is located outside of the SAC (3.69km); therefore, the proposed works will not result in any fragmentation of habitat in the designations.

Hydrological Connection - The proposal is hydrologically connected to the designated site, there is the potential of site run off, debris and silt introduction to the water course, hydrocarbon spills and leaks if not properly managed.

Disturbance of Qualifying Features – impacts to qualifying feature habitats downstream from potential risk of silt, debris and hydrocarbons due to hydrological links via the Cavan River which is hydrologically linked to the designated site which may impact on suitable habitat for bird species at the designated site. NB. Breeding bird surveys did not identify any of the qualifying species using the site for breeding, with a single passing Golden Plover recorded on one survey. Similarly, the site was screened out from impacts on wintering birds due to lack of suitable habitat.

Air dispersal – Activities will not amount to any notable increase in dispersal of pollutants than already occurring.

Distance and hydrological link are shown in Figure overleaf.



Figure 3: Distance between Site and Lough Oughter SAC/SPA

7.0 SCREENING MATRIX

The site hydrologically connected to Lough Oughter SAC & SPA via the Cavan River which borders and flows through the proposed development site. Qualifying features of both the SAC and SPA have extended territorial ranges or are not constrained by terrestrial barriers; records of these qualifying features such as Eurasian Otter have been recorded on the Cavan River less than 1 & 2km of the proposed development site and as such, a screening matrix has been applied to assess the following potential impacts of the proposed development.

Potential pathways:

- Potential surface runoff from the site, debris and silt introduction due to excavation and construction works to the Cavan River water course, hydrocarbon spills and leaks from plant, machinery and vehicle malfunctions causing degradation of overall environmental, ecological quality and qualifying habitat features of Lough Oughter SAC & SPA.
- Disturbance to qualifying features of designated sites such as Eurasian Otter through loss of extended foraging habitat, impacts to water quality of extended foraging habitat along the Cavan River and obstructions to free movement along water courses such as the Cavan River connected to the designated sites of Lough Oughter SAC & SPA.

The site is physically bordered by the Cavan River with a bridge proposed over it as part of the development. The Cavan River has a hydrological link to the Lough Oughter SAC and SPA (approx. 7km upstream from the proposed development site). Meaning that any potential runoff, hydrocarbon spills/leaks, silt or debris from site entering the river is extremely high. Qualifying features such as Eurasian Otter and waterfowl species have extended territorial and foraging ranges that may extend beyond the 7km aquatic or 3.69km terrestrial setback distance from the designated sites and as such may be subject to disturbances and impacts both directly and indirectly from site construction and operation.

Table 7: Stage 1 Test of Likely Significance (TOLS) Lough Oughter SAC & SPA

Description of project/development	To increase participation and interest in sport, to improve standards of performance and to develop sports facilities at national, regional, and local level through a Departmental policy
---	--

	and resource framework in partnership with its Agencies, other Government Departments and the National Governing Bodies of Sport by the creation of sports pitches and spectator stands with associated parking and lighting schemes.
Designated site(s)	Lough Oughter SAC & SPA
Description of likely impacts on designated sites	<ul style="list-style-type: none"> - Potential surface runoff from the site, debris and silt introduction due to excavation and construction works to the Cavan River water course, hydrocarbon spills and leaks from plant, machinery and vehicle malfunctions causing degradation of overall environmental, ecological quality and qualifying habitat features of Lough Oughter SAC & SPA. - Disturbance to qualifying features of designated sites such as Eurasian Otter through loss of extended foraging habitat, impacts to water quality of extended foraging habitat along the Cavan River and obstructions to free movement along water courses such as the Cavan River connected to the designated sites of Lough Oughter SAC & SPA.
Likely impacts (direct, indirect or secondary impacts) on the designations	
Size and scale	The site 18.5ha situated to the Southwest of Cavan Town, located between Kingspan Breffni Park and the Royal School, Cavan. Currently there are no construction or alterations relating to this proposal occurring, however, there are two other developments which are either currently ongoing or have recently completed construction within the curtilage of the proposed development site.
Land-take	The proposal does not require any land take from within the SAC or SPA.
Distance from designations or key features of site	The site is 3.69km away from the Lough Oughter SAC & SPA by land but is hydrologically connected to the designated sites via the Cavan River. Habitat features of the sites such as Natural eutrophic

	lakes with Magnopotamion or Hydrocharition – type vegetation, Bog Woodland and Wetland and Waterbirds are located 3.69km away from the proposed development site within the designated site boundaries. However, other qualifying features such as waterfowl and Eurasian Otter have extended territorial and foraging ranges which would potentially put them within the proposed development site, records of Eurasian Otter show Otter on the Cavan River within a few hundred meters of the site putting them at risk of immediate, direct impacts from the proposed development.
Resource requirements	The proposal does not require any resources from within the SAC/SPA.
Excavation requirements	The proposal does not require any excavation from within the SAC/SPA.
Transport requirements	All transportation requirements will be achieved using the existing public road network, however, due to the site's location on the banks of the Cavan River and its hydrological links to the SAC/SPA there is considered to be a risk of potential impacts from hydrocarbon spills and leaks from vehicle malfunctions due to surface run off.
Duration of construction	Yet to be decided
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site as a result of:	
Reduction of habitat	The proposal will not result in the reduction of habitat within the SAC/SPA or areas of supporting natural and semi-natural habitat will occur. Site is located on the outskirts of Cavan Town on the banks of the Cavan River.
Disturbance to key species	There is expected to be a potential risk of impacts to key species such as Eurasian Otter due to the transient nature of this species and utilizing extended foraging habitats along water courses.
Habitat fragmentation	No direct loss or fragmentation of habitats will be undertaken. However, due to hydrological links via the Cavan River introduction

	of silt, debris and hydrocarbons could cause degradation of the aquatic habitat downstream impacting on habitats located at the designated sites.
Reduction of species diversity	Construction of the development will not impact species diversity directly within the designated SAC/SPA, however, the transient nature of species such as Eurasian Otter and waterfowl species may cause direct impacts should they enter the vicinity of the proposed development site, the hydrological links to the SAC and SPA via the Cavan River, provide a direct route of potential impact downstream which could impact non-transient features such as habitat types causing degradation and thereby impacts species diversity.

The test of likely significance (TOLS) at stage 1 has indicated that the proposed development will not take place within the SAC or SPA and therefore will not create any direct impact to the sites themselves through land take or direct habitat loss. However, there is a significant risk from run off, debris/silt introduction and hydrocarbon leaks and spills from the proposed works during the construction stage due to the Cavan River bordering the proposed site and being hydrologically linked to the Lough Oughter SAC and SPA. Qualifying features of the SAC, such as Eurasian Otter, have extended foraging habitats and ranges (average around 18km) putting the proposed development site well within the range of these qualifying features as the SAC and SPA are only 3.69km away by land (approx. 7km along the Cavan River).

Records of Eurasian otter less than 1km from the site on the Cavan River were received. Otter surveys and camera monitoring of the Cavan River adjacent to the site were undertaken. Whilst the habitat was considered suitable, no holts (breeding or otherwise) were recorded. However, some presence indicators and one sighting of otter on camera trap footage was found during the otter survey carried out by MCL Consulting. Therefore, it was concluded that otters are likely using the site for foraging and commuting.

Other qualifying features for the SPA, for example species of waterfowl such as whooper swan, also have extended foraging ranges and are not confined by terrestrial barriers. Breeding bird surveys were undertaken, with no evidence of qualifying species' breeding or

foraging behaviour identified within the site. Wintering bird suitability was screened out due to the size and quality of the habitats present, and the likelihood of disturbance from the adjacent school grounds and existing GAA pitch further limiting suitability for resident wintering bird populations. Transient individuals of the qualifying species cannot be completely ruled out; but any potential impacts are not considered significant due to the results of the breeding bird surveys. As such, this has been screened out.

The hydrological link and connectivity between the proposed development site and the designated SAC and SPA creates a direct pathway for potential risks. There are also several other planning proposals which have occurred within the last 5 years, 2 of which are within the curtilage of the proposed development site. Cumulative effects from this are considered to create greater impacts of a more lasting nature when considered with the scale and scope of the proposed sports campus development. It is recommended that further assessment is required as the proposal still poses a risk of impact that cannot be fully negated for at this stage.

7.1 Screening Conclusion

In the absence of avoidance or mitigation measures, this development has potential to pose significant risk to qualifying features of the Natura 2000 designated sites identified. In particular, risks to qualifying habitat through contamination and to qualifying bird and otter populations through contamination of the habitat utilised by these species.

8.0 STAGE 2: APPROPRIATE ASSESSMENT AND NIS

8.1 Impact Statement

The main impacts are likely to be felt during the construction phase of works, with potential for pollution of the Cavan River, which is hydrologically linked to the designated site, as well as disturbance of qualifying species (otter). This may impact qualifying habitat directly through degradation, and qualifying species indirectly through a reduction in habitat quality. As such, a robust pollution prevention strategy is required regarding this risk.

Other potential impacts may include construction noise, visual and vibration disturbance to qualifying species such as otter.

In reference to qualifying species, there are some remaining risks from the operational phase of the development, which are to be mitigated primarily through site design.

Some risks of ongoing pollution during the operational phase through site runoff are also possible and will require mitigation.

8.2 Design Stage Mitigation (Avoidance)

A core strategy of the scheme is to avoid impacts through the design of the site. A riparian buffer zone of a minimum of 10m is proposed as part of the design, adjacent the Cavan River. This will incorporate a works exclusion zone during the construction phase, lessening the risk of silt/pollution run off into the water course as well as limiting disturbance to any riparian mammals.

Where a bridge is proposed spanning the Cavan River this has been designed to ensure that all piling works for construction are a minimum of 5m from the riverbank.

Proposals in this area incorporate providing a native, riparian planting mix which will be detailed in a subsequent Habitats Management Plan following planning approval. This habitat will lessen noise impacts on the riparian zone as well as intercepting and reducing nutrient and sediment runoff from the site and providing benefits such as riverbank stabilisation.

8.3 Construction Stage Mitigation

The key potential effects identified during the construction phase of the proposed development are direct and indirect disturbance to protected fauna, in addition to potential localised degradations to water quality.

A general mitigation measure is to employ an Ecological Clerk of Works (ECoW) on site during key parts of the construction phase. The ECoW will monitor all construction activities in the vicinity of the Cavan River and will monitor and ensure the implementation and effectiveness of mitigation measures. In addition, the river will be monitored in the vicinity of direct works within the river basin to ensure there is no disturbance to protected fauna (transient otter) and that reduction in water quality, is also avoided.

In the unlikely event of mitigation measures underperforming or failing, emergency measures will be implemented to prevent impacts to designated sites / features (e.g. spill kits, bunding) and all works will cease. This will be coordinated by the ECoW. This feedback loop will ensure mitigation is responsive to any unexpected issues that arise and therefore the construction phase of the proposed development will not adversely affect the integrity of the designated site concerned.

In order to mitigate potential impacts from water pollutants during the construction phase, all works associated with the construction of the proposed development will be undertaken with due regard to water quality protection. Mitigation measures to protect water quality have been incorporated into the outline Construction Environmental Management Plan (oCEMP) for the proposed development. These mitigation measures to protect water quality will be implemented and are summarised in sections below.

8.3.1 Otter specific mitigation measures

Full otter report is provided in the appendices.

Site design includes a minimum of 10 metres to be retained as a buffer between the proposed development and the surrounding water courses to reduce any potential impact.

It is also recommended that a surface water management plan be drafted and implemented to avoid potential impacts on the water courses and water quality. Consideration should also be given to otters concerning their use of the site's interior for foraging and fencing designs should facilitate free movement of otters to allow unrestricted passage throughout the site.

Bridge design is to incorporate a small culvert or small ledge structure be worked into the bridge landing areas to allow otters free land access across the areas where the bridge makes contact with the banks of the River Cavan. It is also recommended that exclusion fencing be installed around the perimeter of the halting area in order to prevent the otters from accessing the site during works in order to avoid accidental injury during construction.

8.3.2 Silt and Sediment Pollution

A detailed Outline Construction Environmental Management Plan has been prepared for construction works on-site. This will include measures such as:-

- Controlled Construction Compounds
- Biosecurity Measures to protect against Invasive Species Importation
- Drainage Management, no direct construction discharge to Cavan River
- Abundant use of Silt Fencing and Silt Traps

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- No on-site mixing of concrete
 - No on-site washing out of concrete lorries
 - Bunded fuel Storage
 - Controlled Refuelling Facilities at Construction Compound
 - Spill Kits
 - Plant Nappies
 - Biodegradable Lubricants
 - Minimisation of Fill / Materials Stockpiles
 - Safe Storage of Wastes and Chemicals
 - Designated skips according to waste type (recyclable/non-recyclable/biodegradable)

Silt barrier / silt curtains will be used to prevent site drainage from disturbed areas entering the Cavan River. This will be required in particular for bridge construction works, around cut-fill excavations, around piling works and between the construction area and the river. It is imperative that installation of the silt fences is undertaken correctly and this will be supervised by the construction manager and ECoW. The silt barrier / silt curtain will be shaped and installed so that it will catch runoff, without the water flowing underneath or around the edge. The silt barrier will be located downstream of the works and inspected on a regular basis including during and after rainfall events. Grips, sumps, straw bales and sediment traps will be installed to capture silt where applicable. Each of these will be maintained daily by the contractor to ensure that they remain effective and do not increase the likelihood of an incident occurring.

It is also recommended that a 50m buffer zone be implemented for watercourses applying to the construction compound, refuelling and oil/fuel storage and a 10m buffer for water courses applying to the stockpiling of materials and wastes. . An Environmental Monitoring Plan has been developed specifying a programme of environmental monitoring required for surface water, groundwater and dust during the construction phase.. Plant nappies and spill kits must be available and in working condition on site at all times with toolbox talks provided to ensure site staff are aware of potential risks and how to correctly use these response tools.

8.3.3 Vehicles and machinery pollutants

All refuelling, and washing of vehicles will take place in a designated containment area within the Construction Compounds at least 100m from the Cavan River

With regards to the vehicles and machinery used on site, a spill response plan should be in place, and all employees made aware of it to mitigate impacts of any potential spills or leaks should be in place. Plant nappies and spill kits must be available and in working condition on site at all times with toolbox talks provided to ensure site staff are aware of potential risks and how to correctly use these response tools.

All hydrocarbons, (oils, fuels, and lubricants etc), should be stored in lockable containers of up to 110% capacity to ensure there is a reduced risk of overflow spill and should be stored a minimum of 10m from any waterbodies and/or drains. If more than 200 litres of any oil type are to be stored on site, this must be stored in oil storage containers including drums and intermediate bulk containers (IBCs). If possible, biodegradable lubricants and biodegradable hydraulic oil must be used as these are less toxic than traditional synthetic oils but should still be stored in the same way.

Any solvent materials, such as sealants, coatings, adhesives or glazings can be very toxic to flora and fauna when exposed to the environment. As such, it is recommended that water-based or low-solvent products are used and stored in safe and secure containers. Where temporary diesel or petrol driven pumps are required, they should be located within bunded units.

All waste oils, empty oil containers and other hazardous waste products should be disposed of according to the requirements of the Waste Management Act 1996.

8.3.4 Concrete/cement pollution

All necessary care will be taken regarding the use of concrete on site. Any vehicles carrying this material will not be washed out on site. A bunded area more than 100m from the designated site boundaries will be arranged for the storage of these materials. Site preparation and construction will adhere to best practice and will conform to the publication "Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters".

8.3.5 Dust and Air Pollution

A full Dust Management Plan should be developed by the contractor based on the requirements of the oCEMP and implemented which will reduce impacts to a negligible level.

Dust and airborne pollutants may be produced throughout construction phase of this development. It should be ensured that an adequate supply of water is available on site for effective dust suppression with regular wetting of the site to reduce the potential risk of dried dust and debris from becoming airborne, especially during dry periods of weather.

Where earthworks will be leaving exposed soil for long periods, particularly in dry conditions measures such as use of Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable should be implemented.

Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport and implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

8.3.6 Biosecurity

To ensure biosecurity on site and reduce the spread of the invasive species and crayfish plague (*Aphanomyces astaci*) throughout the site and on to other sites the following measures are to be implemented:

Invasive Species (Plants and Bivalves) Construction Phase

- Before any piece of construction ‘machinery’ including crane or mobile machinery / plant, (excavators, rollers, dumpers, tele-handlers etc.) is delivered to the site, the Ecological Clerk of Works shall be provided documentation providing details of all sites close to or involving works in water that the machinery has been working on or stored on in the last 60 days.
- The Ecological Clerk of Works may consider the need for additional biosecurity measures, such as quarantining or pre-delivery disinfection, for any high risk machinery that has recently involved in in-river works.

-
- Biosecurity Process for machinery arriving or leaving the site during the construction phase with regard to invasive plant and invasive bivalve species is as follows:-

- On arrival at or departure from the site, **ALL** construction machinery and for delivery vehicles travelling within the site beyond the construction compound / delivery bay should be visually inspected and disinfected in the self-contained biosecurity washing area of the Construction Compounds.
- The disinfection process shall involve dosing of the exterior of the machinery with a diluted solution of 1% Vircon Aquatic solution or an approved alternative.
- The machinery should then be power-hosed with water of 60 °C + to remove disinfection solutions and any invasive species debris and any residual treated clams / eggs which may be present, followed by a final off-site visual inspection.
- The treatment and inspection of machinery shall be overseen and approved by a qualified ecological Clerk of Works, including verification records to confirm completion of the disinfection for each piece of machinery, including any replacement / standby units intended to be used on the project. Records shall be retained for inspection by the client's representatives.
- Sludge from the self-contained biosecurity facility shall be routinely (on at least a weekly basis) removed from the washing area and transferred to a water-tight covered skip for storage, awaiting off-site disposal to an appropriately licensed landfill site for deep burial.

Mitigation Measures Invasive Species (Plants only) Construction Phase

- The Ecological Clerk of Works shall be responsible for the monitoring of biosecurity onsite. These responsibilities include site management, restrict personal and movement to designated areas, restrict access to site, clean maintain PPE, equipment and plant machinery.
- Plant machinery will remain on site in restricted area until excavation, and replacement to the containment area have been completed.

-
- Plant machinery to be thoroughly cleaned down upon completion of works including tracks, tyres, buckets, trailers etc and material placed in the containment area.
 - PPE especially boots to be deep clean and any material placed in containment area.
 - Cleaning of Plant Machinery and PPE will be overseen and undertaken by onsite Invasive Species supervisor who will instruct if the plant and personal are safe to leave.

8.3.7 Disturbance (Otter)

The main threats to this species from the proposal are direct disturbance/displacement effects associated with noise emissions from construction activity, use of plant and human presence during the works and indirect disturbance/displacement of otter should the works lead to a reduction in water quality/alteration of habitat and/or prey availability. The otter survey carried out in the vicinity of the proposed area of works determined that otters are likely present in low numbers within the area of River Cavan in proximity to the site. Whilst occasional commuting otter were recorded on cameras there was no evidence of extensive otter presence identified, and no breeding holts were recorded and as such there is considered a limited risk to the status of this qualifying species. (refer to Appendices for otter survey summary report).

In order to reduce the noise and vibration disturbances during bridge construction, it is proposed that continuous flight auger (CFA) piling will be utilised. This method has been deemed much less impactful than standard percussive piling methods such as driven piling due to the current setback distance. Other piling within the site will be low vibration piling however this is situated beyond the zone of impact for otter. See Appendices for diagram illustrating a vibration contour graph for a 70t CFA piling rig. Based upon this diagram the proposed method of CFA piling is not expected to have lasting significant impacts on otters given that there are no holts identified within the works area, with commuting and foraging otters only being present.

A soft start approach will be implemented when the use and starting of heavy machinery is required. The soft-start methodology will be required every time machinery is started following a 30minute rest period. Once machinery is in full operation associated noise and vibration will keep fish outside of the area of influence allowing them time to leave the area of disturbance.

A works exclusion buffer will be in place for the majority of the construction phase (bridge construction excepted) and disturbance from construction noise is considered to be a temporary impact and is not considered to be a significant impact provided construction works are restricted to normal working hours. ECoW checks will be undertaken of the river working area prior to construction works for the bridge and any presence/evidence of otter within the works zone will be evaluated and works postponed until further assessment can be undertaken of risks to this species.

Indirect pollution impacts have been discussed in relevant sections above.

8.3.8 General Mitigation

All works will be carried out in accordance with best practice:

- Waste Management Act, 1996
- Guidelines for the Treatment of Otters during the Construction of National Road Schemes (NRA, 2006)
- Control of Water Pollution From Construction Sites (CIRIA C532)

In general, all construction works undertaken on this site should adhere to all relevant UK Guidance for Pollution Prevention (GPPs):

- PPG 1: General guide to the prevention of pollution;
- GPP 2: Above ground oil storage;
- GPP 5: Works and maintenance in or near water;
- GPP 8: Safe storage and disposal of used oils;
- PPG 18: Managing fire water and major spillages;
- GPP 21: Incident response planning;
- GPP 22: Dealing with spills; and
- GPP 26: Safe storage – drums and intermediate bulk containers

Management and protection measures for mammals should be implemented prior to works commencing on site, these include:

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- No excavations are to be left uncovered or without a means of egress (a sloped plank for example) overnight, as wildlife may fall in or enter in search of food and become trapped.
 - No buildings or storage units are to be left open overnight, as wildlife may enter and become trapped.
 - No poisonous or potentially harmful substances or materials are to be left unsecured overnight.
 - Fuelling of any machinery or the deposition of cement/concrete should not occur within 10m of any waterbody. All refuelling of mobile plant shall take place at the refuelling area within the Construction Compound.
 - Portable fuel bowers, stored at the Construction Compound shall be used to refuel any fixed plant (bridge cranes etc) with appropriate spill kit and drip tray controls in place for the refuelling.

If any priority species are discovered or any activity suggesting priority species have been disturbed during construction is observed, all work must cease immediately, and the ecologist should be notified as soon as possible to detail how to proceed.

A competent foreman will be nominated to ensure best practice is followed on site and to oversee all environmental monitoring.

8.4 Operational Stage Mitigation

8.4.1 Site Runoff

The construction of this development will involve control of drainage from surface runoff using Sustainable Urban Drainage Scheme (SUDS), with silt traps, silt fencing and soakaways deployed and no direct discharge to the Cavan River.

The development includes proposed vehicular roadways and car parks. There is therefore a perceived risk of runoff water from these areas potentially introducing pollutants and hydrocarbons into the Cavan River. A SUDS scheme has been developed, with the added protection of interceptors to create an environmentally safe drainage system to protect the nearby aquatic habitat from potential pollution through surface runoff. This scheme incorporate areas of permeable surfacing, infiltration trenches, flow attenuation controls and other measures which allow infiltration of runoff waters into the ground to minimise

runoff being generated. This proposed drainage system will operate under the influence of standard green field discharge rates and does not utilise a constant high flow discharge or pump system as it is designed to prevent surface flooding during rainfall events.. This system and discharge are not considered to impact upon the SAC due to the low discharge flow rates perceived for this type of drainage installation.

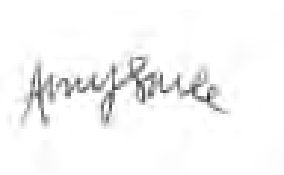
9.0 CONCLUSION

Stage 1 Screening and Stage 2 Appropriate Assessment for the proposed development have identified two designated sites, Lough Oughter SAC and SPA, with potential to be adversely affected primarily via pollution of the hydrologically connected River Cavan. The potential impacts on qualifying habitats and species were outlined as habitat degradation or loss and resulting decrease in population or breeding success of qualifying species.

As such mitigation measures were outlined and assessed, including sensitive site design, stringent biosecurity, pollution and sediment control measures for the construction and operational phases, disturbance mitigation measures, runoff management and a suitable SUDS scheme. This indicates that no contamination will be experienced in River Cavan, thus eliminating the perceived risk to the designated sites.

It is concluded that this proposed development will have negligible impacts on the qualifying habitats and species of Lough Oughter designated sites provided that the proposed mitigation measures as described in the EIAr are implemented.

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Reviewed By: -



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Senior Ecologist

10.0 REFERENCES

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FIGURES



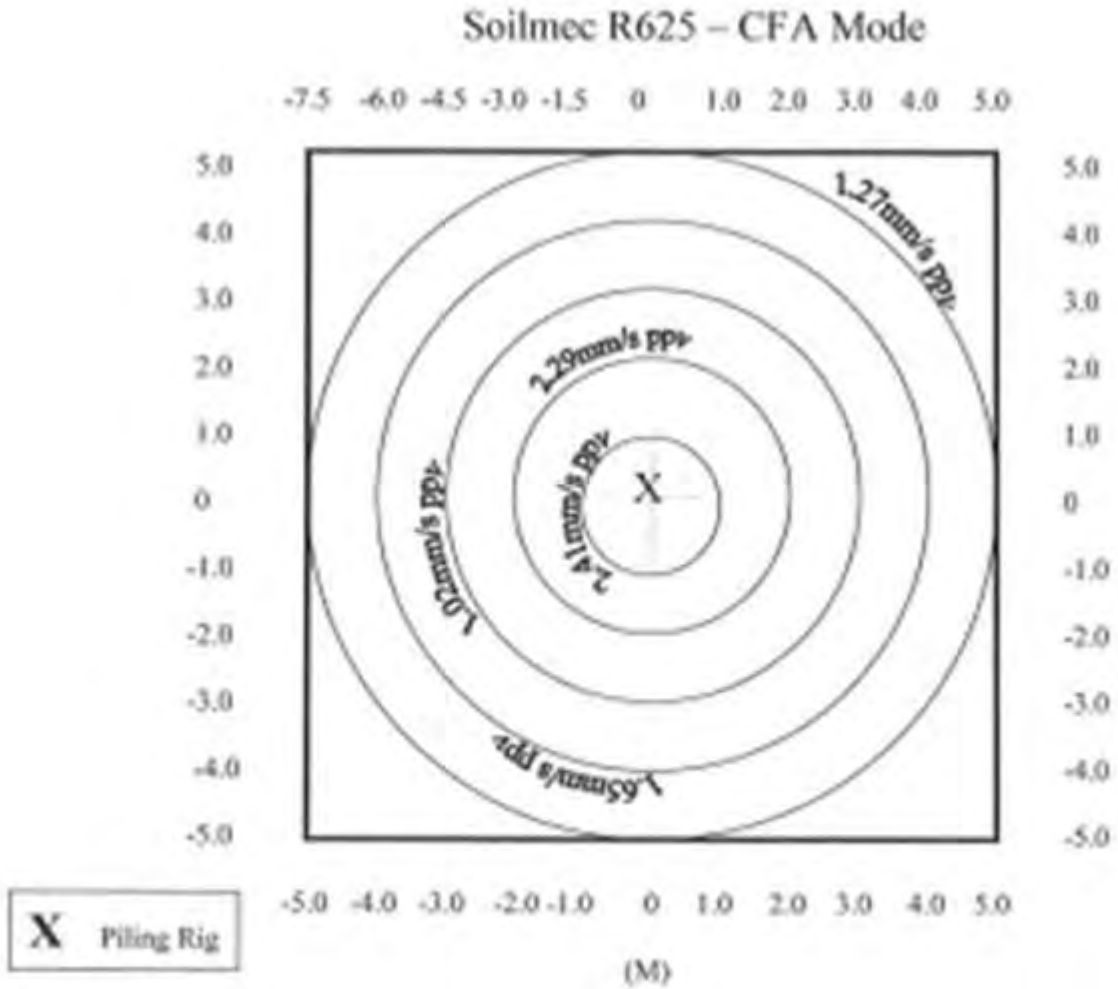
Figure 4: Cavan River bordering proposed development site and Breffni Park



Figure 5: Cavan River

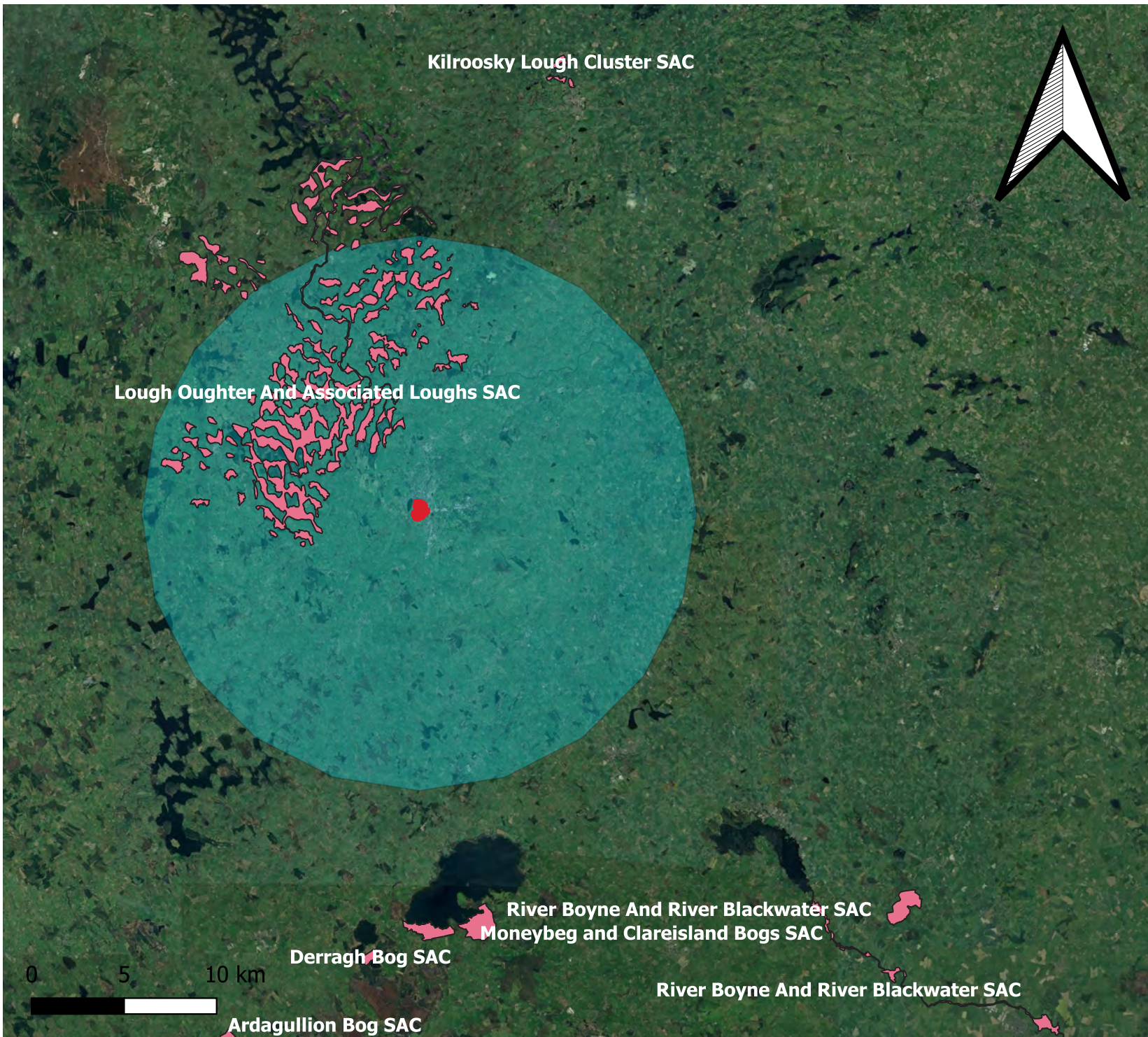
APPENDICES

CFA Piling Vibrations



DISTANCE FROM SOURCE	PEAK VIBRATION RECORDED (mm/s ppv)
1.0	2.41
2.0	2.29
3.0	1.02
4.0	1.65
5.0	1.27

Designated Sites Within Zone of Influence



Legend

- Red Line Boundary
- SAC_ITM_2023_05
- Buffered

Appendix II: SAC within 15km of site

Created by: Ryan Boyle

Reviewed by: Emily Taylor

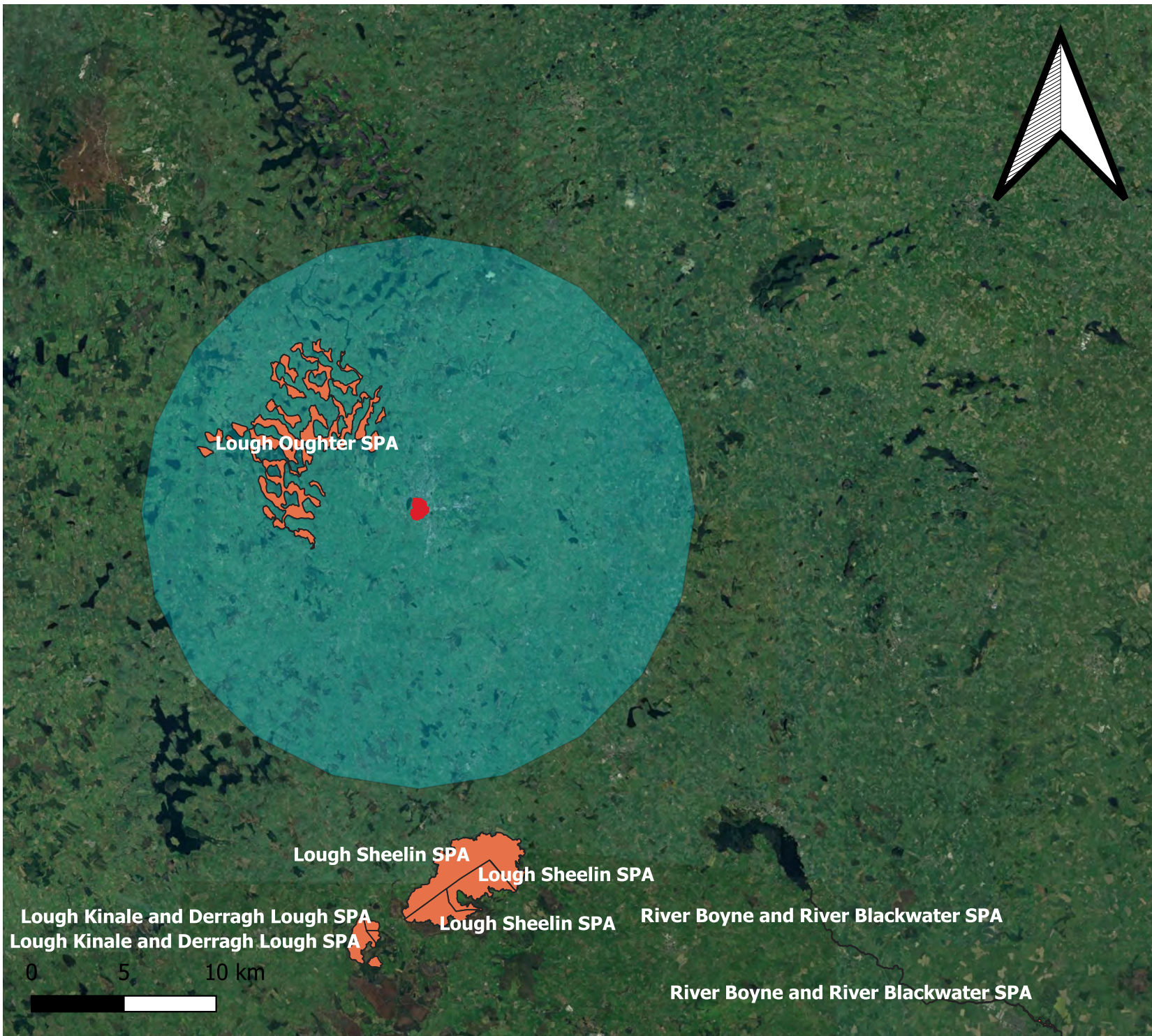
Client: McAdam Design

Scale: 1:285742 @ A3

Date: 22/05/2023



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Legend

- Red Line Boundary
- SAC_ITM_2023_05
- Buffered

Appendix III: SPA within 15km of
 site Created by: Ryan Boyle
 Reviewed by: Emily Taylor

Client: McAdam Design
 Scale: 1:285742 @ A3
 Date: 22/05/2023



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