Infill Housing Development, St. Patrick's Park development, Rathangan, Co. Kildare

Development
Infill Housing Development, St. Patrick's Park Rathangan, Co. Kildare
Screening Report for Habitats Appropriate Assessment

on behalf of Kildare County Council

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1.0 Introduction

Kildare County Council is proposing to develop an Infill Housing Development, at St. Patrick's Park, Kildare Road, Rathangan. The project at St Patricks Park involves the demolition of 15 No residential units, refurbishment of 26 No Vacant Units, 7 new housing units, creation of new green space at the location of demolished units which will include extensive landscaping and recreational areas, additional roads and car parking, part rerouting of drainage/utilities, other ancillary site works and an upgrade to the grey water drainage system.

Pursuant to proper planning and development Kildare County Council in the Rathangan Local Area Plan 2016-2022 Policy GIO 2: makes sure that particular attention should be given to the requirement for Appropriate Assessment Screening where necessary ensures all proposals/projects are screened to avoid significant impacts on Natura 2000 sites in accordance with Article 6 of the Habitats Directive.

The purpose of this assessment is to determine, the appropriateness, or otherwise, of the proposed project in the context of the conservation objectives of sites which are protected for their natural habitats and species under European legislation, termed Natura 2000 sites.

2.0 Process

Ireland became a signatory to the EU Birds Directive in 1979 and the Habitats Directive in 1992. Arising from this legislation was the obligation to establish the Natura 2000 network: nominated sites of highest biodiversity importance for rare and threatened habitats and species across the EU. In Ireland, the Natura 2000 network of European sites comprises Special Areas of Conservation (SACs, including candidate SACs), and Special Protection Areas (SPAs, including proposed SPAs).

SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the protection of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the qualifying interests of the sites; from these the conservation objectives of the site are derived.

The requirements for an Appropriate Assessments (AA) are fully set out in the EU Habitats Directive 92/43/EEC. Articles 6(3) and 6(4) of this Directive state:

> 6.3. 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.
>
> 6.4. 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 a site that is impacted upon by a proposed development 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.

The Department of the Environment, Heritage and Local Government (DoEHLG) issued guidance on Appropriate Assessment (*Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*) in December 2009 which provided advice on the information required in an Appropriate Assessment. Guidance from DoEHLG published in February 2010 stated that it is the responsibility of the competent authority (or consent authority) to undertake the Appropriate Assessment. The assessments may be based on information 2022 submitted by the proponent of the plan or project, in the form of a Natura Impact Statement. This Natura Impact Statement must be prepared by an ecological specialist with input from other relevant disciplines as required experts, e.g. engineers, planning specialists, hydrologists.

This screening assessment has been prepared in accordance with the current guidance (NPWS, 2009, Revised February 2010).

3.0 Stages of the Appropriate Assessment

This document has been prepared in accordance with the European Commission Environment DG document "Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC", referred to as the "EC Article 6 Guidance Document". The guidance document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and (4) of the Habitats Directive, and is viewed as an interpretation of the EU Commission's document "Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC", referred to as "MN2000". In addition, "Appropriate Assessment Guidance for Planning Authorities" was published by the Department of the Environment, Heritage and Local Government in December 2009 (DEHLG, 2009) and amended in March 2010. Cognisance has been taken of this document in carrying out this screening assessment.

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. In the first instance, the plan should aim to avoid any negative impacts on European sites by identifying possible impacts early in the plan-making, and writing the plan in order to avoid such impacts. Following that, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the plan is still likely to result in adverse effects, and no further practicable mitigation is possible, then it is rejected. If no alternative solutions are identified and the plan is required for imperative reasons of overriding public interest (IROPI test) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

Screening Phase

This section of the screening process describes the Natura 2000 sites within a 15km radius of infill housing development at St. Patrick's Park, Rathangan A 15km buffer zone has been chosen as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process. This is in line with "Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities", produced by the Department of the Environment, Heritage and Local Government.

The integrity of a Natura 2000 site (referred to in Article 6.3 of the EU Habitats Directive) is determined based on the conservation status of the qualifying features of the SAC. The qualifying features for each site have been obtained through a review of online documentation relating to each Natura 2000 site available from the NPWS.

There is a European site located 7 km from the proposed development site in Rathangan located at St. Patrick's Park Rathangan, the River Barrow and River Nore SAC. Table 1 lists the Natura 2000 sites within *circa* 15km of the proposed, housing development and ancillary works at St. Patrick's Park Rathangan.

4.1 Description of the Project and whether is it required for proper management of an European Site

The project as outlined is not required for the proper management of a European Site i.e an SAC or SPA site.

The project at St Patricks Park, involves the demolition of 15 No residential units, refurbishment of 26 No Vacant Units, 7 new housing units, creation of new green space at the location of demolished units which will include extensive landscaping and recreational areas, additional roads and car parking, part rerouting of drainage/utilities, other ancillary site works and an upgrade to the grey water drainage system.

Site location map is included as Appendix 2.

The design of the proposed development takes into account best environmental engineering design to ensure least impact to the environment.

Please see attached latest civil drawings for the site.

The overall site is currently drained into an existing ditch approximately 200m to the south. There is an existing attenuation tank system at the south-east of the site which attenuates the flow during storm events. The existing system is under sized. It is proposed to add 8 tree pits and a new attenuation tank system to add the required capacity. The tree pits will be located adjacent to the car parking areas. The tree pit design is as per the "grey to green" surface water treatment philosophy.

Construction of foundations of pathways, and fencing structures will not exceed 500mm in depth.

Landscaping will only use clean uncontaminated topsoils or topsoils excavated from within the site.

Planting schemes will not include any known invasive alien species as defined by Invasive Species Ireland.

All waste generated from the demolition will be removed from the site to a licenced disposal site and any waste containing asbestos material will be disposed of in accordance with the proper management of this material and conveyed by a liscenced contractor to a designated disposal site.

General Site Construction Environmental Measures Consistent with Best Practice, Standards, Design and Controls

The developer will outline a Construction Environmental Management Plan in consultation with the competent authority Kildare Co. Council for the development which will describe the methodology to be used on site to ensure best environmental management of the site including maintenance of site water quality, avoidance of potential run-off occur on site and the protection of flora and fauna. The CEMP will informed by the best practice guidelines as outlined in this section of the screening statement.

Best Quality Environmental Management of Site

No machinery will operate in-stream in drainage ditches or watercourses.

The Wildlife Act (1976) and the Wildlife Amendment Act 2000 states that the removal of hedgerows or marginal vegetation should not occur from 1st of March through August 31st.

The proposed development will not occur outside the existing boundary of the St. Patrick's Park Estate i.e, tree line, hedgerows and boundaries will be maintained.

Limiting Silt or Fines run-off During Construction

Silt deposition to the drainage ditch to the south of the site is of potential concern as a result of on site disturbance to land adjacent. Such release of silt into the drainage system may impact water quality and spawning beds down stream and all effort must be made to prevent such an eventuality. It is therefore very important to keep any potential silt or fines losses from the site to a minimum, during construction, see details below.

Oil spill from machinery during construction is also a concern which must be designed out, see details below

Environmental Measures to minimise impact of Construction and use of Machinery on Site

The following measures are critical for preserving water quality and aquatic habitats.

1. Fuels, oils, greases and hydraulic fluids must be stored in bunded compounds well away from the watercourse or off site. Refuelling of machinery, etc., should be carried out in bunded areas or off site.

2. Runoff from the above should only be routed to the watercourse via suitably designed and sited settlement ponds/filter channels.

3. Settlement ponds should be inspected and maintained regularly.

4. Watercourse banks will be left intact.

5. The natural riparian treelines and scrub vegetation which are adjacent to the river must be retained at the site and maintained as portion of the development area managed for biodiversity (see site Landscape Plan Map). This will provide a natural buffer to run-off of fines from the site.

6. Drainage of site should utilise old existing drains on the site where possible.

7. Sediment/silt traps are to be located at appropriate locations of the site to deal with any potential run-off from plantation process.

8. All drainage and sediment/silt traps should be in place before any site works occur.

Isolation of works area

Where engineering works are carried out near the banks of watercourses it is often necessary to isolate the works area, in particular in areas where concrete is being poured. Isolation of the works area reduces the risk of sediment entering the water-course.

If temporary works in or on the banks of watercourses are unavoidable, a method that causes the least disturbance to the water is chosen.

Contaminated water can arise from a number of sources including:

- direct disturbance of the watercourse bank;
- run-off from exposed ground and material stockpiles
- run-off from roads and haul routes ;
- plant washings;
- fuel and chemical storage/refuelling areas;

The risk of water becoming polluted in the first place in this area should be minimised by,

No direct disturbance of watercourse bank

Minimising run-off

No plant washings on site

No chemical or fuel storage will be carried out on site.

Around the works area a bund should be constructed to prevent any adverse leakage

Bunds.

These can be placed around exposed soils and any excavations/material tockpiles. This will prevent clean water entering the area and dirty water from leaving the area. Bunds should be made of non-erodible material such as straw bales/geotextiles or sand bags.

MINIMISE erosion of exposed soils

The most obvious way to minimise erosion is to minimise the amount of soil exposed.

All works will be carried out on site in suitably dry weather conditions.

Design measures to prevent any pollution of adjacent water-course post construction

The proposed housing units will be linked to the existing foul water system and hence to the Rathangan Waste Water Treatment Plant. The proposed development is within the loading capacity of the Rathangan Waste Water Treatment Plant.

Impact to the physico-chemical quality of the water is expected to be minimal once construction is complete as all sewage water from the site will be treated to tertiary level and is within the load capacity of the Rathangan WWTP.

A full infiltration system will be incorporated into the design of the buildings and associated pathways. The overall site is currently drained into an existing ditch approximately 200m to the south. There is an existing attenuation tank system at the south-east of the site which attenuates the flow during storm events. The existing system is under sized. It is proposed to add 8 tree pits and a new attenuation tank system to add the required capacity. The tree pits will be located adjacent to the car parking areas. The tree pit design is as per the "grey to green" surface water treatment philosophy. This will improve the Water Quality of the grey water leaving the site.

5.0 Sources for Information on Natura 2000 sites to Inform Screening Process

5.1 Nature Conservation Sites and Available Information

Data and information about European sites, and other nature conservation sites, were acquired from www.npws.ie. This includes site boundaries, site synopses, lists of qualifying interests (SACs) and special conservation interests (SPAs), and conservation objectives (European sites).

European sites have site specific conservation objectives, and the associated supporting documents were sourced from the NPWS website.

- National Biodiversity Data Centre.
- EISs, NISs and other reports for projects in the general area, including previous Natura 2000 Screening Reports in Rathangan area and Rathangan Green Infrastructure Report held by Kildare County Council.
- Kildare County Development Plan.
- Rathangan Green Infrastructure Report Kildare County Council
- Rathangan Local Area Plan Kildare County Council
- Geological Survey of Ireland Website

- **REFERENCES**

- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, 2009.
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission Environment DG, 2000.
- Fossitt, J. A. (2000) A Guide to the Habitats of Ireland. The Heritage Council, Ireland.
- Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC: European Commission, 2000

6.0 Features of the Development that Could Impact on Natura 2000 Sites

6.1 Brief Description of the Natura 2000 Sites

6.2 Relevant SACs Descriptions and Potential Impact

Pollardstown Fen SAC

Pollardstown Fen SAC is located *circa* 9.5km from the proposed St. Patrick's Park development in Rathangan. Pollardstown Fen SAC is a ground water dependent

ecosystem and disruption to site hydrology is understood to be the most significant threat to this site. However, there is no direct groundwater hydrological link between the site of the proposed St. Patrick's Park Development and the SAC due to the significant distance, sub-surface topography and surface geomorpholgy isolating the sites from one another. Therefore it is envisaged there will be no hydrological disruption to the integrity of the SACs or the habitats or species for which they are designated and no significant impacts to habitats or species likely to occur as a result of the proposed development. There will be no direct loss of habitat or species due to site works located at such a significant distance form this site.

Mouds Bog SAC

Mouds Bog SAC is located approximately 9.5km to the east of the proposed development site. Rathangan is located in the Barrow River Catchment, drained by the Slate River which is a tributary of the Figile River and ultimately a tributary of the Barrow River. The majority of Mouds Bog SAC is in the Liffey River Catchment. Therefore there is no hydrological connection to the Rathangan site which is in the Barrow River Catchment and therefore there is no direct catchment connectivity from this site to the proposed development site. Mouds Bog SAC is a ground water dependent ecosystem and due to the significant distance sub-surface topography and surface geomorpholgy isolating the sites from one another any potential development in Rathangan is highly unlikely to impact on the groundwater regime of Mouds Bog SAC and therefore will not impact on the integrity of the SACs or the habitats for which they are designated. There will be no direct loss of habitat or species due to site works located at such a significant distance form this site.

Ballynafagh Lake SAC

Ballynafagh Lake is located, *circa* 15km from the proposed development site. It is a shallow alkaline lake with some emergent vegetation. The Blackwood Feeder, which connects Ballynafagh Lake to the Grand Canal, is also included in the site. Ballynafagh Bog SAC and Ballynafagh Lake SAC are all located up stream of Rathangan, and so have no direct catchment connectivity to the Rathangan area. Any potential development in Rathangan is highly unlikely to impact on the surface water or groundwater regime of these SACs and therefore will not impact on the integrity of the SACs or the habitats and species forwhich they are designated. There will be no direct loss of habitat or species due to site works located at such a significant distance form this site.

Ballynafagh Bog SAC

This site is a raised bog situated about *circa* 15km from the proposed development site. The area is directly underlain by muddy, fossiliferous limestones, interbedded with calcareous shales. The subsoils are predominantly clay-rich tills. All are of low permeability. The site comprises a relatively small core of uncut high bog (approx. 70 ha), which is surrounded by a more extensive area of cutover bog (approx. 90 ha). The high bog area can be divided into a wet core of active bog which covers an area of 23 ha, surrounded by approximately 44 ha of degraded raised bog which is experiencing drying-out at present.

There is no direct catchment connectivity from this site to the proposed development site. Ballynafagh Bog SAC is a ground water dependent ecosystem but due to the significant distance sub-surface topography and surface geomorpholgy isolating the sites from one another any potential development in Rathangan is highly unlikely to impact on the groundwater regime of Ballynafagh Bog SAC and therefore will not impact on the integrity of the SACs or the habitats

for which they are designated. There will be no direct loss of habitat or species due to site works located at such a significant distance form this site.

The Long Derries, Edenderry SAC

The long Derries is an orchid rich grassland site on ridge of glacial esker gravel and tills which has no direct ecological or hydrological link to the proposed development area in Rathangan and is located at a remove of 9 kilometers from the site. The development works on the proposed development site will not impact on the integrity of the SACs or the habitats for which they are designated. There will be no direct loss of habitat or species due to site works located at such a significant distance form this site.

River Barrow and River Nore SAC

The area of the proposed development lies within the catchment of the Slate River in Rathangan which is a tributary of the Figile Riiver which is ultimately a tributary of the River Barrow therefore the possibility of impact to the River Barrow and Nore SAC is discussed in more detail in the following sections below.

Receiving Environment-Terrestrial Habitats

The site at present predominantly supports a housing estate development associated roads and managed amenity grassland habitat and boundary walls and vegetation.

The site is delineated by roads, hedgerow/treelines and concrete walls, which form the boundaries of the residential estate St. Patrick's Park, Rathangan.

The Park area is not part of any designated conservation area. No habitats at the study area conform to those listed under Annex I of the EU Habitats Directive, and no species of flora which is rare or protected in Ireland (i.e. listed in the Flora Protection Order 2015 or the Irish Red data list) was noted or has been previously recorded in this area.

The ecological value of the site was assessed for the most part as low and moderate local value, i.e. comprised principally of modified habitats with low species diversity and low wildlife value with some areas of the Park containing some semi-natural habitat or habitat of higher local importance for wildlife.

The proposed St. Patrick's Park Park Housing Development is located at least 7 kilometres from nearest SAC.

Site visits were carried out in May and June 2022.

The habitats of the site have been recorded as part of the overall assessment of the site habitat follows (Fossitt 2000).

Annexed Habitats

Annexed habitats do not occur in the area of proposed works.

Table 1. Natura 2000 sites within 15km of Proposed Disused stone structure House Redevelopment.

Site Name (code)	Qualifying Interests Habitats and Species	Minimum Distance from Disused stone structure redevelopment(km)
River Barrow and River Nore SAC Site Code 002162	Annex I - priority habitat – Alluvial wet woodlands - Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (91E0) – Petrifying springs - Petrifying springs with tufa formation (Cratoneurion) (7220) Annex I- habiats – Old oak woodlands - Old sessile oak woods with Ilex and Blechnum in British Isles (91A0) – Floating river vegetation - Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation (3260) – Estuary – (1130) – Tidal mudflats - Spartina swards (Spartinion maritimae) (1320) – Salicornia mudflats - Salicornia and other annuals colonizing mud and sand (1310) – Atlantic salt meadows - (Glauco – Puccinellietalia maritimae) (1330) – Mediterranean salt meadows (Juncetalia maritimi) (1410) – Dry heath - European dry heaths (4030) – Eutrophic tall herbs - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430) Annex II- species – Sea Lamprey Petromyzon marinus (1095) – River Lamprey Lampetra fluviatilis (1099) – Brook Lamprey Lampetra planeri (1096) – Freshwater Pearl Mussel Margaritifera margaritifera (1029) – Nore Freshwater Pearl Mussel Margaritifera durrovensis (1990) – Crayfish Austropotamobius pallipes (1092) – Twaite Shad Alosa fallax (1103) – Atlantic Salmon Salmo salar (1106) – Otter Lutra lutra (1355) – Desmoulin's Whorl Snail Vertigo moulinsiana(1016) – Killarney Fern Trichomanes speciosum (1421)	7 km

Site Name (code)	Qualifying Interests Habitats and Species	Minimum Distance from Disused stone structure redevelopment(km)
Pollardstown Fen SAC Site Code 000396	Annex I - priority habitat – Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] – Petrifying springs with tufa formation (Cratoneurion) [7220] – Alkaline fens [7230] Annex II- species – Vertigo geyeri [1013] – Vertigo angustior [1014] – Vertigo moulinsiana [1016] – Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] – Petrifying springs with tufa formation (Cratoneurion) [7220] – Alkaline fens [7230]	9.5 km
Mouds Bog SAC Site Code 002331	Annex I - priority habitat – Active raised bogs [7110]; Annex I -habitats – Degraded raised bogs still capable of natural regeneration [7120]; and – Depressions on peat substrates of the Rhynchosporion [7150].	9.5km
Ballynafagh Lake SAC Site Code 001387	Annex I - priority habitat - Alkaline fens [7230] Annex II- species - Vertigo moulinsiana [1016] - Euphydryas (Eurodryas, Hypodryas) aurinia [1065]	15km
Ballynafagh Bog SAC Site Code 000391	Annex I - priority habitat – Active raised bogs [7110]; Annex I -habitats – Degraded raised bogs still capable of natural regeneration [7120]; and – Depressions on peat substrates of the Rhynchosporion [7150].	15km
The Long Derries, Edenderry SAC Site Code 000925	Annex I - priority habitat Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	9.0km

6.3 Conservation Objectives

A Natura 2000 site's conservation objectives are defined by DAHG and are, "intended to ensure that the relevant Annex I habitats and Annex II species present on a site are maintained in a favorable condition" (DEHLG, 2010). The DEHLG guidelines state that, "The Conservation Objectives derive from the qualifying interests, the Natura 2000 standard data form, and the management plan for the site, with summary information also available in the site synopsis." Whilst the Natura 2000 standard data forms and site synopses do present details of the qualifying features of Natura 2000 sites, and list the generic threats to those features, they do not define the conservation objectives of the site.

For the purposes of this assessment, information on the conservation objectives for the sites has been gained from consultation with NPWS relating to the Border Regional Planning Guidelines and NPWS generic Conservation Objectives for Natura 2000 Sites where no Management Plan is yet available.

Generic conservation objectives for SPAs are as follows:

- To maintain the bird species of special conservation interest for which the SPA has been listed, at favourable conservation status.

Generic conservation objectives for SACs are as follows:

- To maintain Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status;
- To maintain the extent species richness and biodiversity of the entire site; and
- To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

The favorable conservation status of a species can be described as being achieved when: population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced nor 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.

Favorable conservation status of a habitat can be described as being achieved when: its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that 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 favorable as defined below.

7.1 Likely Impact to the Natura 2000 Sites

The possible impacts that might arise from the proposed development have been examined in the context of the factors that could potentially affect the integrity of the Natura 2000 sites. As part of the screening stage process the proximity and qualifying interests of the Natura 2000 sites in the wider hinterland of the proposed Infill Housing Development, St. Patrick's Park at, Rathangan were considered. In assessing the sites that could potentially be impacted by the proposed development a source-pathway-receptor model was used. All sites potentially impacted were considered in relation to the size and nature of the proposed development and the sensitivity of the receptors in the wider locality. If a Natura 2000 site of particular significance/relevance exists beyond a nominal

screening area this was also included in the screening appraisal. Accordingly, all potential pathways for impact on designated sites were included in this screening exercise both within and outside a nominal 15km zone which was chosen to display the location and discuss sites most proximate to the proposed development. Table 2 summarises the location and qualifying interests of designated sites in the area.

The European Site which may potentially be impacted due to its hydrological; connection through the Slate River Catchment to the area of the proposed development is the River Barrow and Nore SAC, which is downstream of the Rathangan area and of which the Slate River is a tributary, this will be further elaborated on in the following sections.

All other sites are screened out due to having not direct ecological or hydrological connection to the proposed development site. The sites which are screened out are

- Pollardstown Fen SAC Site Code 000396
- Mouds Bog SAC Site Code 002331
- Ballynafagh Lake SAC Site Code 001387
- Ballynafagh Bog SAC Site Code 000391
- The Long Derries, Edenderry SAC Site Code 000925

IDENTIFICATION AND DESCRIPTION OF ANY INDIVIDUAL AND CUMULATIVE IMPACTS LIKELY TO RESULT;

An assessment of the impact of the proposed development and its associated waste water management as it may impact on aquatic habitats and species of qualifying interest for the Barrow and Nore SAC site has been carried out. The SAC is located over 7km downstream of the proposed development site and the Slate River, in the catchment of which the proposed development site is located, is the hydrological connection between the site and the River Barrow and Nore SAC.

The River Water quality in the Slate River at Rathangan has been recorded as moderate.

Any impact to the water quality of the Rive Barrow and River Nore due to construction development will be insignificant due to environmental design measures incorporated into the project to limit any run-off of fines from development site during development and the distance from the site i.e. greater than 7km.

At present the foul waste water from the proposed development will be directed to a municipal Waste Water Treatment Plant WWTP current loading (P.E.): 3 720, Physical Capacity (p.e.): 4 000.

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity.

Currently the Rathangan Waste Water Treatment Plant operates under license from the EPA, at Rathangan, in County Kildare

There is spare capacity in the plant and water quality will not vary from the current status due to the development because of this spare capacity.

Irish Waters annual report for 2020 to EPA on discharges to the River Slate from Rathangan WWTP shows as follows: found that the WWTP was compliant for all parameters Total Phosphorous, Orthophosphorous, BOD, SS but failed for Ammonia for which remediation measures will be put in place.

The above indicates that Rathangan WWTP is not a significant contributor to reduction in water quality for the annexed aquatic habitats or species of qualifying interest of the River Barrow and River Nore as the water quality from the plant is considered to be acceptable for salmonids, lamprey species, otters, and the habitat floating river vegetation. The status is marginal for freshwater pearl mussels, which favour highly oligotrophic systems. The distance of over 7km from the Rathangan site to the SAC also allows for natural attenuation processed to also occur.

As all waste water from the site will be directed to the main waste water treatment plant and the additional housing population falls within the capacity of the plant it is considered that there will be no adverse impact to annexed aquatic habitats of qualifying interest for the site as a result of the proposed development.

Any impact to the water quality of local drainage channels due to construction development will be insignificant due to environmental design measures incorporated into the project to limit any run-off of fines from development site during development. It is envisaged that the construction of a new proprietary grey water management for the site will improve the run-off water quality from the proposed development site.

A full infiltration system will be incorporated into the design of the buildings and associated pathways. The overall site is currently drained into an existing ditch approximately 200m to the south. There is an existing underground attenuation tank system at the south-east of the site which attenuates the flow during storm events. The existing system is under sized. It is proposed to add 8 tree pits and a new attenuation tank system to add the required capacity to cope with peak run-off events. The tree pits will be located adjacent to the car parking areas. The tree pit design is as per the "grey to green" surface water treatment philosophy. This will improve the Water Quality of the grey water leaving the site.

The following publications have been consulted:

-EPA online water quality maps

-Current EPA Licence for Rathangan WWTP

-Rathangan LAP

-Annual Environmental Report on Rathangan WWTP 2020 (Irish Water/Uisce Eireann

Table 2 Nature and Significance of any potential impacts on the qualifying interests of the Natura site arising from the implementation of the project

Qualifying Interest	Level of Protection	Relevant	Likelihood of Impact	Cause of Impact
Alluvial wet woodland (code: 91E0)	**Habitats Directive Annex 1 Priority**	**no**	**none**	**N/A**
Old sessile oak woods with Ilex and Blechnum in British Isles [91A0]	**Habitats Directive Annex 1**	**no**	**none**	**N/A**
Floating river vegetation (code: 3260)	**Habitats Directive Annex 1**	**no**	**Insignificant due to environmental design measures in the project to limit any run-off from development site and the capacity of the Rathangan WWTP to treat waste water from the site**	**N/A**
Estuary (code: 1130)	**Habitats Directive Annex 1**	**no**	**none**	**N/A**
Salicornia mudflats (code: 1310)	**Habitats Directive Annex 1**	**no**	**none**	**N/A**
Spartina swards (Spartinion maritimae) [1320]	**Habitats Directive Annex 1**	**no**	**none**	**N/A**
Mudflats and sandflats not covered by seawater at low tide [1140]	**Habitats Directive Annex 1**	**no**	**none**	**N/A**

Atlantic salt meadows (code: 1330)	**Habitats Directive Annex 1**	**no**	**none**	**N/A**
Mediterranean salt meadows (code: 1410)	**Habitats Directive Annex 1**	**no**	**none**	**N/A**
Killarney Fern (*Trichomanes speciosum*)	**Habitats Directive Annex 2 and 4 and Flora protection Order 1999**	**no**	**none**	**N/A**
Freshwater pearl mussel (*Margaritifera margaritifera*) [1029]	**Habitats Directive Annex 2**	**No juvenile mussel beds occur within 10km upstream/downstream of site**	**Insignificant due to environmental design measures in the project to limit any run-off from development site and the capacity of the Rathangan WWTP to treat waste water from the site**	**N/A**
White-clawed crayfish (*Austropotamobius pallipes*) [1092]	**Habitats Directive Annex 2 and 5**	**no**	**none**	**N/A**
Sea lamprey (*Petromyzon marinus*) [1095]	**Habitats Directive Annex 2**	**no**	**none**	**N/A**
Brook lamprey (*Lampetra planeri*) [1096]	**Habitats Directive Annex 2**	**No juvenile mussel beds occur within 10km upstream/downstream of site**	**Insignificant due to environmental design measures in the project to limit any run-off from development site and the capacity of the Rathangan**	**Potential run-off of fines**

			WWTP to treat waste water from the site	
River lamprey (*Lampetra fluviatilis*) [1099]	**Habitats Directive Annex 2 and 5**	**no**	**none**	**N/A**
Allis shad (*Alosa alosa*) [1102]	**Habitats Directive Annex 2 and 5**	**no**	**none**	**N/A**
Twaite shad (*Alosa fallax fallax*) [1103]	**Habitats Directive Annex 2 and 5**	**no**	**none**	**N/A**
Salmon (*Salmo salar*) [1106]	**Habitats Directive Annex 2 and 5**	**yes**	**Insignificant due to environmental design measures in the project to limit any run-off from development site and the capacity of the Rathangan WWTP to treat waste water from the site**	**Potential run-off of fines**
Otter (*Lutra lutra*) [1355]	**Habitats Directive Annex 4**	**yes**	**No**	**N/A**

7.1 SAC Sites Impact Conclusions

The nearest SAC within the 15km distance from the proposed development site lies at a distance of 7km from the proposed development site, at St. Patrick's Park Rathangan, i.e. the River Barrow and Nore SAC. There is expected to be no direct loss of habitat to this SAC and all surface water and foul water on site are adequately treated and therefore no impact is envisaged to the adjacent river aquatic habitat as a result of this development.

It is also highly improbable that a project of this nature and scale will have any measurable impact on the qualifying interests of Pollardstown Fen, Ballynafagh

Lake, Ballynafagh Bog, Mouds Bog or the Long Derries SACs as there is no hydrological or habitat linkage between these sites and the proposed development site.

For the considered European sites there will be no reduction in habitat area of qualifying interest, no disturbance to key species or habitats, no reduction in species density or no changes in key indictors of conservation value.

Table 1 summarises the location and qualifying interests of designated sites in the within a 15km radius of the proposed development site.

Table 2 outlines a screening matrix for potential impacts to the SAC sites.

Table 2.

Site Name	Reduction in Habitat Area of Habitat of Qualifying Interest **Possible Potential Impacts**	Disturbance to Key Habitats or Species **Possible Potential Impacts**	Habitat or Species Fragmentation **Possible Potential Impacts**	Reduction in Species Density **Possible Potential Impacts**	Changes in Key Indicators of Conservation Value **Possible Potential Impacts**
Barrow and Nore SAC	No	No	No	No	No
Pollardstown Fen	No	No	No	No	No
Ballynafagh Bog SAC	No	No	No	No	No
Ballynafagh Lake SAC	No	No	No	No	No
Mouds Bog SAC	No	No	No	No	No
The Long Derries	No	No	No	No	No

Cumulative Impact

A requirement of the AA process is to take into consideration any cumulative impacts as a result of other plans in the area. It is considered that because of the small scope and scale of the proposed development and the fact that it is highly unlikely to lead to any adverse impact to any Natura 2000 sites within a 15km radius of the site, no cumulative impact will result from the proposed development in combination with any other proposals in the Rathangan area.

8.1 Screening Conclusions

The likely impacts that will arise from the proposed development of works have been examined in the context of the key environmental factors that could potentially affect the integrity of the Natura 2000 network, e.g. disturbance, habitat loss, etc. and the results of the Screening Assessment, as presented in Tables 2. The tables indicate "no" for sites where no negative impact is anticipated on the conservation objectives or on the overall integrity of the site.

Conclusion of screening stage

In conclusion, to determine the potential impacts, if any, of the proposed St. Patrick's Park Rathanagan on nearby Natura 2000 sites, a screening process for AA was undertaken. The proposed development is within 15km of 6 Natura 2000 sites.

It is considered that the proposed development does not include any element that has the potential to significantly alter the favorable conservation objectives associated with the species and habitats, or, interfere with the key relationships that define the structure or function, either alone or in combination with other impacts, of the Natura 2000 sites considered in this document provided that the following is carried out:

The proposed development is completed as described in section 4.

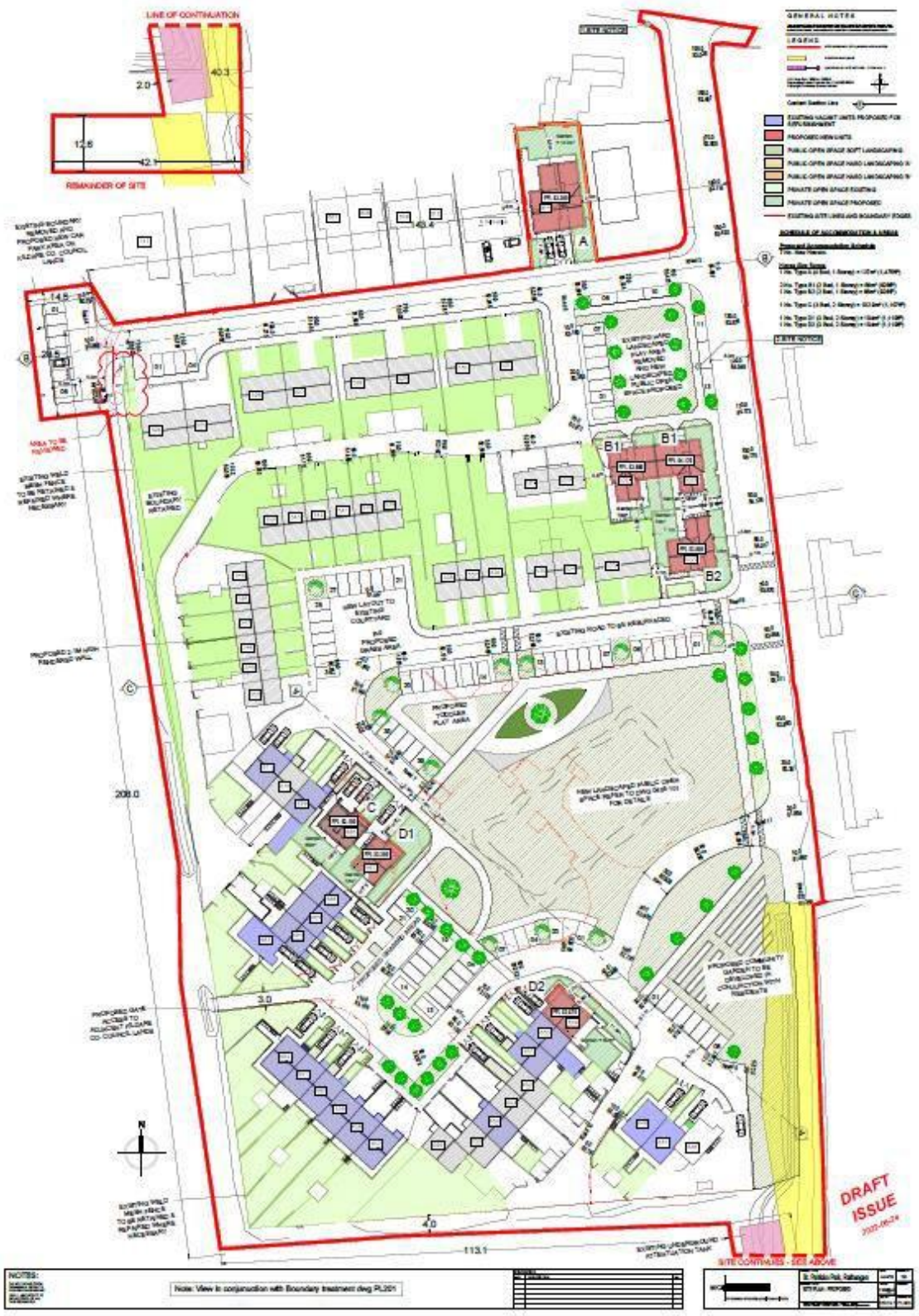
The programme of measures consistent with best practice, standards, design and controls as outlined in section 4 are implemented

It has been objectively concluded during the screening process that none of these sites are likely to be significantly impacted by the proposed St. Patrick's Park Development, Rathangan Town and these are:

- River Barrow and River Nore SAC Site Code 002162
- Pollardstown Fen SAC Site Code 000396
- Mouds Bog SAC Site Code 002331
- Ballynafagh Lake SAC Site Code 001387
- Ballynafagh Bog SAC Site Code 000391
- The Long Derries SAC Site Code 000925

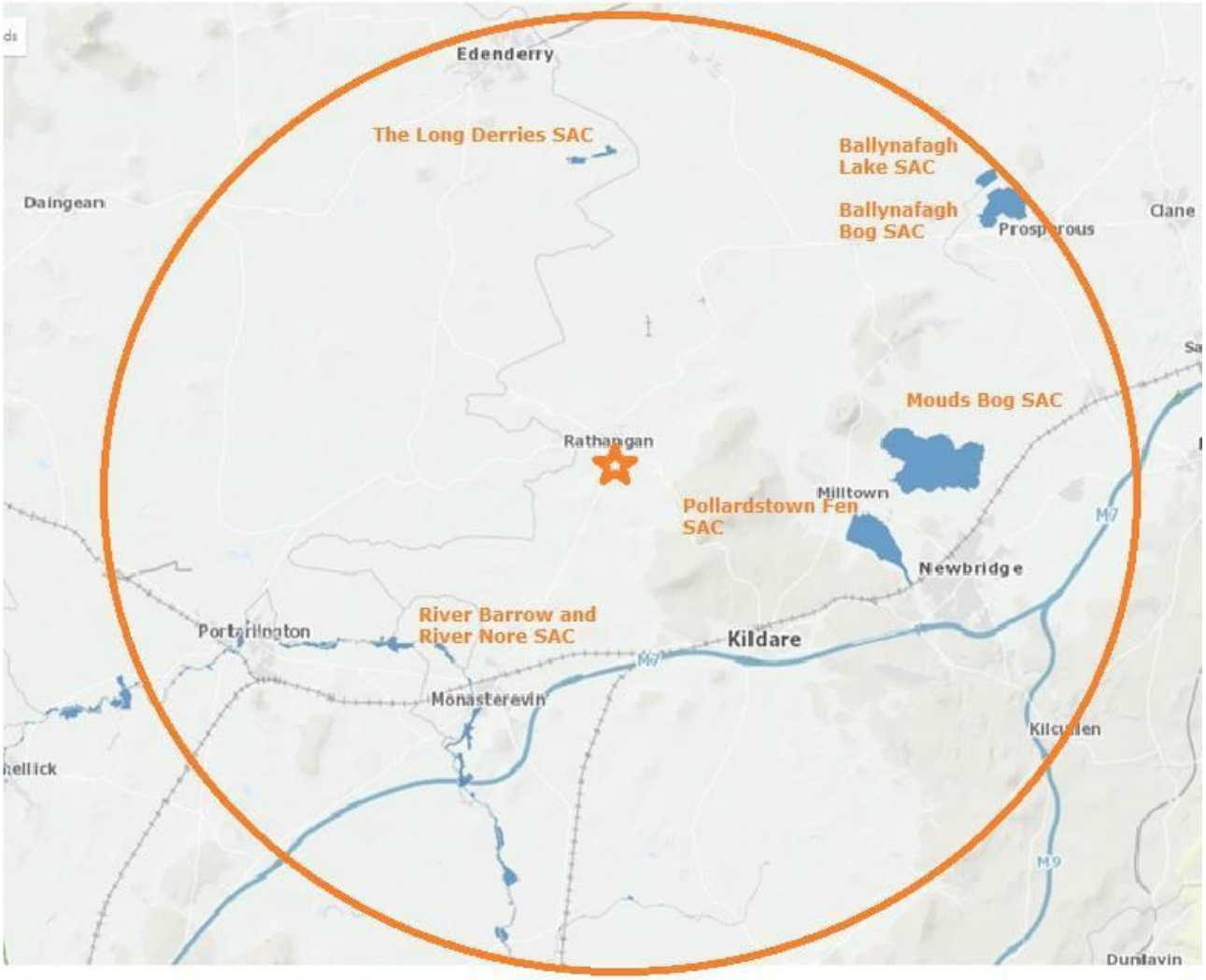
Appendix 1. Location and Layout of Proposed Development


PLAYGROUND
HARD SURFACE
DRAFT
ISSUE


LINE OF CONTINUATION
REMAINDER OF SITE
GENERAL NOTES
LEGEND
A
B1
B2
C
D1
D2
DRAFT ISSUE
SITE CONTINUES - SEE ABOVE
NOTES:
Note: View in conjunction with Boundary treatment dwg PL201

Appendix 2

Natura 2000 Sites within a 15km radius of the proposed development site



Appendix 3

Photographic Record of Proposed Infill Housing Development, St. Patrick's Park Rathangan

View 1