

**APPROPRIATE  
ASSESSMENT  
SCREENING REPORT**

**ENFIELD  
TOWN CENTRE  
PARKING**



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| Document Issue |          |        |              |
|----------------|----------|--------|--------------|
| Rev.           | Date     | Status | Job Ref. No. |
| v.1            | 10.09.23 | FINAL  | 0508         |

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## 1.0 INTRODUCTION.

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### 1.1 PREAMBLE.

EHP Services has been appointed by Meath County Council to prepare an Appropriate Assessment Screening Report in support of their Part VIII application to construct a park and ride facility on lands at Main Street, Enfield, Co. Meath.

The author of this report, Mr. Tony Ewbanks, holds a MA (Hons) degree in Town & Country Planning and a MSc (Hons) degree in Biodiversity & Land Use Planning. He is a member of the Irish Planning Institute and the Royal Town Planning Institute and has over twenty three years experience in public and private sector planning in England, Scotland and Ireland. EHP Services has been providing specialist town planning and environmental planning services since 2011 including the preparation of Stage 1 Appropriate Assessment Reports, Stage 2 Natura Impact Statements, Strategic Environmental Assessments and Environmental Impact Assessments. Additional information is available at [www.ehpservices.ie](http://www.ehpservices.ie).

### 1.2 BACKGROUND.

Article 6 (3) & (4) of Council Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora; hereafter referenced as the Habitats Directive, requires assessment where it is considered that such a proposed plan or project could have a significant impact on the Natura 2000 site network of Special Areas of Conservation (SAC), Special Protection Areas (SPAs) or Natural Heritage Areas (NHAs).

Articles of 6(3) & (4) of the Habitats 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...'*

*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... the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected ...'*

This AA Screening Report assesses whether the development subject of this application will, either alone or in combination with other plans or projects, likely have a significant effect on Natura 2000 sites in view of their conservation objectives.

### 1.3 LEGISLATIVE & REGULATORY BACKGROUND.

This Appropriate Assessment Screening Report has been prepared in accordance with the European Commission's 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, 2021) and Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018) as well as the Department of the Environment's Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG, 2010).

In addition to the guidelines referenced above, the following relevant documents were also considered in the preparation of this report:

1. Council of the European Commission (1992) Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Official Journal of the European Communities. Series L 20, pp. 7-49.
2. EC (2000) Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg.
3. EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence. Opinion of the Commission.
4. EC (2013) Interpretation Manual of European Union Habitats. Version EUR 28. European Commission.
5. Council Directive 2000/60/EC The [EU Water Framework Directive \(European Commission 2000\)](#).

This Article 6(3) Appropriate Assessment Screening Report has also been prepared in compliance with the provision of section 177U of the Planning & Development Act 2010 (as amended).

**1.4 STUDY AREA.**

The study area (see Figure 1 below) comprises of Enfield town centre and peripheral residential areas. The surrounding landform is flat and characterised by mixed use urban development.



Figure 1 – Site Location Map.

Source: [www.google.com/maps](http://www.google.com/maps) (2023)

**1.5 APPROPRIATE ASSESSMENT METHODOLOGY.**

The European Commission's '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' and 'Appropriate Assessment of plans and projects in Ireland – Guidance for planning Authorities' documents in addition to the DoEHLG's 2002 'Managing Natura 2000 Sites - the provisions of Article 6 of the Habitats Directive 92/43/EEC' guidance advocate a four stage approach to completing Appropriate Assessment with associated testing at each stage.

Underscoring each stage is the premise that the outcome of that stage of assessment dictates whether a subsequent stage should be progressed to as illustrated in Figure 2 overleaf.

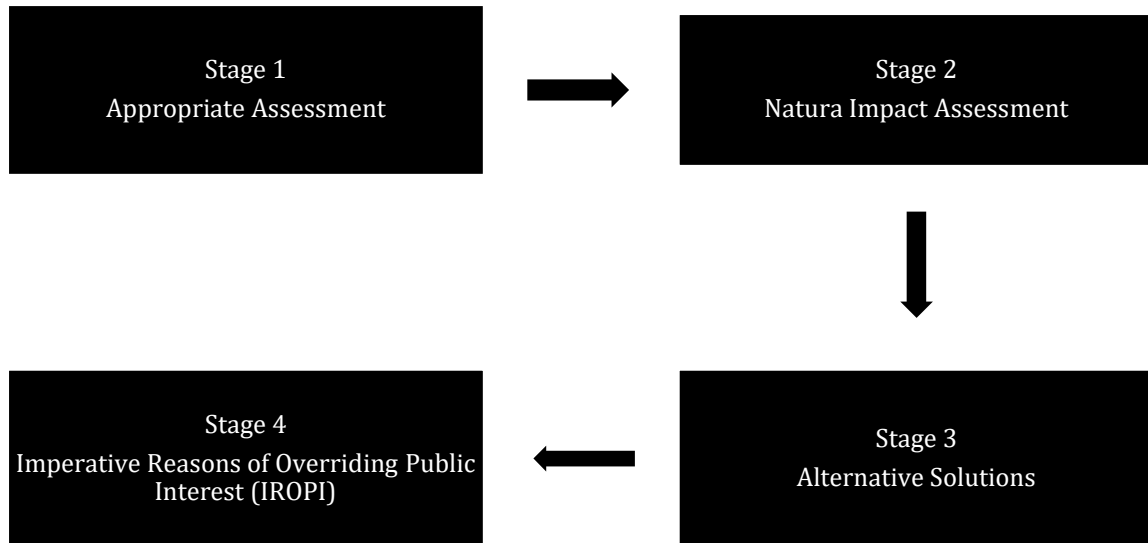


Figure 2 – Appropriate Assessment Stages.

*Stage 1* - Appropriate Assessment Screening is the process which identifies the likely impacts upon a Natura 2000 site by a plan or project, either alone or in combination with other plans or projects and consider whether such impacts are likely to be significant.

*Stage 2* – Natura Impact Statement is the stage where the extent of impacts identified in Stage 1 are considered against the integrity of the Natura 2000 site, either alone or in combination with other plans or projects, with respect to the site’s structure, function and its conservation objectives.

*Stage 3* – Assessment of Alternative Solutions is the stage which examines alternative mechanisms of achieving the objectives of the plan or project which avoids an adverse impact on the integrity of the Natura 2000 site.

*Stage 4* – Assessment of Imperative Reason of Overriding of Public Interest (IROPI) is the process by which an assessment of compensatory measures is considered where imperative reasons of overriding public interest exist to justify and permit the plan or projects in light of identified significant impact upon the Natura 2000 site.

## 2.0 STAGE 1 – SCREENING FOR APPROPRIATE ASSESSMENT.

The DoEHLG guidelines ‘Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities’ sets a four part structure to screening assessment which is summarized below:

- Step 1: Plan or Project Description.
- Step 2: Identification of Natura 2000 sites and their qualifying interest and conservation objectives.
- Step 3: Identification of likely significance of effect(s) on Natura 2000 sites.
- Step 4: Screening Conclusion.

### 2.1 ASSESSMENT METHODOLOGY.

A desk top study and site inspection was carried out to collate available information on the application site and surrounding environment in order to establish existing habitats and floral and faunal species within. Sources of data included -

- National Parks and Wildlife (NWPS) – GIS database, Conservation Objectives supporting documents and site synopsis;
- CFRAM – Potential flooding mapping system;
- National Biodiversity Centre (NBDC) web mapper;
- Geological Survey Ireland (GSI) groundwater vulnerability mapping systems; and

- Environmental Protection Agency (EPA) - online resources.

A site inspection was carried out on 25<sup>th</sup> August 2023 in advance of preparing this Appropriate Assessment Screening Report. All habitats within and adjacent to the application site were readily identifiable during the site visit. Habitats were identified in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000).

## 2.2 PROJECT DESCRIPTION.

The application seeks planning permission for the construction of a public park and ride facility comprising of the following:

- 107no. surface parking spaces including 8no. E-charging points/spaces;
- 15no. frame supporting stands for 30no. bicycles;
- 5no. E-bicycle charging points/spaces;
- Recycling point with 8no. crane lifted receptacles;
- 5m wide access road and 1.8m wide footpath;
- Grassed areas and landscaping; and
- Ancillary site development works including road gullies, internal surface water drainage and connection to mains drainage.

Detailed plans and drawings have been submitted with the application.

## 2.3 STEP 1 - DESCRIPTION OF THE PROJECT OR PLAN.

### 2.3.1 Site & Habitat Description.

The 0.65Ha application site (see Figure 2 above) is located on the northern side of Main Street in the centre of Enfield village. The site comprises of the Enfield Community College building, a telecommunications mast and compound, temporary/mobile classrooms and hardsurfaced play area. The site is surrounded by commercial properties to the east, west and south. Immediately surrounding the application site and village core are large residential estates. The application site's northern and north-eastern boundaries abut the New Inn and Coachyard Avenue residential areas. Access into the application site is to the south off Main Street.

Using Fossitt's (2000)<sup>1</sup> habitat classification system the application site can be described as a BL3 - Buildings and Artificial Surfaces habitat type.

The application site is not within or associated with the management of any of the adjoining conservation areas comprising the Natura 2000 site network.

### 2.3.2 Geology and Hydrology of the Study Area.

The varied landscapes in County Meath formed over hundreds of millions of years by various geological processes. The oldest underlying bedrock geology stems from a time when Ireland was made up of two main 'halves'. Bellewstown and Grangegeeth areas have volcanic rocks erupted as oceanic islands as two plates of the Earth's crust came together and closed the Lapetus Ocean, 500 to 400 million years ago. Associated with them are Silurian aged sandstones which formed in the shallowing sea as the ocean finally closed. The majority of the bedrock underlying the county consists of Lower Carboniferous aged rocks, which are mainly limestone. These formed on the continental shelf of a tropical sea around 340 million years ago. There were both deep marine basins and shallow water environments across Meath. A period of shallow seas with excessive evaporation left gypsum and mudstone deposits in the Kingscourt (Cavan) area in a downwarped basin. The southern end of the faulted depression is in Meath. Some of the last sediments to be deposited in Meath occurred during the Quaternary period (1.6 million years ago to present) when a series of large ice sheets moved over Ireland, and down the Irish Sea area, depositing glacial till (clay, sand and gravel) and scouring the underlying bedrock giving Meath much of its present day geomorphological character<sup>2</sup>.

<sup>1</sup> Fossitt, J.A. (2000), 'A Guide to Habitats in Ireland'. The Heritage Council.

<sup>2</sup> Clarke, A., Parkes, M. & Gatley, S. *The Geological heritage of Meath – An Audit of County Geological Sites in Meath* (2007), Geological Survey of Ireland.



County Meath has a rich and varied aquatic environment consisting of coastline, rivers, streams, lakes and estuarine waters. The Royal Canal and Boyne Navigation Canal, albeit artificial water sources, are also part of this environment. Collectively, they constitute an important economic, recreational, ecological and aesthetic resource. The application site and surrounding village and countryside is located in the Eastern River Basin District which incorporates all of part of twelve local authority areas including Dublin, Dun Laoghaire-Rathdown, Fingal, South Dublin, Meath, Kildare, Wicklow, Cavan, Offaly, Westmeath and small parts of Counties Wexford and Louth. It encompasses the catchment areas of the Rivers Liffey, Boyne, Avoca/Vartry and Nanny/Delvin along with the coastline from Drogheda, Co. Louth in the north to Arklow, Co. Wicklow in the south and all the groundwater within the region.

A heavily overgrown ditch runs parallel with the application site’s northern boundary. The extent of vegetation within the ditch prevented observation of whether there was water present and, if so, if it was standing or flowing. The closest open watercourse to the application site is the Royal Canal located, at its closest, approximately 335m to the north-west. The Royal Canal is 145km long linking the River Liffey in Dublin to the River Shannon in Longford. The canal flows through the suburbs of North Dublin and countryside of Counties Kildare, Meath and Westmeath, through Mullingar and Co. Longford into Richmond Harbour in the village of Clondra. Rising out of Dublin through a series of 26no. locks it reaches the summit level of 94m (ASL) near Mullingar and then descends through a further 20no. locks to its terminus in Richmond Harbour. Lough Owel in Co. Westmeath is the main water supply for the canal.

The Geological Survey of Ireland’s (GSI) groundwater vulnerability mapping system indicates the application site is at moderate risk (see Figure 3 below).

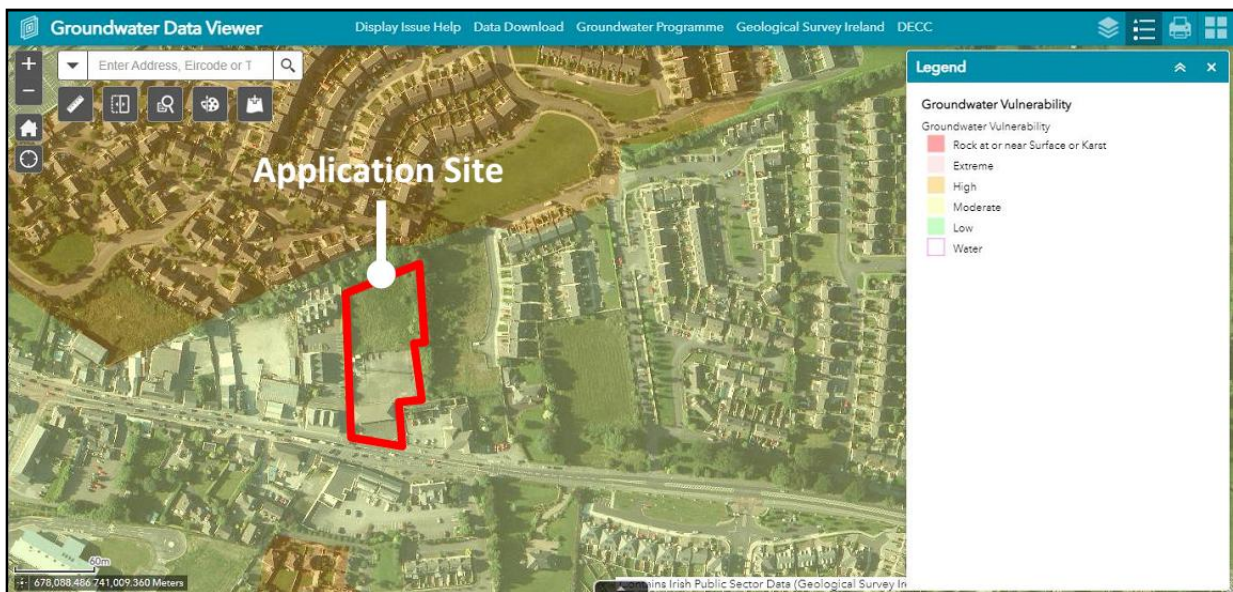


Figure 3 – Groundwater Vulnerability Map.

Source: [www.gsi.ie](http://www.gsi.ie) (2023)

The Office of Public Work’s Catchment Flood Risk Assessment & Management (CFRAM) mapping system indicates the application site is not at risk of any coastal, fluvial or pluvial flooding event as illustrated in Figure 4 overleaf. CFRAM noted recurring flooding along the main street after surface water for the road and paths caused localised flooding after heavy rain. (Flood ID 1203). There has been no further report of localised flooding since 2005.



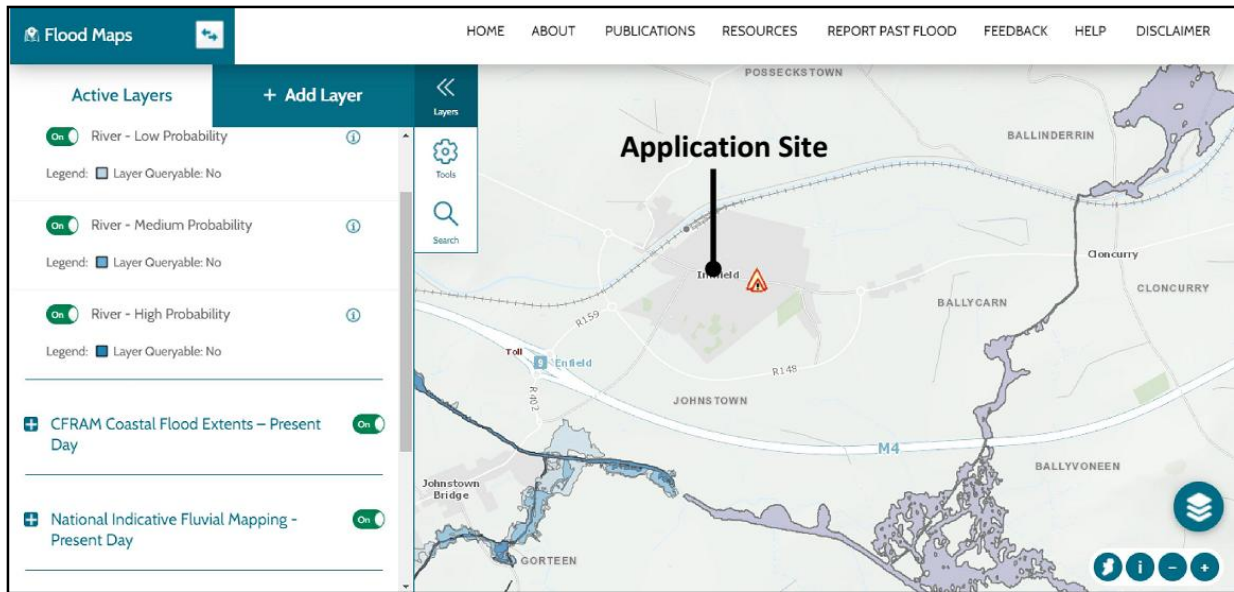


Figure 4 – CFRAM Flooding Potential Map.

Source: [www.floodinfo.ie/map/floodmaps/](http://www.floodinfo.ie/map/floodmaps/) (2023)

**2.4 STEP 2 - IDENTIFICATION OF EUROPEAN SITES WITHIN THE ZONE OF INFLUENCE.**

The Office of the Planning Regulators’ Practice Note PN01 - Appropriate Assessment Screening for Development Management (2021) defines the Zone of Influence (ZoI) of a proposed development as the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. It states this should be established on a case-by-case basis using the Source-Pathway-Receptor SPR framework with reference to the nature, size and location of the proposed development, the sensitivities of the ecological receptors and the potential for cumulative impacts / in combination effects.

In ecological and environmental impact assessment, for an effect to occur there must be a risk enabled by having a source (e.g. construction works at a project site), a receptor such as a European Site and a pathway between the source and the receptor (e.g. a watercourse which connects the two). A ‘receptor’ is defined as the Special Conservation Interest (SCI) of SPAs or Qualifying Interest (QI) of SACs for which conservation objectives have been set for the European sites being screened. This is described as the Source-Pathway-Receptor (SPR) analysis.

For most developments there may be many potential ZOIs, each one specific to the identified potential impact. For example a water-borne pollutant may result in a linear and far reaching ZOI whereas an air-borne pollutant may result in a more circular and localised ZOI. Consideration is therefore given to the source-pathway-receptor linkage and associated risks between the project and Natura 2000 sites. For a significant effect to occur there needs to be an identified risk whereby a source (e.g. contaminant or pollutant arising from construction activities) affects a particular receptor (i.e. a Natura 2000 site) through a particular pathway (e.g. a watercourse).

The identification of risk does not automatically mean that an effect will occur, nor that it will be significant. The identification of these risks means that there is a possibility of environmental or ecological damage occurring. The level and significance of the effect depends upon the nature of the consequence, likelihood of the risk and characteristics of the receptor.

The precautionary principle is applied for the purposes of screening to ensure that consideration and pre-emptive action is undertaken where there is a lack of scientific evidence. It is noted that mitigation measures are not taken into account in the Stage 1 Appropriate Assessment screening process.

Using the SPR analysis framework the ZoI may be defined within context of the application site and proposed development as the ‘source’ and the surrounding SPAs, SACs and NHAs as the ‘receptors’. Through a combination of natural and anthropogenic factors including distance and relative position, land uses and physical considerations (i.e. ground level differences, roads, urban development etc.) it is

not likely that the all SACs, SPAs and NHAs identified in Figure 5 overleaf would be prone to potential impacts arising from the proposed development. How the ditch t

There are no direct pathways linking the source and receptor such as a watercourse running through the application site. The heavily vegetated nature of the ditch to the rear of the application site prevents confirmation of the presence of water and if such water is standing or flowing. The application site is however located close enough to the Royal Canal pNHA which, whilst not a designated European site, is hydrologically linked to the Rye Water Valley/Carlton SAC to the east and the Mount Hevey Bog SAC and Molerick Bog NHA to the north-west. The appropriate assessment will consider potential impacts upon these three designated areas.

A review of extant grants of planning permission was carried out on the National Planning Application Map and Meath County Council's ePlan planning systems in a pattern radiating 200m from the application site. Given the application site's urban location and the heavily developed nature of the surrounding area a 200m radius was considered sufficient to capture any permitted development that could give rise to significant cumulative effects. When considering the potential cumulative impacts/in combination effects of the proposed development with other projects i.e. extant grants of planning permissions the Zol which are summarised in Table 1 below.

| <b>Table 1 - Extant Grants of Planning Permissions &amp; Projects</b> |   |  |                   |
|---|---|--|-------------------|
| <b><i>Planning</i></b>  |   |  |                   |
| <b>Ref. No.</b>   | <b>Applicant</b>                                  | <b>Development</b>   | <b>Decision</b>   |
| TA181069  | John & Breda Fitzgerald                           | Construction of new side, rear and front extensions to existing two storey end of terrace dwelling and associated site works and services  | Approved 20.12.18 |
| TA191340  | Derek & Sharon Donohoe                            | Single store extension to the east of existing dwelling, first floor extension to the north and west of dwelling, dwelling renovations including rearrangement of layouts, upgrade of services and all associated site works.  | Approved 29.01.20 |
| TA191701  | Paddy Mulligan<br>Compass Physio                  | Two storey front and side extensions to existing single storey premises, new pitched roof to front, side and rear elevations.  | Approved 14.04.21 |
| TA200458  | The Board of Management of St. Mary's PS, Enfield | Single storey extension, comprising of 3no. classrooms with toilets and ancillary rooms for the provision of Special Needs Education, sensory garden (100m <sup>2</sup> ) and soft play area (200m <sup>2</sup> ) enclosed with boundary walls and railings. Relocation of hard court play area (1600m <sup>2</sup> ) to south of the existing building. Extension of existing rear (east) parking area to provide 10no. additional spaces, including disabled users and turning facility. | Approved 08.09.20 |
| 23450   | A & S Healthcare Ltd. t/a Keane's Careplus        | Change of use from banking to retail for use as a pharmacy, proposed new elevational signage to front and side of building and associated site works.  | Approved 27.07.23 |
| <b><i>Projects</i></b>  |   |  |                   |
| None.   |   |  |                   |

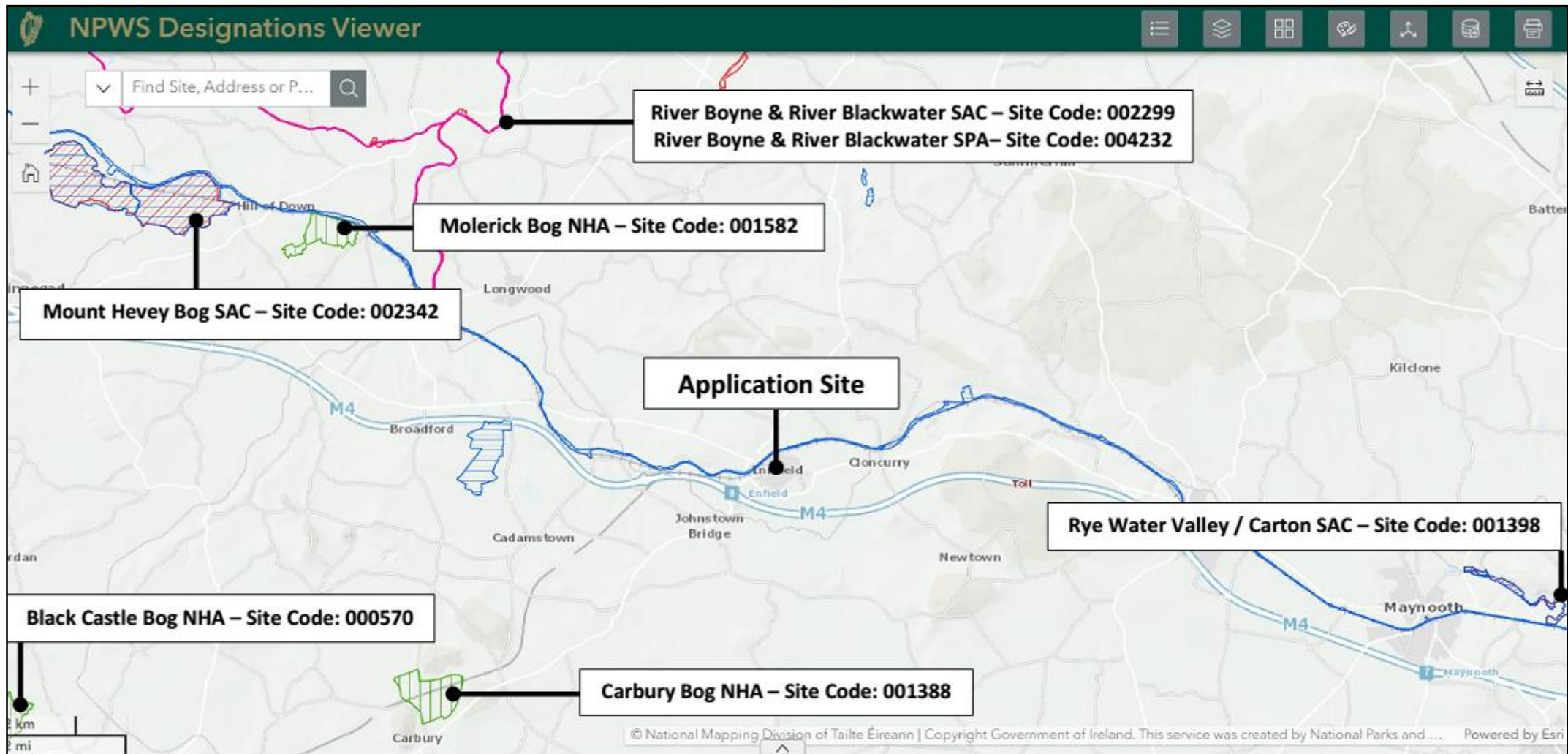


Figure 5 – Natura 2000 Sites Map.

Source: [www.npws.ie](http://www.npws.ie) (2023)

**Table 2 – Identification of Designated Sites within the Zone of Influence (Zol)**

| European site and distance from application site  | Qualifying Interest/Special Conservation Interest for which the European site has been designated (Source: NPWS Conservation Objectives Documents <a href="http://www.npws.ie">www.npws.ie</a> 21.06.23)                     | Conservation Objective   | Zone of Influence consideration.   |
|---|--|--|--|
| <p>Rye Water Valley / Carton Special Area of Conservation.</p> <p>[Site Code: 001398]</p> <p><b>Distance</b> – 17.0km (approx.)</p> | <ul style="list-style-type: none"> <li>• Petrifying Springs [7220]</li> <li>• Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) [1014]</li> <li>• Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) [1016]</li> </ul> | <p>Site synopsis (dated 11.10.13 Rev 13) and conservation objectives (Version 1, dated 23.03.21) for this site were reviewed as part of the assessment and are attached to Appendix 1.</p> | <p><b>Size and scale</b> – The application site is 0.65Ha (approx.) in area. The site is different from the greatly varied scale and configurations of adjoining commercial and residential properties.</p> <p><b>Land-take</b> - None within Natura 2000 site network.</p> <p><b>Distance from the European site</b> - 17km (approx.) north-west of Rye Water Valley / Carton SAC; 15km (approx.) south-east of Mount Hevey Bog SAC and 12km (approx.) south-east of Molerick Bog NHA.</p>  |
| <p>Mount Hevey Bog Special Area of Conservation.</p> <p>[Site Code: 002342]</p> <p><b>Distance</b> – 15.0km (approx.)</p>           | <ul style="list-style-type: none"> <li>• Raised Bog (Active) [7110]</li> <li>• Degraded Raised Bog [7120]</li> <li>• Rhynchosporion Vegetation [7150]</li> </ul>   | <p>Site synopsis (dated 09.01.14 Rev. 13) and conservation objectives (Version1 dated 21.03.16) for this site were reviewed as part of the assessment and are attached to Appendix 1.</p>  | <p><b>Resource requirements</b> - None required from Natura 2000 site. No on-site resources required to facilitate proposed development.</p> <p><b>Emissions – LAND:</b> Detailed proposed surface water drainage plans have been prepared by DCE Duffy Chartered Engineers Irl. Illustrates the entire vehicular parking area/spaces and circulation space will provide attenuation of 3003sqm. in area comprising of a minimum 300m stone sub-base of clean, crushed, washed 20-50mm angular stone with 40% voids. Parking spaces will be finished in 80mm thick permeable paving blocks. Surface water will flow through new 150mm drainage pipes down the proposed access road via an oil interceptor before discharging into mains drainage under the adjoining public road. The drainage proposal has been designed in compliance with BRE 365. There will be no direct discharge to ground. The proposed development does not propose nor requires any foul sewer connections.</p>  |
| <p>Molerick Bog Natural Heritage Area.</p> <p>[Site Code: 001582]</p> <p><b>Distance</b> – 12.0km (approx.)</p>                     | <p>N/A</p>   | <p>Site synopsis (dated 14.11.02) see Appendix 1. No conservation objectives available on <a href="http://www.npws.ie">www.npws.ie</a> as of date of this report</p>                       | <p>There will be no direct discharge to ground. The proposed development does not propose nor requires any foul sewer connections.</p> <p><b>AIR:</b> The proposal would attract more vehicles to and from the application site which would increase the volume of associated traffic and therefore the amount of airborne hydrocarbons discharged to the atmosphere. This volume of aerosolised discharge is difficult to quantify however the proposed development is a facility serving the general public and the existing volume/frequency of traffic currently attracted to the town centre. The application site is located in the town centre and next to the settlement's principal and heavily trafficked arterial route. The proposed development will not, in itself, generate any additional levels of traffic therefore it will not generate any additional airborne emissions to the immediate environs.</p> <p><b>WATER:</b> The application site is located in an area where underlying groundwater is considered to be at moderate risk (see Figure 3 above). The proposed development will not discharge to ground. Surface water will be</p> |

directed to existing mains drainage via an oil interceptor and there is no requirement for foul sewerage drainage. The proposed development therefore will not affect the quality of underlying ground water.

**Excavation requirements** – None within Natura 2000 site network. The application site will require clearance of existing ground vegetation cover to the rear and minor site levelling to provide flat development area for construction. Excavation works will be limited to foundational work for the new road, footpath, parking area and ancillary facilities

**Transportation requirements** – Construction phase of development will generate associated HGV, delivery and worker traffic. Operational related traffic will primarily be private vehicles and occasionally small vans. All associated traffic will access the site via the existing urban road network and park within the application site.

**Duration of construction, operation and decommissioning** – Construction phase of development is estimated at between 3-4 months. Operational lifespan of development proposal is indefinite with subsequent maintenance and upgrades of the site. There are no plans to decommission the site and return it to its previous condition and/or use.



## 2.5 STEP 3–IDENTIFICATION/ASSESSMENT OF LIKELY EFFECTS.

### 2.5.1 Assessment Criteria.

A likely change in conservation status should be used as a measure to determine whether an impact on a habitat or species is likely to be significant. The European Commission’s 2002 ‘Managing Natura 2000 Sites the provision of Article 6 of the Habitats Directive 92/43/EEC’ document sets out indicative prompts to assess the significance of an identified impact on the conservation objectives of a Natura 2000 site, including its structure and function. These are summarised in Figure 6 below.

| Impact Type                | Significance Indicator                                       |
|----------------------------|--|
| Loss of Habitat            | Percentage of Loss   |
| Fragmentation              | Duration or permanence, level in relation to original extent |
| Disturbance                | Duration or permanence, distance from site                   |
| Species Population Density | Timescale for replacement                                    |

**Figure 6 - Examples of Impact Significance Indicators.**

The European Commission’s 2001 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’ (EC, 2021) sets out appropriate criteria for the assessment of potential direct, indirect or secondary impacts upon the receiving SACs and NHA.

These criteria, which are set out in Table 3 below will be used to identify and assess within context of the existing development subject of the extension of duration of permission application.

| <b>Table 3 - Potential Impact Assessment Criteria</b>   |
|---|
| 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 sites.  |
| Describe any likely, direct, indirect or secondary impacts of the projects (either alone or in combination with other plans or projects) on the Natura 2000 sites by virtue of: <ul style="list-style-type: none"> <li>• Site and scale</li> <li>• Land take</li> <li>• Distance from Natura 2000 site or key features of the site</li> <li>• Resource requirements (water abstraction etc.)</li> <li>• Emissions (disposal to land, water or air)</li> <li>• Excavation requirements</li> <li>• Transportation requirements</li> <li>• Duration of construction, operation, decommissioning etc.</li> <li>• Other</li> </ul> |
| Describe any likely changes to the sites arising as a result of: <ul style="list-style-type: none"> <li>• Reduction of habitat area</li> <li>• Disturbance to key species</li> <li>• Habitats or species fragmentation</li> <li>• Reduction in species density</li> <li>• Changes in key indicator of conservation value (water quality etc.)</li> <li>• Climate change</li> </ul>  |
| Describe any likely impact on the Natura 2000 sites as a whole in terms of: <ul style="list-style-type: none"> <li>• Interference with the key relationships that define the structure of the site</li> <li>• Interference with key relationships that define the function of the site</li> </ul>   |
| Provide indicators of significance as a result of the identification of effects set out above.  |
| Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.  |

### 2.5.2 Assessment of Likely Effects.

The following sections, outlining the identification and assessment of likely impacts and their significance upon the Natura 2000, employ a combination of the above significance indicators specified in Figure 5 and the criteria set out in Table 3 above. Any potential changes to the identified European sites are arising from disturbance to key species, habitat or species fragmentation,

reduction in species density, changes in key conservation value indicators and climate change are assessed in Table 4 below.

| <b>Table 4 - Description of Likely Changes to Site</b>              |  |
|---|--|
| <b>Potential Impact</b>   | <b>Assessment</b>  |
| Disturbance to key species  | No floral or faunal species utilise the application site. Construction and operational phases of development will introduce temporary additional vehicle movements to the area and a level of human activity in excess of the application site's previous uses and generated none of which will have a direct or indirect negative impact upon the habitats and species within Mount Hevey Bog SAC, Rye Water Valley/Carton SAC or the Royal Canal pNHA from visual or auditory stimuli, diminution of existing water quality or disturbance to normal patterns of behaviour of key species.   |
| Habitat or species fragmentation                                    | The proposed development does not physically intrude upon the Hevey Bog or Rye Water Valley/Carton SACs therefore habitat or species fragmentation will not occur as a result.   |
| Reduction in species density  | Proposed development will have no direct or indirect negative impact. Hevey Bog and Rye Water Valley/Carton SACs are located some distance from the application site as is the connecting hydrological conduit the Royal Canal pNHA. The application site is located in the centre of a heavily developed and urbanised settlement. No aspect of the proposed development's construction, use or decommissioning will directly or indirectly affect species density within the distant SACs.   |
| Changes in key indicator of conservation value (water quality etc.) | The GSI's ground water vulnerability mapping system indicates the application site is located within an area of moderate risk. The proposed development will fully attenuate all surface water and discharge via a high specification, high quality oil interceptor into the town's existing surface water drainage system which has more than sufficient carrying capacity for the additional load. Surface water will comprise of precipitation i.e. rain, snow and sleet which is not a source of potential contamination. The potential volume of petrol, diesel, oil and/or engine fluid leakage within the application site once operational would be miniscule and will be fully ameliorated with the installation and proper operation of the proposed oil interceptor. The proposed development does not pose a direct or indirect threat to the local aquifer, local ground water quality or the water within the Royal Canal and by association the Hevey Bog and Rye Water Valley/Carton SACs. |
| Climate change  | None associated with the Natura 2000 site network. Proposed development does include provision for vehicle and bicycle E-charging points.  |

Any likely impacts on the Natura 2000 site network within the Zol in terms of structure and function are described in Table 5 below.

| <b>Table 5 - Description of Potential Impacts on the Likely Zone of Impacts</b> |   |
|---|---|
| <b>Potential Impact</b>   | <b>Assessment</b>   |
| Key relationships that define the structure of the site.                        | None directly. The proposed development and application site have no direct or indirect contributory connection to the key relationships that define the varied structures of the Rye Water Valley / Carton Special Area of Conservation, the Mount Hevey Bog Special Area of Conservation or the Molerick Bog Natural Heritage Area. |
| Key relationships that define the function of the site/                         | None. Proposed development and application site have no direct or indirect contributory connection to the key relationships that define the varied functions of the Rye Water Valley / Carton Special Area of Conservation, the Mount Hevey Bog Special Area of Conservation or the Molerick Bog Natural Heritage Area.               |

Any likely impacts upon the indicators of significance as a result of identified effects set out in previous assessments upon the Natura 2000 site network are set out in Table 6 below.

| <b>Table 6 - Description of Impact on Indicators of Significance</b>                   |   |
|--|---|
| <b>Potential Impact</b>  | <b>Assessment</b>   |
| Indicators of significance as a result of the identification of effects set out above. | No direct, indirect or secondary impacts in terms of habitat loss or fragmentation or species density reduction or associated disturbances have been identified. The proposed development is unlikely to give rise to any indicator of significance upon the integrity or qualifying interests of the Rye Water Valley / Carton Special Area of Conservation, the Mount Hevey Bog Special Area of Conservation or the Molerick Bog Natural Heritage Area. |

Any potential individual or cumulative impacts arising from the existing development and other plans or projects upon the Rye Water Valley / Carton Special Area of Conservation, the Mount Hevey Bog Special Area of Conservation, the Molerick Bog Natural Heritage Area or the wider Natura 2000 site network are set out in Table 7 overleaf.

| <b>Table 7 - Description of Significant Individual or Collective Impact(s)</b>  |   |
|---|---|
| <b>Potential Impact</b>   | <b>Assessment</b>   |
| Describe from the above those element of the project or plan, or in combination of elevation, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known. | <p>The extant permissions identified in Table 1 above were screened out at application stage with the County Council citing their satisfaction that each development proposal did not pose a threat to the existing character, integrity or qualifying interests of the Rye Water Valley / Carton Special Area of Conservation, the Mount Hevey Bog Special Area of Conservation or the Molerick Bog Natural Heritage Area.</p> <p>The proposed development, alone or in combination, with the County Development Plan's zoning objectives and planning policies and other plans and projects noted in Table 1 above are unlikely to have a material or adverse effect upon the existing character, integrity or qualifying interests of the designated conservation areas or in the subsequent delivery of their respective conservation objectives.</p> |

### **3.0 APPROPRIATE ASSESSMENT CONCLUDING STATEMENT.**

The impacts of all aspects and elements of the proposed development of the application site have been fully assessed and considered.

Given the nature and scale of the proposed development, its urban setting, the proposed connection into existing and well capacitated public infrastructure and the lack of any direct or indirect pathway, conduit to a sensitive environmental receptor it may be concluded with reasonable certainty that the proposed car parking facility will have no adverse or diminishing impact upon the integrity, diversity, structure and functionality of any Natura 2000 site or impeded in the implementation of their respective conservation objectives.

In light of such a finding it is not necessary to carry out further environmental assessment through a Stage 2 Appropriate Assessment (Natura Impact Statement).

National Parks & Wildlife Service  
Designation Conservation Area Site Synopsis  
& Conservation Objectives

## SITE SYNOPSIS

**SITE NAME: MOUNT HEVEY BOG SAC**

**SITE CODE: 002342**

Mount Hevey Bog is situated approximately 4 km north-east of Kinnegad, in the townlands of Cloncrave, White Island, Aghamore, Kilwarden and Kilnagalliagh. The Meath-Westmeath County boundary runs through the centre of the bog. The site comprises a raised bog that includes both areas of high bog and cutover bog. The Dublin-Sligo railway runs through the northern part of the bog isolating two northern lobes. The northern lobes are adjacent to the Royal Canal.

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 (\* = priority; numbers in brackets are Natura 2000 codes):

[7110] Raised Bog (Active)

[7120] Degraded Raised Bog

[7150] Rhynchosporion Vegetation

Active raised bog comprises areas of high bog that are wet and actively peatforming, where the percentage cover of bog mosses (*Sphagnum* spp.) is high, and where some or all of the following features occur: hummocks, pools, wet flats *Sphagnum* lawns, flushes and soaks. Degraded raised bog corresponds to those areas of high bog whose hydrology has been adversely affected by peat cutting, drainage and other land use activities, but which are capable of regeneration. The Rhynchosporion habitat occurs in wet depressions, pool edges and erosion channels where the vegetation includes White Beak-sedge (*Rhynchospora alba*) and/or Brown Beak-sedge (*R. fusca*), and at least some of the following associated species, Bog Asphodel (*Narthecium ossifragum*), sundews (*Drosera* spp.), Deergrass (*Scirpus cespitosus*) and Carnation Sedge (*Carex panicea*). The site consists of a long, narrow bog separated into four sub-sections; the larger eastern section supports a wet quaking area with hummock/hollows and pool complex. Hummock/hollow complex also occurs in the south-west lobe and the north-west lobe of the site. An infilled lake is now a soak system. Forestry occurs on the most easterly section of the site. There is abandoned cutover bog all around the bog and particularly on the western section. There are some wet and actively regenerating areas of the cutover along the southern margins of the western lobe and along the railway.

Much of the high bog has vegetation typical of the Midlands Raised Bog type. The vegetation consists of Heather (*Calluna vulgaris*), cottongrasses (*Eriophorum angustifolium* and *E. vaginatum*), Bog Asphodel, White Beak-sedge and midland indicator species Bog-rosemary (*Andromeda polifolia*) and the bog moss *Sphagnum magellanicum*. The wet quaking area in the eastern section of the bog has pools that support the bog moss *Sphagnum cuspidatum*, with White Beak-sedge, cottongrasses and Heather at the edges. The hummock/hollow complex supports a range of hummock-forming bog mosses, including *Sphagnum imbricatum* and *S. fuscum*, as well as other species such as *S. capillifolium*, *S. magellanicum* and *S. papillosum*. Other plants found in the hummock/hollow complexes are Bog-rosemary, Cross-leaved Heath (*Erica tetralix*), Bog Asphodel and Deergrass.

The infilled lake is wet and quaking and the vegetation is dominated by Purple Moor-grass (*Molinia caerulea*), Bog-myrtle (*Myrica gale*) and Downy Birch (*Betula pubescens*), along with the bog mosses *Sphagnum palustre* and *S. papillosum*. The Downy Birch trees appear to be between 20 and 30 years old, and the Bog-myrtle is over 150 cm high. The edge of the former lake is clearly marked by robust plants of Heather. Some areas of old abandoned cutover bog on the site are very wet and regenerating well, with a good cover of bog mosses, including species such as *S. cuspidatum*, *S. papillosum*, *S. capillifolium*, *S. auriculatum* and *S. subnitens*.

Current land use on the site consists of limited mechanised peat-cutting, mostly on the eastern end of the high bog. There are areas of old peat cuttings all around the site with some very old abandoned regenerating cutover along the edge of the railway. The area to the east of the site has been afforested. Areas of cutover have been reclaimed for agricultural purposes. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and burning of the high bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.

Mount Hevey Bog is a site of considerable conservation significance as it comprises a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. The site supports a good diversity of raised bog microhabitats, including hummock/hollow complexes, pools, flushes and regenerating cutover, as well as a number of scarce plant species. Active raised bog is listed as a priority habitat on Annex I of the E.U. Habitats Directive. Priority status is given to habitats and species that are threatened throughout the E.U. Ireland has a high proportion of the total E.U. resource of this habitat type (over 60%) and so has a special responsibility for its conservation at an international level.

Version date: 9.01.2014

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## Conservation Objectives for : Mount Hevey Bog SAC [002342]

### 7110 Active raised bogs

To restore the favourable conservation condition of Active raised bogs in Mount Hevey Bog SAC, which is defined by the following list of attributes and targets:

| Attribute  | Measure                | Target  | Notes  |
|--|------------------------|---|--|
| Habitat area   | Hectares               | Restore area of active raised bog to 77.8ha, subject to natural processes   | Active Raised Bog (ARB) habitat is estimated to be 60.0ha. Area of Degraded Raised Bog (DRB) on the High Bog (HB) has been modelled as 24.5ha. See map 2. However, it is estimated that only 12.3ha is potentially restorable to ARB by drain blocking. The total potential ARB on the HB is therefore estimated to be 72.3ha. Eco-hydrological assessments of the cutover estimates that an additional 5.5ha of bog forming habitats could be restored. The long term target for ARB is therefore 77.8ha. See raised bog supporting document for further details on this and following attributes |
| Habitat distribution   | Occurrence             | Restore the distribution and variability of active raised bog across the SAC. See map 3 for distribution in 2000      | ARB habitat at Mount Hevey Bog comprises central and sub-central ecotopes and active flush and occurs on both parts of the bog. DRB also occurs on both parts of the bog, which will require restoration measures. There is also potential for ARB restoration on cutover areas of the bog (see area target above)   |
| High bog area  | Hectares               | No decline in extent of high bog necessary to support the development and maintenance of active raised bog. See map 2 | The area of high bog within Mount Hevey Bog SAC in 2012 (latest figure available) was 217.5ha (DAHG 2014)  |
| Hydrological regime: water levels  | Centimetres            | Restore appropriate water levels throughout the site  | For ARB, mean water level needs to be near or above the surface of the bog lawns for most of the year. Seasonal fluctuations should not exceed 20cm, and should only be 10cm below the surface, except for very short periods of time  |
| Hydrological regime: flow patterns   | Flow direction; slope  | Restore, where possible, appropriate high bog topography, flow directions and slopes. See map 4 for current situation | ARB depends on mean water levels being near or above the surface of bog lawns for most of the year. Long and gentle slopes are the most favourable to achieve these conditions. Changes to flow directions due to subsidence of bogs can radically change water regimes and cause drying out of high quality ARB   |
| Transitional areas between high bog and adjacent mineral soils (including cutover areas) | Hectares; distribution | Restore adequate transitional areas to support/protect active raised bog and the services it provides                 | No natural margins remain around Mount Hevey Bog. In places, bog vegetation is regenerating on long abandoned cutover. Eco-hydrological assessments have evaluated the potential for ARB restoration on cutover areas (see note for habitat area attribute above)  |
| Vegetation quality: central ecotope, active flush, soaks, bog woodland                   | Hectares               | Restore 38.9ha of central ecotope/active flush/soaks/bog woodland as appropriate                                      | At least 50% of active raised bog habitat should be high quality (i.e. central ecotop, active flush, soaks, bog woodland. Target area of active raised bog for the site has been set at 77.8ha (see area target above)   |
| Vegetation quality: microtopographical features  | Hectares               | Restore adequate cover of high quality microtopographical features  | Hummock and hollow microtopography is well developed in the western part of Mount Hevey Bog. Previous drainage efforts associated with a forestry plantation (which has since been clear felled) on the high bog on the eastern side have had a negative effect on the surface microtopography   |
| Vegetation quality: bog moss ( <i>Sphagnum</i> ) species                                 | Percentage cover       | Restore adequate cover of bog moss ( <i>Sphagnum</i> ) species to ensure peat-forming capacity                        | <i>Sphagnum</i> cover varies naturally across Ireland with relatively high cover in the east to lower cover in the west. Hummock forming species such as <i>Sphagnum austinii</i> are particularly good peat formers. <i>Sphagnum</i> cover and distribution also varies naturally across a site   |

|   |                        |   |  |
|---|------------------------|---|--|
| Typical ARB species: flora                                | Occurrence             | Restore, where appropriate, typical active raised bog flora   | Typical flora species include widespread species, as well as those with more restricted distributions but typical of the habitat's subtypes or geographical range  |
| Typical ARB species: fauna                                | Occurrence             | Restore, where appropriate, typical active raised bog fauna   | Typical fauna species include widespread species, as well as those with more restricted distributions but typical of the habitat's subtypes or geographical range  |
| Elements of local distinctiveness                         | Occurrence             | Maintain features of local distinctiveness, subject to natural processes  | The main feature of interest is a small lough that occurred on the west side of the bog (Cloncrave Lough), which has infilled and now corresponds with active flush  |
| Negative physical indicators                              | Percentage cover       | Negative physical features absent or insignificant  | Negative physical indicators include: bare peat, algae dominated pools and hollows, marginal cracks, tear patterns, subsidence features such as dry mineral mounds /ridges emerging or expanding and evidence of burning   |
| Vegetation composition: native negative indicator species | Percentage cover       | Native negative indicator species at insignificant levels   | Native negative indicator species that suggest drying out include abundant bog asphodel ( <i>Narthecium ossifragum</i> ), deergrass ( <i>Trichophorum germanicum</i> ) and haretail cotton-grass ( <i>Eriophorum vaginatum</i> ) forming tussocks; abundant magellanic bog-moss ( <i>Sphagnum magellanicum</i> ) in pools previously dominated by <i>Sphagnum</i> species typical of very wet conditions (e.g. feathery bog-moss ( <i>S. cuspidatum</i> )). Indicators of frequent burning events include abundant <i>Cladonia floerkeana</i> and high cover of carnation sedge ( <i>Carex panicea</i> ) (particularly in true midlands raised bogs) |
| Vegetation composition: non-native invasive species       | Percentage cover       | Non-native invasive species at insignificant levels and not more than 1% cover  | Most common non-native invasive species on raised bogs include lodgepole pine ( <i>Pinus contorta</i> ), rhododendron ( <i>Rhododendron ponticum</i> ), and pitcherplant ( <i>Sarracenia purpurea</i> )  |
| Air quality: nitrogen deposition                          | kg N/ha/year           | Air quality surrounding bog close to natural reference conditions. The total N deposition should not exceed 5kg N/ha/yr | Change in air quality can result from fertiliser drift; adjacent quarry activities; or other atmospheric inputs. The critical load range for ombrotrophic bogs has been set as between 5 and 10kg N/ha/yr (Bobbink and Hettelingh, 2011). The latest N deposition figures for the area around Mount Hevey Bog suggest that the current level is approximately 15.7kg N/ha/yr (Henry and Aherne, 2014)  |
| Water quality   | Hydrochemical measures | Water quality on the high bog and transitional areas close to natural reference conditions                              | Water chemistry within raised bogs is influenced by atmospheric inputs (rainwater). However, within soak systems, water chemistry is influenced by other inputs such as focused flow or interaction with underlying substrates. Water chemistry in marginal areas and lagg zone surrounding the high bog varies due to influences of different water types (bog water, regional groundwater and run-off from surrounding mineral lands)  |

## Conservation Objectives for : Mount Hevey Bog SAC [002342]

### 7120 Degraded raised bogs still capable of natural regeneration

**The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in Mount Hevey Bog SAC**

| Attribute | Measure | Target | Notes |
|-----------|---------|--------|-------|
|-----------|---------|--------|-------|

**Conservation Objectives for : Mount Hevey Bog SAC [002342]**

**7150 Depressions on peat substrates of the Rhynchosporion**

**Depressions on peat substrates of the Rhynchosporion is an integral part of good quality Active raised bogs (7110) and thus a separate conservation objective has not been set for the habitat in Mount Hevey Bog SAC**

| <b>Attribute</b> | <b>Measure</b> | <b>Target</b> | <b>Notes</b> |
|------------------|----------------|---------------|--------------|
|------------------|----------------|---------------|--------------|

## SITE SYNOPSIS

**SITE NAME: RYE WATER VALLEY/CARTON SAC**

**SITE CODE: 001398**

Rye Water Valley/Carton SAC is located between Leixlip and Maynooth, in Counties Meath and Kildare, and extends along the Rye Water, a tributary of the River Liffey. 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 (\* = priority; numbers in brackets are Natura 2000 codes):

[7220] Petrifying Springs\*

[1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)

[1016] Desmoulin's Whorl Snail (*Vertigo moulinsiana*)

The Rye Water in Carton Estate is dammed at intervals, creating a series of lakes.

Reed Sweet-grass (*Glyceria maxima*) is frequent around the lakes, along with Yellow Iris (*Iris pseudacorus*), Reed Canary-grass (*Phalaris arundinacea*), Bulrush (*Typha latifolia*), Water Forget-me-not (*Myosotis scorpioides*), Marsh-marigold (*Caltha palustris*) and starworts (*Callitriche* spp.). Along the remainder of the site the river has been dredged and much of the reed fringe removed.

To the north-west of Carton Bridge a small clump of willows (*Salix* spp.), with dogwood (*Cornus* sp.), Alder (*Alnus glutinosa*), Ash (*Fraxinus excelsior*) and Elder (*Sambucus nigra*) occurs. The ground flora found here includes Golden Saxifrage (*Chrysosplenium oppositifolium*), Meadowsweet (*Filipendula ulmaria*), Common Valerian (*Valeriana officinalis*), Wavy Bitter-cress (*Cardamine flexuosa*) and Bittersweet (*Solanum dulcamara*).

The woods on Carton Estate are mostly old demesne woods with both deciduous and coniferous species. Conifers, including some Yew (*Taxus baccata*) – a native species, are dominant, with Beech (*Fagus sylvatica*), oak (*Quercus* sp.), Sycamore (*Acer pseudoplatanus*), Ash and Hazel (*Corylus avellana*) also occurring. The ground flora is dominated by Ivy (*Hedera helix*), with such species as Hedge Woundwort (*Stachys sylvatica*), Wood Speedwell (*Veronica montana*), Woodruff (*Galium odoratum*), Wood Avens (*Geum urbanum*), Common Dog-violet (*Viola riviniana*), Wild Angelica (*Angelica sylvestris*), Ramsons (*Allium ursinum*), Ground-ivy (*Glechoma hederacea*) and Ivy Broomrape (*Orobanche hederæ*) also found.

Hairy St. John's-wort (*Hypericum hirsutum*), a species legally protected under the Flora (Protection) Order, 1999, occurs in Carton Estate and there is an old record from the estate for the similarly protected Hairy Violet (*Viola hirta*). However, this latter species has not been recorded from the site in recent years. Another species listed in the Red Data Book, Green Figwort (*Scrophularia umbrosa*), occurs on the site in several locations by the Rye Water. The woods at Carton Demesne are the site of a rare Myxomycete fungus, *Diderma deplanatum*.

The marsh, mineral spring and seepage area found at Louisa Bridge supports a good diversity of plant species, including stoneworts, Marsh Arrowgrass (*Triglochin palustris*), Purple Moor-grass (*Molinea caerulea*), sedges (*Carex* spp.), Common Butterwort (*Pinguicula vulgaris*), Marsh Lousewort (*Pedicularis palustris*), Grass-of-parnassus (*Parnassia palustris*) and Cuckooflower (*Cardamine pratensis*). The mineral spring found at the site is of a type considered to be rare in Europe and is a habitat listed on Annex I of the E.U. Habitats Directive. The Red Data Book species Blue Fleabane (*Erigeron acer*) is found growing on a wall at Louisa Bridge.

Within the woods, Blackcap, Woodcock and Long-eared Owl have been recorded. Little Grebe, Coot, Moorhen, Tufted Duck, Teal and Kingfisher, the latter a species listed on Annex I of the E.U. Birds Directive, occur on and about the lake. The Rye Water is also a spawning ground for Trout and Salmon, and the rare, Whiteclawed Crayfish (*Austroptamobius pallipes*) has been recorded at Leixlip. The latter two species are listed on Annex II of the E.U. Habitats Directive. The rare Narrowmouthed Whorl Snail and Desmoulin's Whorl Snail occur in marsh vegetation near Louisa Bridge. Both are rare in Ireland and in Europe, and are listed on Annex II of the E.U. Habitats Directive. The scarce dragonfly, *Orthetrum coerulescens*, has also been recorded at Louisa Bridge.

The conservation importance of the site lies in the presence of several rare and threatened plant and animal species, and the presence of petrifying springs, a habitat type listed on Annex I of the E.U. Habitats Directive. The woods found on Carton Estate and their birdlife are of additional interest.

Version date: 11.10.2013

001398\_Rev13.Doc

## SITE SYNOPSIS

**SITE NAME: MOLERICK BOG**

**SITE CODE: 001582**

Molerick Bog NHA is situated approximately 4 km south-west of Longwood in the townlands of Molerick, Anneville and Blackshade Co. Meath. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded by the Dublin-Sligo railway line to the north and local roads to the east.

The site consists of a small basin bog with a dry surface. Cutover is found all around the site, there is broadleaved woodland located to the south-west, wet woodland is located to the north-west, scrub to the east, humid grassland to the south, a flush/fen area to the west and humid grassland on mineral soil to the north-west.

Much of the high bog has vegetation typical of a Midland Raised Bog including Ling Heather (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Deergrass (*Scirpus cespitosus*), Common Cottongrass (*Eriophorum angustifolium*) and Sphagnum spp.. The Midland Raised Bog indicator species Bog-rosemary (*Andromeda polifolia*) is also found on the bog. Downy Birch (*Betula pubescens*) is found growing in a wet part of the high bog and is also invading the high bog margins from the cutover.

Active cutover bog occurs on the east and west margins of the high bog. Scrub occurs to the north, east and south-east of the site. Dry, broadleaved semi-natural woodland on cutover, comprising Ash (*Fraxinus excelsior*), Downy Birch and Willow (*Salix* spp.) with some Hawthorn (*Crataegus monogyna*) and Elder (*Sambucus nigra*) is located to the south-west of the site. A small area of wet woodland dominated by Alder (*Alnus glutinosa*) is located to the north-west. Wet improved grassland occurs to the south of the high bog, supporting Rushes (*Juncus* spp.), bog mosses (*Sphagnum* spp.) and Common Cottongrass. There is also a fen/flush area to the south-east margin of the site on cutover. Species found here include Marsh Cinquefoil (*Potentilla palustris*), Common Marsh-bedstraw (*Galium palustre*), Ragged Robin (*Lychnis flos-cuculi*), Sedges (*Carex* spp.), Marsh Pennywort (*Hydrocotyle vulgaris*) and several orchids, including Common Twayblade (*Listera ovata*).

Current landuse on the site includes extensive active peat-cutting on the east and western margins, with old peat-cuttings all around the site. Areas of cutover have been reclaimed for agricultural purposes to the south. Damaging activities associated with these landuses include drainage and burning of the high bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.

Molerick Bog NHA is a site of conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This site is located in Co. Meath at the eastern extreme of raised bogs in Ireland and is one of only four raised bogs in the county. Ireland has a high proportion of the total E.U. resource of this habitat type (over 50%) and so has a special responsibility for its conservation at an international level.

14.11.2002