ECOLOGICAL IMPACT ASSESSMENT REPORT

Proposed Development of a New Machinery Yard and Regional Salt Barn at Jigginstown, Newhall, Naas, Co Kildare

Prepared for: Kilgallen & Partner Consulting Engineers

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1 SUMMARY

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1.2 The proposed development site ("the Site") is within the townland of Jigginstown west of Naas Town, Co Kildare. An existing retail park is adjacent north - east of the Site and an M7 motorway on ramp borders the Site to the north-west. Lands north of the Site are commercial in nature while lands to the south are agricultural consisting of arable field and pasture land separated by hedgerows and treelines. There is a drainage ditch along the western boundary of the site which joins the road drainage network immediately downstream of the Site.

1.3 The Site is approximately 1.88 ha in size and has been previously infilled with soil. The proposed development will consist of the construction of an administration building, vehicle maintenance work shop and 23,000 tonne strategic salt barn with ancillary buildings and structures within the Site.

1.4 The aim of this report is to evaluate the habitats and species present at the Site, as well as characterising the impacts and effects of the proposed development. Recommendations on appropriate mitigation measures will be given if required, as will recommendations for biodiversity enhancement.

1.5 The Site was surveyed by SLR ecologist Owen Twomey on 1 February 2019 in suitable weather conditions. There were no constraints to the survey. Owen prepared the EcIA report with input from Elaine Dromey MCIEEM. Elaine carried out the technical review.

1.6 A desk study was carried out to collate available information site designated for nature conservation as well as records of rare and/or protected species within the potential zone of influence of the proposed development. There is a single designated site within 2 k of the Site; The Grand Canal pNHA. There is no potential for direct impacts and effects such as habitat loss within the pNHA as a result of the proposed development as there is no overlap of the Site and the boundary of the Grand Canal pNHA. It was also considered that the lack of connectivity between the Sites removed potential for indirect impacts or effects to the pNHA.

1.7 The dominant habitats within the Site is Disturbed ground (ED) and immature woodland (WS2). The remaining habitats within the Site are composed bordering habitat such as hedgerow (WL1) and drainage ditch (FW4). The drainage ditch forms the western boundary of the Site and flows in a northern direction within the site. Immediately downstream of the Site the ditch is diverted west and incorporated into the surface water management of a motorway slip road. The drainage ditch may provide suitable habitat for amphibians; however, none were reordered during the site visit. Several wintering snipe were recorded adjacent to the Site. There were a small number of mammal tracks noted during the site visit that are likely to be rabbit. There were no other signs of mammals noted and there was no resting or breeding places present. There are no features with the potential to support roosting bats within the Site and similarly the foraging and commuting opportunities for bats are negligible.

1.8 There will be a permanent loss of disturbed ground and immature woodland within the site, but as this is a common and widely occurring habitat that doesn't provide suitable breeding and / or foraging opportunities for mammals and birds, this loss will only be significant at the level of the Site. Overall the residual effects are not anticipated to be significant.

2 INTRODUCTION

2.1 SLR Consulting Ireland (SLR) was commissioned in January 2019 by Kilgallen & Partners Consulting Engineers, on behalf of the Kildare County Council, to prepare an Ecological Impact Assessment (EcIA) report for the proposed development of a machinery yard at Jigginstown, Newhall, Naas, Co. Kildare.

Background to the Commission

2.2 The proposed machinery yard at Jigginstown, Newhall will replace the existing facility currently located in Newbridge, Co. Kildare. The proposed Site at Jigginstown, Newhall, Naas is brownfield and has previously been infilled with soils as part of the development of Newhall Retail Park. The proposed development will provide a range of services to Kildare County Council including:

- Coordination of winter maintenance,
- Coordination of surface dressing operations,
- Vehicle hire and purchase,
- Salt Storage,
- Fuel Storage,
- Provision of vehicles for pothole repair and street sweeping,
- Bitumen Storage,
- Vehicle re-spray facility,
- Plant storage,
- Workshop,
- Offices.

General Description of the Site

2.3 The proposed development site ("the Site") is centred at approximate Irish Transverse Mercator (ITM) coordinates 686530 E 718354 N (**Figure 1**.) within the townland of Jigginstown, Co Kildare ca. 2.5 km west of the centre of Naas Town. The Site is approximately 1.88 ha in size and. has previously been infilled with soil. Newhall Retail Park is directly adjacent to the eastern boundary of the Site while an on ramp of the M7 motorway borders the Site to the north. Lands in the surrounding area north- west and north- east of the Site are in use for commercial development, while lands south west and south east are in agricultural use. There is a drainage ditch on the western boundary of the Site. This drain flows in a northerly direction within the site before joining a road drainage network immediately downstream of the Site. The Site has previously been in-filled using soils excavated from the development of Newhall Retail park north - east of the Site.

Brief Project Description

2.4 The proposed development will consist of the construction of an administration building, vehicle maintenance work shop and 23,000 tonne regional salt barn with ancillary buildings and structures. These include;

- A 4-bay vehicle maintenance workshop
- Secure internal storage with admin space above
- Fuel storage
- Bitumen storage
- Vehicle storage
- Truck wash
- Weighbridge
- Secure external storage

Purpose of the Report

2.5 The purpose of this Ecological Impact Assessment report is to evaluate the habitats and species present at the Site, as well as characterising the impacts and effects of the proposed development. Recommendations on appropriate mitigation measures will be given if required, as will recommendations for biodiversity enhancement.

Evidence of Technical Competence and Experience

2.6 The ecology fieldwork for this project was carried out by Owen Twomey BSc PgDip. Owen holds a BSc in Environmental Science (Zoology) and a Postgraduate Diploma in Ecological Assessment. Owen also prepared this report and has previously prepared similar ecological impact assessment reports for a range of different projects.

2.7 Elaine Dromey BSc MSc MCIEEM carried out the technical review of this report Elaine holds a BSc in Earth Science from University College Cork and an MSc in Vegetation Survey and Assessment from the University of Reading, UK. Elaine has previously prepared and technically reviewed similar impact assessment reports for a large variety of different projects.

3 RELEVANT PLANNING POLICY AND LEGISLATION

3.1 The planning policy and legislation that is relevant to the proposed development is set out in the following sections.

Local Planning Policy

Kildare County Development Plan 2017 - 2023

3.2 The Site falls within the Kildare County Council Development Plan 2017 – 2023. The policies and objectives of this development plan in relation to natural heritage and green infrastructure are set out in Chapter 13 of the Kildare County Development Plan. These policies are listed in Appendix C of this report.

3.3 In summary; the overarching aim of these policies to protect, conserve enhance and manage County Kildare's natural heritage and green infrastructure through proper management, sensitive enhancement and appropriate development.

County Kildare Biodiversity Plan 2009 - 2014

3.4 The most recent County Kildare Biodiversity Plan seeks to; improve the knowledge of the county's natural resources, raise awareness, develop appreciation the county's biodiversity and the functions which it preforms, and guide the sustainable development of the county in manner which respects and protects biodiversity. The Biodiversity Plan aims to achieve these goals by implementing four key objectives;

- To facilitate the collection and dissemination of heritage information.
- To raise public awareness, understanding and appreciation of County Kildare's heritage.
- To promote best practice in heritage conservation and management.
- To inform policy and provide advice to Kildare local authorities.

Legislation

3.5 The EIA Directive (85/337/EEC) is in force since 1985 and applies to a wide range of defined public and private projects, which are defined in Annexes I and II of the EIA Directive[1]. The EIA Directive of 1985 has been amended three times, in 1997, in 2003 and in 2009. The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011. Directive 2011/92/EU has been amended in 2014 by Directive 2014/52/EU.

3.6 The EIA Directive was first transposed into Irish law by the European Communities (Environmental Impact Assessment) Regulations, 1989 (S.I. No. 349 of 1989) which amended the Local Government (Planning and Development) Act, 1963 (and other legislation) to provide for environmental impact assessment. The European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (S.I. 296 of 2018) came into force on 1 September 2018, save for limited provisions which to came into effect in January 2019. The Regulations principally seek to implement the requirements of EIA Directive 2014/52/EU.

[1] http://ec.europa.eu/environment/eia/eia-legalcontext.htm

3.7 The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora was adopted in 1992 and aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

3.8 The Natura 2000 network of protected areas is known as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). In general terms, they are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. The requirements of the Habitats Directive have been transposed into Irish law through the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I. No. 477/2011]. This legislation affords protection to both Special Protection Areas and Special Areas of Conservation.

3.9 Special Areas of Conservation (SAC) are designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive 92/43/EEC (Habitats Directive) which is transposed into Irish law by the EC (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). Special Protection Areas (SPA) are classified under the Birds Directive (2009/147/EC on the Conservation of Wild Birds). Article 6(3) of the Habitats Directive requires an 'appropriate assessment' to be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An 'appropriate assessment' is an evaluation of the potential impacts of a plan or project on the integrity of a Natura 2000 site, and the incorporation, where necessary, of measures to mitigate or avoid negative effects.

3.10 Flora and fauna in Ireland are protected at a national level by the Wildlife Acts 1976 to 2018 and the Flora (Protection) Order 2015. Natural Heritage Areas (NHA) are areas that are considered to be important for the habitats present or for the species of plants and animals supported by those habitats. Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they were formally proposed for designation. Section 19(1) of the Act states that '*Where there is a subsisting natural heritage area order in respect of any land, no person shall carry out, or cause or permit to be carried out, on that land any works specified in the order or any works which are liable to destroy or to significantly alter, damage or interfere with the features by reason of which the designation order was made*'.

3.11 In addition, a list of proposed Natural Heritage Areas (pNHAs) was published in 1995 but to date these have not had their status confirmed. Prior to statutory designation, pNHAs are subject to limited protection under various agri-environment and forestry schemes and under local authority planning strategies such as County Development Plans.

4 METHODS

4.1 The methods used to carry out the survey of the Site, to evaluate the habitats and species and to prepare the report is outlined in this section. The assessment method for this report was developed using the standard professional impact assessment guidance published in 2018 by Chartered Institute of Ecology and Environmental Management (CIEEM).

Scope of the Report

4.2 The scope of this report is to set out the baseline ecology of the Site using the findings of the desk and field study. The extents of the study area are delineated by the Site boundary (redline boundary). The scope of the baseline ecology survey is to classify the habitats present within the Site (redline boundaries) and to evaluate their suitability to support protected species.

Zone of Influence

4.3 The 'zone of influence' for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change (CIEEM, 2018).

4.4 The zone of influence of the proposed development at Jigginstown, Co. Kildare is discussed in paragraphs 5.3 – 5.4 of this report.

Desk Study

4.5 A desk study was carried out to collate the available existing ecological information on the Site. The Site and the surrounding area were viewed using available satellite imagery[2].

4.6 The National Parks and Wildlife Service (NPWS)[3] and the National Biodiversity Data Centre (NBDC)[4] online resources were accessed for information on sites designated for nature conservation and on protected habitats and species. Only records for the past 10 years are considered within this report as older records are unlikely to still be relevant given their age and the changes in land management that has occurred in the intervening period. Environmental Protection Agency (EPA) Maps[5] was accessed for other environmental information relevant to preparation of this report, such as surface water features.

4.7 Kildare County Councils website was also accessed for information on relevant planning policy while the planning portal[6] was accessed for information on other planning applications within the Site and immediate surrounding area.

4.8 The conservation status of birds is evaluated using Birds of Conservation Concern in Ireland (BoCCI) published by BirdWatch Ireland and the RSPB NI (Colhoun & Cummins, 2013). This is a list of priority bird species for conservation action on the island of Ireland. The BoCCI lists birds which

[2] https://www.google.ie/maps & http://www.bing.com/maps/ (last accessed 06 Feb 2019)
[3] www.npws.ie (last accessed 04 Feb 2019)
[4] http://maps.biodiversityireland.ie/#/Map (last accessed 05 Feb 2019)
[5] http://gis.epa.ie/(last accessed 31 Oct 2018) (last accessed 06 Feb 2019)
[6] http://www.kildare.ie/CountyCouncil/OnlineServices/OnlinePlanningEnquiries/ (last accessed 08 Feb 2019)

breed and / or winter in Ireland and classifies them into three separate lists; Red, Amber and Green; based on the conservation status of the bird and hence their conservation priority.

4.9 The conservation status of mammals within Ireland and Europe is evaluated using one or more of the following documents; Wildlife Acts (1976 - 2012), the Red List of Terrestrial Mammals (Marnell et al., 2009) and the EU Habitats Directive 92/43/EEC.

Field Surveys

4.10 The Site was visited on 1 Feb 2018 by SLR ecologist Owen Twomey. The Site visit was carried out in dry weather conditions with light breezes[7], and cloud cover at 2 oktas[8]. Temperature was 3°C. The objective of the site visit was to undertake a walkover survey to better understand the ecology of the Site and to determine its ecological value.

Habitats

4.11 Habitats were identified, described and classified to level 3 (where possible) of the standard Heritage Council classification scheme (Fossitt, 2000) during the walkover survey. Features of ecological interest, if present, were noted and the dominant plant species present in each habitat type were recorded. This is not a comprehensive list of plant species but is sufficient to broadly describe the botanical interest of the site. Species nomenclature follows Parnell & Curtis (2012) for scientific and English names of vascular plants.

Species

4.12 Mammal tracks, signs or direct observations were recorded during the walkover survey of the Site. Incidental sightings of birds, mammals or amphibians were noted during the walkover survey. The habitats present were also evaluated in terms of suitability to support foraging bats. Trees with features; such as areas of loose flaking bark, splits, cavities etc.; that could provide suitable roost sites for bats, where present, were also noted during the ground level survey. The suitability of the habitats for roosting and commuting and foraging bats was evaluated using the Bat Conservation Trust guidelines (see Appendix A).

Impact Assessment

4.13 The ecological evaluation and impact assessment within this report has been undertaken following the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland ("CIEEM guidelines").

Important Ecological Features

4.14 Ecological features can be important for a variety of reasons and the rationale used to identify them is explained in the text. Importance may relate, for example, to the quality or extent of the site or habitats therein; habitat and / or species rarity; the extent to which such habitats and / or species are threatened throughout their range, or to their rate of decline.

[7] 2 on the Beaufort Wind Scale https://www.spc.noaa.gov/faq/tornado/beaufort.html

[8] Cloud amount is reported in oktas or eighths. Okta is a unit used in expressing the extent of cloud cover, equal to one eighth of the sky. https://www.metoffice.gov.uk/guide/weather/observations-guide/how-we-measure-cloud

Evaluation: Determining Importance

4.15 The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known / published accounts of distribution and rarity where available, and professional experience:

- International (European).
- National (Ireland).
- Regional (Leinster).
- County (Kildare)
- Townland (Jigginstown).
- Local (intermediate between the Site and Townland).
- Site (Development site delineated by redline boundary).

4.16 The above frame of reference is applied to the ecological features identified during the desk-study and surveys of the Site.

Impact Assessment

4.17 The impact assessment process involves the following steps:

- identifying and characterising impacts;
- incorporating measures to avoid and mitigate (reduce) these impacts;
- assessing the significance of any residual effects after mitigation;
- identifying appropriate compensation measures to offset significant residual effects (if required); and
- identifying opportunities for ecological enhancement.

4.18 When describing impacts, reference has been made to the following characteristics, as appropriate:

- Positive or negative;
- Extent;
- Magnitude;
- Duration;
- Timing;
- Frequency; and
- Reversibility.

4.19 The impact assessment process considers both direct and indirect impacts: direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat occupied by a species during the construction process. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or feature, e.g. the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to the drying out of wet grassland.

4.20 Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance:

- Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area.

- Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

Significant Effects

4.21 The 2018 CIEEM guidelines sets out information, in paragraphs 5.24 through to 5.28, of the document, about the concept of ecological significance. Significant effects are qualified with reference to an appropriate geographic scale, and the scale of significance of an effect may or may not be the same as the geographic context in which the feature is considered important.

4.22 A significant effect, for the purposes of EcIA, is defined as an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.

4.23 The nature of the identified impacts on each assessed feature is characterised. Where it is concluded that an effect would be likely to reduce the importance of an assessed feature, it is described as significant. The degree of significance of the effect takes into account the geographic context of the feature's importance and the degree to which its interest is judged to be affected.

Cumulative Effects

4.24 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

4.25 Other plans and projects that should be considered when establishing cumulative effects are:

- proposals for which consent has been applied but which are awaiting determination;
- projects which have been granted consent but which have not yet been started or which have been started but are not yet completed (i.e. under construction);
- proposals which have been refused permission but which are subject to appeal and the appeal is undetermined;
- constructed developments whose full environmental effects are not yet felt and therefore cannot be accounted for in the baseline; or
- developments specifically referenced in a National Policy Statement, a National Plan or a Local Plan.

Mitigation

4.26 Where significant impacts have been identified, the mitigation hierarchy has been taken into account, as suggested in the 2018 CIEEM Guidelines, which sets out a sequential approach of avoidance of impacts where possible, application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Once avoidance and mitigation measures have been applied, along with any necessary compensation measures, and opportunities for enhancement incorporated, residual impacts have then been identified.

Limitations / Difficulties Encountered

4.27 The walkover survey was carried out in suitable weather conditions and all areas of the Site were accessible. While the survey was carried out outside the flowering season (typically May – September) this was not considered a constraint given that the habitats present are relatively species poor with only commonly occurring floral species present thereby allowing confident identification even vegetatively.

5 BASELINE ECOLOGICAL CONDITIONS

5.1 This section sets out the baseline ecological conditions using the findings of the desk study and survey of the Site.

Desk Study

5.2 The potential zone of influence of the project was identified during the desk study and is discussed within this section. The sites designated for nature conservation within the identified potential zone of influence are set out in this section as are the results of the online search for rare and /or protected flora and fauna.

Identification of the potential zone of influence

5.3 The proposed construction and operation of the machinery yard has the potential to result in localised impacts and minor localised effects. The potential zone of influence for proposed developments of this scale and nature, that do not result in emissions to air or water or where such emissions are so low that any effect would not be appreciable would be limited a maximum distance of 2 km and is likely to be much less than this.

5.4 Using a precautionary approach, a potential zone of influence of 2 km is applied to the proposed machinery yard at Jigginstown, Newhall, Co. Kildare.

Sites Designated for Nature Conservation

5.5 The site location and the 2 km potential zone of influence are shown on **Figure 1**.

Natura 2000 (European) Sites

5.6 There are no Natura 2000 sites within the 2 km potential zone of influence of the proposed development. The closest Natura 2000 site to the Site is Mouds Bog SAC (002331) ca 5.7 km[9] to the west.

5.7 The Appropriate Assessment (AA) screening report, prepared by SLR Consulting as part of this submission, extended the zone of influence to 5 km in a very precautious approach. The AA screening report considered that there is no potential for effects on any Natura 2000 sites as a result of the proposed machinery yard.

5.8 Natura 2000 sites can be scoped out of this assessment and are not considered further in this report.

Nationally Important Sites

5.9 There is a single proposed Natural Heritage Area (pNHA) within the 2 km potential zone of influence of the proposed development. The Grand Canal pNHA (002104) is ca. 230 m east of the Site at its closest point.

5.10 The Grand Canal pNHA comprises the canal channel and the banks on either side along a number of branches. A number of habitats are found within the canal boundaries, including hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland. The ecological value of the canal lies more in the diversity of species it supports along its linear habitats than in the presence of rare species.

[9] When measured in a straight line

5.11 There is no potential for direct impacts and effects such as habitat loss within the pNHA as a result of the proposed development as there is no overlap of the Site and the boundary of the Grand Canal pNHA. The pNHA is separated from the site by agricultural fields and more than one hedgerow. There is also a ca. 2.5 m high earthen berm along the southwestern boundary of the site. The drainage ditch on the western boundary of the site drains to the north away from the canal. The Site is not connected to The Grand Canal pNHA via surface water pathways. There is no potential for indirect impacts or effects to the habitats that comprise The Grand Canal pNHA. The Grand Canal pNHA can therefore be excluded from further consideration in this report as it is not considered likely to be affected by the proposed development.

5.12 There are no other nationally important sites within 5 km of the proposed development and as there is no potential for impacts they can be scoped out of this assessment and are not considered further in this report.

Rare and Protected Flora and Fauna

5.13 The NBDC database was searched for records of rare and/or protected species from the 1 km grid square N6818 within which the Site is located. The records returned, dated within the last 10 years, are presented in Table 4 below.

5.14 The absence of recent (within 10 years) records of species from the NBDC database does not necessarily imply that a species does not occur within the search area rather it has not formally been recorded as present.

Table 1 Rare and/or Protected Species Within Grid Square N6818

Species recorded	Date of last record	Protected Status	Source / dataset
Common Wood Pigeon *Columba palumbus*	07/08/2015	Wildlife Acts EU Directive Annex II, III	NBDC Birds of Ireland
Mallard *Anas platyrhynchos*	04/03/2013	Wildlife Acts EU Directive Annex II, III	NBDC Birds of Ireland
Mute Swan *Cygnus olor*	25/02/2016	Wildlife Acts BoCCI – Amber list	NBDC Birds of Ireland
White-clawed Crayfish *Austropotamobius pallipes*	20/04/2012	Wildlife Acts EU Directive Annex II, V	NBDC General Biodiversity Records from Ireland
Eurasian Badger *Meles meles*	15/08/2016	Wildlife Acts	NBDC Mammals in Ireland 2016-2025
West European Hedgehog *Erinaceus europaeus*	06/01/2016	Wildlife Acts	NBDC Mammals in Ireland 2016-2025

Site Visit

Habitats

5.15 The habitats present within the Site are described, classified and evaluated in this section of the report and shown on **Figure 2.**

ED Disturbed Ground

5.16 The largest proportion of the Site (ca. 1 ha) can be best defined as a mosaic of disturbed ground, primarily comprising spoil and bare ground (ED2) and recolonising bare ground (ED3) (**Plate 1**). This has been disturbed in the past through soil in-filling as part of an adjacent development.

5.17 Large areas of soft rush *Juncus effusus* have developed on the site forming an almost homogenous sward over areas. Hard rush *Juncus inflexus* is also present but in much smaller numbers. In the eastern extent of the Site rush species give way to more grasses, particularly cock's-foot *Dactylis glomerata*, perennial rye-grass *Lolium perenne* and false oat-grass *Arrhenatherum elatius*. In the centre of the Site there are areas of bare ground as well as smaller areas of spoil. Gorse *Ulex europaeus* is common in this area. Some machinery tracks in these areas contained small areas of standing water during the site visit. Pointed spear-moss *Calliergon cuspidata* was noted in some of these small wet areas.

5.18 Some alder *Alnus glutinosa* and willow *Sallix* sp. seedlings and saplings are encroaching into this habitat, particularly in the west where it adjoins an area of immature woodland within the Site.

5.19 Other species recorded within this habitat include creeping cinquefoil *Potentilla reptans,* ribwort plantain *Plantago lanceolata*, dandelion *Taraxacum officinale* agg., creeping buttercup *Ranunculus repens*, spear thistle *Cirsium vulgare*, common dogwood *Cornus sanguinea*, bramble *Rubus fruticosus* agg., nettle *urtica dioica,* clovers *Trifolium* spp., willowherb *Epilobium* sp. daisy *Bellis perennis,* scarlet pimpernel *Anagallis arvensis*, dock *Rumex* sp., and common ragwort *Senecio jacobaea*.

5.20 While there is some variation within this habitat the species composition is comprised of common and widespread species which are typically associated with disturbed ground. Disturbed ground habitat within the Site is evaluated as important at the Site level.

FW 4 Drainage Ditch

5.21 A drainage ditch forms the western boundary of the Site. This ditch is approximately 1 m wide and is bordered by immature woodland within the Site and an adjacent field hedgerow outside of the Site. The ditch was heavily silted with a slow flow ca. 10 cm deep at the time of survey (**Plate 2**). The Site slopes towards the ditch and there are two outflow pipes with associated headwalls draining into it from the Site. Sections of the ditch bank have also been replaced with concrete engineering within the site.

5.22 The ditch flows in a northern direction within the site and is largely unvegetated. Immediately downstream of the Site the ditch is diverted west and incorporated into the surface water management of the motorway slip road.

5.23 The altered nature of the ditch within the Site and alterations and diversion directly downstream of the Site mean that the ditch is not likely to support fish and is of limited value to amphibian species such as common frog *Rana temporaria* and smooth newt *Lissotriton vulgaris*. The ditch would be evaluated as important at the Site level.

WL1 Hedgerow

5.24 There are two hedgerows within the Site. The first hedgerow forms the north-west boundary and runs adjacent to the adjoining road (**Plate 3**). This hedgerow is heavily managed along much of its

length, has a large number of gaps and is not stock proof. This hedge is ca. 5 m tall and has a is wooden fencing associated with it. The second hedgerow is along the southeast boundary adjacent to the bordering agricultural field. This hedgerow is less managed, with less gaps and is stock proof over much of its length. Both of these hedgerows merge into the immature woodland in the western portion of the Site.

5.25 Hawthorn *Crataegus monogyna* is the dominant species in both hedgerows within the Site. Ash *Fraxinus excelsior,* sycamore *Acer pseudoplatanus* and willow *Salix* sp. are present in lower numbers. Ivy *Helix hedera* and bramble comprises the majority of the ground flora.

5.26 This habitat is common and widespread throughout the surrounding landscape. and throughout the island of Ireland. This habitat would therefore be evaluated as important at the Site level.

WS2 Immature Woodland

5.27 Immature woodland has established over much of the Site (ca 0.8 ha) after the site was infilled with soil (circa 10 years ago). This immature woodland has developed from opportunistic self seeding species of trees. It is primarily comprised of young, thin bole alder trees (**Plate 4**) with small amounts of willow and ash are also present. These trees are all approximately the same age class and typically fall between 4 -5 m tall with a few exceptions

5.28 The shrub layer is absent within most of this habitat and where present is dominated by bramble. The field layer varies slightly throughout the habitat. Hard rush and soft rush are common while ivy is more common in drier areas. Some fallen trees and dead wood are also present. Other species recorded within the field layer of this habitat are similar to those recorded in the adjacent disturbed ground habitat. These include, daisy, dandelion, spear thistle, nettle, cleavers *Galium aparine*, creeping cinquefoil, willowherb, perennial rye-grass, cock's foot

5.29 Alder self-seeds rapidly and as a result can quickly colonise bare ground, particularly near watercourses or other damp ground. This example of immature woodland is not species-rich with the only species present being commonly occurring and widespread in a wide range of different habitat types. Immature woodland such as this is common throughout Ireland. This habitat would therefore be evaluated as important at the Site level.

Species

5.30 This section sets out the records returned for species during the desk study, the species noted during the walkover survey and the suitability of the habitats present to support such species.

Birds

5.31 The NBDC search carried out during the desk study returned two records of mute swan within the 1 km grid square N6818 within which the Site is located. Mute swan is amber listed in Ireland as more than 20% of the European population winter in Ireland. The European population is considered to be Secure. Mute swans are widespread on lakes, ponds and rivers.[10]. There are no watercourses or waterbodies of sufficient size to support this species. These records are more than likely to be from the Grand Canal east of the Site.

5.32 The birds seen or heard during the walkover survey on 1 February 2019 were noted and the habitats present were evaluated for their ability to support bird species. The species recorded is not an exhaustive list but provides an indication of the bird assemblage.

[10] https://www.birdwatchireland.ie/IrelandsBirds/Swans/MuteSwan/tabid/149/Default.aspx

5.33 Several snipe *Gallinago gallinago* were observed in a hollow with standing water immediately northeast of the Site. Snipe is amber-listed in Ireland due to concerns over the European population which has undergone a moderate recent decline. Snipe has a highly dispersed distribution in winter. They forage across a variety of wetland and damp habitats. Particularly high concentrations are found on the fringes of lowland lakes[11]. While wintering snipe are present around the Site the species is not likely to be breeding there as the breeding population in Ireland is extremely restricted in distribution and the habitats present are not considered likely to offer optimal breeding habitat for the species.

5.34 All birds recorded within the Site are common and widespread species. These included; robin *Erithacus rubercula*, Chaffinch *Fringilla coelebs*, woodpigeon *Columba palumbus,* fieldfare *Turdus pilaris* and blackbird *Turdus merula*. Rook *Corvus frugilegus*, jackdaw *Corvus monedula* and magpie *Pica pica* were observed fly over the Site. The habitats within the Site may offer some limited nesting and foraging habitat for these bird species.

5.35 The bird assemblage present at the Site would be evaluated as important at the Site level.

Bats

5.36 The habitats present within the Site are of low to moderate suitability for small numbers of commuting and foraging bats but given that the Site is somewhat isolated within the landscape it is not likely to be critical for any local bat populations. The hedgerow in the southeast of the Site has some limited connectivity to the Grand Canal through the local hedgerow network. It is proposed to retain this hedgerow as part of the development landscaping

5.37 The Site does offers negligible potential for roosting bats and the potential for use by foraging and / or commuting bats is limited. It is therefore considered that bats do not require further detailed assessment for this proposal and can be scoped out.

Other Mammals

5.38 NBDC returned records for badger within the grid square W75C within which the Site is located. These records were generated from the roadkill survey dataset from the local road network. There were no badger setts or any other evidence of badger activity; such as snuffle holes, digging or latrines; noted within the Site. The slightly waterlogged soils would indicate that habitats present are not likely to be used by badger. Badger is therefore scoped out of this assessment and excluded from further consideration within this report.

5.39 There were a small number of small mammal tracks through the western area of the Site, the size of which would indicate there use by rabbit *Oryctolagus cuniculus*. No other evidence of mammal use of the Site were observed.

5.40 The proposed development will not result in the loss of important habitats for mammals. It is considered that the proposed development does not pose a threat to badger, rabbit or other mammals. Further detailed assessment of mammals is not required and they can be scoped out of further consideration in this report.

Amphibians

5.41 There were no amphibians recorded during the site visit nor are they records of amphibians from the grid square within which the Site is located. The drainage ditch on Site may offer suitable habitat for spawning frogs but is not likely to support smooth newt as suitable terrestrial habitat for this species is limited within the Site and wider area.

[11] https://www.birdwatchireland.ie/IrelandsBirds/Waders/Snipe/tabid/328/Default.aspx

5.42 Further detailed assessment of amphibians is not required and they can be scoped out of further consideration in this report.

Summary of Evaluation of Ecological Features

5.43 **Table 3** summarises the ecological features described and evaluated in the preceding section of this chapter. The importance of these features is summarised along with their legal status and rationale for not carrying forward any features for detailed assessment.

Table 3 Summary of Evaluation of Ecological Features

Ecological Feature	Scale at which Feature is Important[12]	Comments on Legal Status and / or Importance
Natura 2000 sites	International	Natura 2000 sites have been screened out in the Appropriate Assessment screening report prepared as part of this application.
pNHA / NHA (nationally important sites)	National	pNHA / NHA have been scoped out due to distance and lack of ecological connectivity, through landscape or surface water features, to the Site.
Habitats	Site	The habitats present evaluated as important at the Site level are sufficiently widespread and commonly occurring within the landscape. These habitats are sufficiently widespread and resilient that they do not require detailed assessment.
Birds	Site	Foraging and breeding habitat for birds within the Site is extremely limited. The bird assemblage of the Site would be evaluated as important at Site level. However it is considered further within this report due to the presence of wintering snipe (amber listed) around the Site.
Mammals	Site	Mammals, including bats, are scoped out of further consideration within this report as either not likely to be present at all or are not likely to be significantly affected by the proposed development.
Amphibians	Site	The drainage ditch within the Site offer suitable habitat for spawning frogs and is therefore carried forward for detailed assessment

[12] See section 5.29 of this report for geographic scale of importance.

6 ASSESSMENT OF EFFECTS

6.1 This section sets out the potential impacts and their effects on important ecological features. The information available from the desk study and fieldwork has been used to identify impacts and the significant effects including positive, negative, direct, indirect and cumulative effects.

Embedded / Designed – In Mitigation

6.2 The following design principles and "designed-in" mitigation have informed the assessment of impacts.

- Within the design of the proposal good practice environmental and pollution control measures are employed with regard to current best practice guidance such as, but not limited to, the following:
  - CIRIA C532, '*Control of water pollution from construction sites: guidance for consultants and contractors*' (2001).
  - CIRIA C741, '*Environmental good practice on site guide*' (2015 4th Ed.).
  - Compliance with the requirements of the *Greater Dublin Strategic Drainage Study*.
- Retention of the southeast boundary hedgerow as part of the proposed landscaping.
- The proposed surface water management will include
  - The use of catchpit manholes with sumps to trap silts and the use of infiltration beds below the underground storage for attenuated surface water.
  - Hydrocarbon separators with integrated silt chambers will be installed immediately upstream of outfalls to the receiving drain. These separators will be designed in accordance with IS EN 858.
- Surplus excavated material will be disposed of to a licensed waste facility and in accordance with waste management regulations.
- Fuel storage tanks will be bunded. The design, inspection and certification of the bunds shall comply with the document 'Guidance Note on Storage and Transfer of Materials for Scheduled Activities' published by the EPA. The bunds will provide a storage capacity equivalent to 110% of the capacity of the tank it protects.
- Run-off from the truck wash-down will be segregated from surface water run-off. Water used in the wash-down will be recycled; the recycling tank will be supplemented by mains water. Surplus run-off will go to foul water network
- Wastewater from the development will discharge to a network of sealed sewer pipes which will in turn discharge to an existing Irish Water Sewer. Run off from the salt barn aprons and associated areas will go to foul water network in winter when salt is being handled and to the surface water network during summer

Do Nothing Impact

6.3 In the absence of development, it is assumed that the immature alder woodland would develop further over time and become the dominant habitat within the Site. The Do Nothing Impact would result in no positive change in the ecological interest of the Site overtime.

Potential Impacts of the Development

6.4 The potential impacts of developing the Site are limited to habitat loss, temporary disturbance and displacement of species.

Birds

6.5 The loss of the disturbed ground and immature woodland that currently occupy the Site will result in the displacement of bird species that may use these areas. The immature woodland and hedgerow habitat within the Site may offer some nesting habitat for breeding birds. However, the majority of the bird assemblage present is commonly occurring and widespread species that will use a range of habitat types and so can be accommodated within suitable habitats in the surrounding landscape.

6.6 Wintering snipe was present in habitats around the Site during the site visit in February. As previously noted the species has a dispersed distribution in winter, foraging across a variety of wetland and damp habitats. Given the dispersed distribution of the species in winter there is sufficient capacity in the surrounding area and wider countryside to absorb any individuals displaced or disturbed as a result of the proposed development.

6.7 Bird species present on the Site are likely to be habituated to noise associated with operation of farm machinery and road traffic. However, there may be some temporary disturbance of birds if construction work is carried out close to breeding birds in the hedgerow and scrub along the perimeter of the Site.

6.8 The effect on the bird assemblage would be significant at the Site level.

Amphibians

6.9 Common frog may use the drainage ditch within the Site for breeding. The proposed development will not result in the removal or culverting of the ditch. Existing trees along the ditch will be retained as part of the proposed landscaping as will a grassy verge of ca. 4 m (**figure 3**). The proposed development will include surface water drainage to the ditch. However, as the "designed in" mitigation includes both silt and carbon interceptors, there will be no degradation to water quality during the operation phase.

6.10 The effect on amphibians will not be significant.

Cumulative Effects

6.11 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a proposed development results in individually insignificant impacts that, when considered in-combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

6.12 The effects of the proposed development are likely to be confined to the immediate area of the Site and will be limited to habitat loss and habitat degradation of commonly occurring and widespread habitats as well as temporary disturbance and displacement of species within an in the immediate surrounds of the Site. These effects are not thought to be significant. Therefore, it is considered that there is no pathway for other plans and projects to act in-combination and to give rise to cumulative effects.

7 MITIGATION

Birds

7.1 The effect on the bird assemblage during the proposed development is considered likely to be significant at the Site level due to possible disturbance and loss of potential nesting habitat.

7.2 To avoid disturbance of breeding birds the removal of vegetation, particularly woody vegetation, should be timed to avoid the bird nesting season, 1st March – 31st August inclusive where practicable. If this cannot be managed, then a pre-removal check for nesting birds should take place. Works should be timed to avoid disturbance, if possible, of breeding birds in the hedgerow and immature woodland within the Site. This will also ensure compliance with the provisions of the Wildlife Acts 1976 – 2012 with respect to birds. Section 22 (4) of the Act states *"any person who wilfully takes or removes the eggs or nest of a protected wild bird; wilfully destroys, injures or mutilates the eggs or nest of a protected wild bird and wilfully disturbs a protected wild bird on or near a nest containing eggs or unflown young is guilty of an offence where they do not have the appropriate licence"*.

7.3 The existing tress along the drainage ditch will be retained as part of the landscape plan as well as ca. 4 m grassy verge. The northwest hedgerow adjacent to the slip road is currently degraded over much of its length. There is currently no hedge along the eastern boundary of the Site. The proposed development will include a ca. 1.2 planted verge along the eastern boundary. Planting a hedge at the eastern boundary and bolstering the existing hedges by planting additional, appropriate species will offer further nesting and/or foraging opportunities for bird species.

Amphibians

7.4 Should frog spawn be evident in the drainage ditch or standing water at any point during construction then work should immediately cease in that area and a suitably qualified ecologist should be contacted. The ecologist can seek a licence to allow the spawn, tadpoles and froglets to be moved to a suitable receptor site. Once the spawn and / or the animals are moved safely off – site the works can resume in the area.

8 ENHANCEMENT

8.1 Due to the small scale of the proposed development and the restricted area available within the Site there is limited scope for biodiversity enhancement. Biodiversity enhancement would have to be enacted primarily through the landscape management.

8.2 The creation of a hedgerow along the eastern boundary of the Site and the bolstering of the existing hedging along the drainage ditch and northwest bound would result slight biodiversity enhancement.

9 RESIDUAL EFFECTS

9.1 With the 'designed-in' mitigation measures, as detailed above, in place during development of the Site it is considered that residual negative effects on the receiving environment will not be significant.

10 CONCLUSION

10.1 The proposed development of the proposed machinery yard at Jigginstown, Newhall, Naas, Co. Kildare will not result in significant effects on the ecology of the area

10.2 There will be no effect on sites designated for nature conservation as a result of the proposed development. There will be a permanent loss of some disturbed habitat and immature woodland within the Site, but as these are commonly occurring and widespread habitats their loss will not be significant. Overall the residual effects are not anticipated to be significant.

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https://www.bing.com/maps

https://www.google.com/maps

http://kildare.ie/countycouncil/index.html

FIGURES

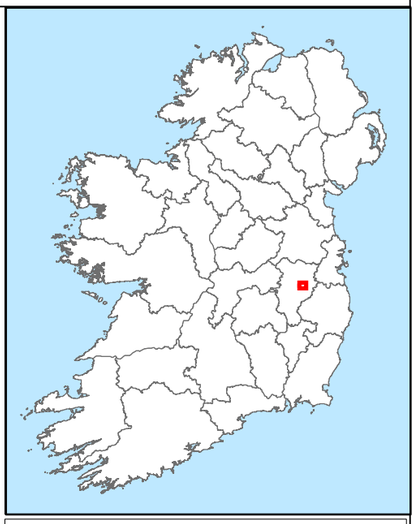
N

LEGEND

SITE BOUNDARY

2 KM BOUNDARY

GRAND CANAL PNHA (002104)



0 0.25 0.5 1 1.5 2

Kilometers

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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KILGALLEN & PARTNERS
CONSULTING ENGINEERS

KCC ROAD MAINTENANCE DEPOT
JIGGINSTOWN, CO. KILDARE

SITES DESIGNATED FOR NATURE CONSERVATION

FIGURE 1

Scale: 1:20,000 @ A3

Date: JANUARY 2019

551.00002. ECIA FIGURE 1

LEGEND

SITE BOUNDARY

HABITATS (FOSSITT CODE)

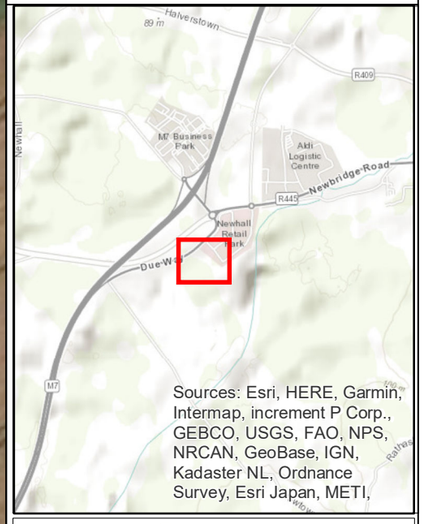
BL3 - BUILDINGS & ARTIFICIAL SURFACES

ED - DISTURBED GROUND

WS2 - IMMATURE WOODLAND

FW4 - DRAINAGE DITCH

WL1 - HEDGEROW



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HABITAT MAP

FIGURE 2

Scale
1:1,000 @ A3

Date
FEBRUARY 2019

551.00002. ECIA FIGURE 2

NOTES A1

ISSUE	DATE	BY	DETAILS
PL1	__/02/19	PC	ISSUED FOR PART 8 SUBMISSION

DESIGN
CSA

STATUS
PLANNING - PART 8

CLIENT
KILDARE COUNTY COUNCIL

PROJECT
KILDARE COUNTY COUNCIL MACHINERY YARD AND REGIONAL SALT BARN

TITLE
SITE LAYOUT

KILGALLEN & PARTNERS
CONSULTING ENGINEERS
3 DANVILLE BUSINESS PARK, KILKENNY CITY, CO. KILKENNY
Tel: +353 56 770 1090, Fax: +353 56 770 5077
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DRN:	SCALE:	DRAWING NO.:	ISSUE:
PC	1:500 @ A1 NTS @ A3	17032-101	PL1
CHKD: NOC	DATE: 18/12/2018		

APPENIDIX A

Photographs

Plate 1: Disturbed ground (ED)

Plate 2: Drainage ditch (FW4)

Plate 3: Hedgerow (WL1)

Plate 4: Immature woodland (WS2)

APPENIDIX B:

Bat Conservation Trust Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats	Description of Communing and Foraging Habitats
Negligible	A building, structure, tree or other feature with negligible habitat features likely to be used by bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A building or structure with one or more potential roost features that could be used by individual bats opportunistically, but do not provide enough space, shelter, protection or appropriate conditions (for example temperature, humidity, height above ground, light levels, levels of disturbance) and/or suitable surrounding habitat to be used on a regular basis, or by larger numbers of bats. Buildings in this category are unlikely to support a maternity colony or be used by hibernating bats. A tree of sufficient size and age to contain potential roost features but with none seen from the ground, or features seen with only very limited roosting potential (i.e. some small cracks or crevices, low ivy cover).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated and not very well connected to the surrounding landscape by other habitat and/or features. Suitable but isolated habitat that could be used by small numbers of foraging bats.

Suitability	Description of Roosting Habitats	Description of Communing and Foraging Habitats
Moderate	A building, structure, tree or other feature with one or more potential roost sites that could be used by bats due to their size, shelter, protection or appropriate conditions (for example temperature, humidity, height above ground, light levels, levels of disturbance) and surrounding habitat but unlikely to support a roost of high conservation value status. Buildings, structures and trees falling into this category would not be expected to support a maternity colony, or significant hibernation or transitory roost.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A building, structure, tree or other feature with one or more potential roost sites that are obviously suitable for use by large numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection or appropriate conditions (for example temperature, humidity, height above ground, light levels, levels of disturbance) and surrounding habitat. Buildings, structures and trees falling into this category may be expected to support a maternity colony, or significant hibernation or a significant transitory roost.	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such a broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roost.

APPENDIX C

County Planning Policies

The natural heritage and green infrastructure planning policies have been extracted from Volume 1 of Kildare County Development Plan 2017 – 2023 and are set out below.

Natural heritage & Green Infrastructure

Policies: General Natural Heritage

It is the policy of Kildare County Council to:

- **NH 1** Facilitate, maintain and enhance as far as is practicable the natural heritage and amenity of the county by seeking to encourage the preservation and retention of woodlands, hedgerows, stonewalls, rivers, streams and wetlands. Where the removal of such features is unavoidable, appropriate measures to replace like with like should be considered, subject to safety considerations.
- **NH 2** Promote the carrying out of basic habitat assessments to inform the design of new developments in order to ensure that proposals for development integrate the protection and enhancement of biodiversity and landscape features wherever possible, by minimising adverse impacts on existing habitats (whether designated or not) and by including mitigation and/or compensation measures, as appropriate.
- **NH 3** Require compliance with Article 10 of the Habitats Directive with regard to encouraging the management of features in the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.

Policies: Natura 2000

It is the policy of Kildare County Council to:

- **NH 4** Support the conservation and enhancement of Natura 2000 Sites including any additional sites that may be proposed for designation during the period of this Plan and to protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site.
- **NH 5** Prevent development that would adversely affect the integrity of any Natura 2000 site located within and immediately adjacent to the county and promote favourable conservation status of habitats and protected species including those listed under the Birds Directive, the Wildlife Acts and the Habitats Directive.
- **NH 6** Ensure an Appropriate Assessment, in accordance with Article 6(3) and Article 6(4) of the Habitats Directive and with DEHLG guidance (2009), is carried out in respect of any plan or project not directly connected with or necessary to the management of a Natura 2000 site to determine the likelihood of the plan or project having a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects and to ensure that projects which may give rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites will not be permitted (either individually or in combination with other plans or projects) unless for reasons of overriding public interest.

Policies: Natural Heritage Areas

It is the policy of Kildare County Council to:

- **NH 7** Contribute towards the protection of the ecological, visual, recreational, environmental and amenity value of the county's Natural Heritage Areas and associated habitat
- **NH 8** Ensure that any proposal for development within or adjacent to a Natural Heritage Area (NHA), Ramsar Sites and Nature Reserves is designed and sited to minimise its impact on the biodiversity, ecological, geological and landscape value of the site, particularly plant and animal species listed under the Wildlife Acts and the Habitats and Birds Directive including their habitats.
- **NH 9** Ensure the impact of development within or adjacent to national designated sites Natural Heritage Areas, Ramsar Sites and Nature Reserves that is likely to result in significant adverse effects on the designated site is assessed by requiring the submission of an Ecological Impact Assessment (EcIA) prepared by a suitably qualified professional, which should accompany planning applications and council developments, as not all development.
- **NH 10** Restrict development within a proposed Natural Heritage Area to development that is directly related to the area's amenity potential subject to the protection and enhancement of natural heritage and visual amenities including biodiversity and landscapes.

Policies: Protected Habitats and Species

It is the policy of Kildare County Council to:

- **NH 11** Ensure that development does not have a significant adverse impact on rare and threatened species, including those protected under the Wildlife Acts 1976 and 2012, the Birds Directive 1979 the Habitats Directive 1992 and the Flora Protection Order species.
- **NH 12** Ensure that, where evidence of species that are protected under the Wildlife Acts 1976-2012, the Birds Directive 1979 and the Habitats Directive 1992 exists, appropriate avoidance and mitigation measures are incorporated into development proposals as part of any ecological impact assessment. In the event of a proposed development impacting on a site known to be a breeding or resting site of species listed in the Habitats Regulations or the Wildlife Acts 1976 -2012 a derogation licence, issued by DAHRRGA, may be required.3.

Policies: Invasive Species

It is the policy of the Council to:

- **NH 13** Support measures for the prevention and / or eradication of invasive species within the county
- **NH 14** Promote best practice with respect to minimising the spread of invasive species in the carrying out of development and to support measures for the prevention and / or eradication of invasive species within the county.
- **NH 15** Require, as part of the planning application process, the eradication/control of invasive introduced species including Japanese Knotweed, when identified on a site or in the vicinity of a site, in accordance with Regulation 49 of the European Communities (Birds and Natural Habitats) Regulations 2011 to 2015.

Policies: General Green Infrastructure

It is the policy of the Council to:

- **GI 1** Ensure the protection, enhancement and maintenance of Green Infrastructure and recognise the health benefits as well as the economic, social, environmental and physical value of green spaces

through the integration of Green Infrastructure (GI) planning and development in the planning process.

- **GI 5** Encourage, pursuant to Article 10 of the Habitats Directive, the management of features of the landscape, such as traditional field boundaries and laneways, important for the ecological coherence of the Natura 2000 network and essential for the migration, dispersal and genetic exchange of wild species
- **GI 6** Provide for the incorporation of underpasses and/or Green Bridges at ecologically sensitive locations on the county's road and rail corridors that will facilitate the free movement of people and species through the urban and rural environment.
- **GI 7** Promote a network of paths and cycle tracks to enhance accessibility to the Green Infrastructure network, while ensuring that the design and operation of the routes respect and where possible enhances the ecological potential of each site.

Policies: Trees, Woodlands and Hedgerow

It is the policy of Kildare County Council to:

- **GI 8** Contribute towards the protection of and manage existing networks of woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character, and to strengthen local networks.
- **GI 9** Ensure that proper provision is made for the consideration, protection and management of existing networks of woodlands, trees and hedgerows when undertaking, approving or authorising development.
- **GI 10** Ensure a Tree Management Plan is provided to ensure that trees are adequately protected during development and incorporated into the design of new developments.
- **GI 11** Ensure that hedgerow removal to facilitate development is kept to an absolute minimum and, where unavoidable, a requirement for mitigation planting will be required comprising a hedge of similar length and species composition to the original, established as close as is practicable to the original and where possible linking in to existing adjacent hedges. Native plants of a local provenance should be used for any such planting
- **GI 12** Restrict the cutting of hedges during the bird-nesting season (1st March until 31st August), except in certain legally defined circumstances, in accordance with the provisions of the Wildlife (Amendment) Act 2000.
- **GI 13** Recognise the biodiversity and archaeological importance of townland boundaries, including hedgerows, and promote their protection and retention.
- **GI 14** Contribute towards the protection where possible of the trees which are considered an important component of demesne landscapes.
- **GI 15** Encourage the protection of historic hedgerows or significant hedgerows which serve to link habitat areas to each other and the surrounding countryside.
- **GI 16** Encourage the planting of woodlands, trees and hedgerows as part of new developments using native plants of local provenance.
- **GI 17** Carry out a survey of trees within the main urban settlements as part of the preparation of local area plans and to include policies for the protection of trees within local area plans where appropriate.

Policies: Inland Waterways Network

It is the policy of Kildare County Council to:

- **GI 19** Require the submission of an Ecological Impact Assessment where deemed necessary by the planning authority (and where necessary an Appropriate Assessment in relation to Natura 2000 sites) including bat and otter surveys for developments along river, stream and canal corridors.
- **GI 20** Maintain a biodiversity zone of not less than 10 metres from the top of the bank of all watercourses in the county, with the full extent of the protection zone to be determined on a case by case basis by the Council, based on site specific characteristics and sensitivities. Strategic Green Routes / Blueways / Trails will be open for consideration within the biodiversity protection zone, subject to appropriate safeguards and assessments, as these routes increase the accessibility of the Green Infrastructure Network.
- **GI 21** Ensure that expert advice is sought in developing lighting proposals along river, stream and canal corridors, in order to mitigate impacts of lighting on bats and other species.
- **GI 22** Require that runoff from a developed area will not result in deterioration of downstream watercourses or habitats, and that pollution generated by a development is treated within the development area prior to discharge to local watercourses.
- **GI 23** Contribute towards the protection of rivers, streams and other water courses and, wherever possible, maintain them in an open state capable of providing suitable habitats for fauna and flora while discouraging culverting or realignment.
- **GI 24** Consult, as appropriate, with Inland Fisheries Ireland in relation to any development that could potentially impact on the aquatic ecosystems and associated riparian habitats.
- **GI 25** Ensure the protection, improvement or restoration of riverine floodplains and to promote strategic measures to accommodate flooding at appropriate locations, to protect ground and surface water quality and build resilience to climate change.

Policies: Urban Green Infrastructure

It is the policy of Kildare County Council to:

- **GI 26** Ensure that the Green Infrastructure Strategy and Network is used to inform the development management process to ensure that new residential areas, business/ industrial development and other relevant projects contribute towards the protection, management and enhancement of the existing Green Infrastructure of the local area in terms of the design, layout and landscaping
- **GI 27** Require all new developments to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes or towers, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process.
- **GI 28** Restrict development that would fragment or prejudice the Green Infrastructure network.
- **GI 29** Strengthen ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional Green Infrastructure network.
- **GI 30** Require multifunctional open space provision within all new developments; this includes provision for ecology and sustainable water management

Policies: Green Infrastructure and SuDS

It is the policy of the Council to:

- **GI 31** Promote and support the development of Sustainable Urban Drainage Systems (SuDS).

- **GI 32** Promote and support the development of Sustainable Urban Drainage Systems (SuDS) such as integrated constructed wetlands, permeable surfaces, filter strips, ponds, swales and basins at a site, district and county level and to maximise the amenity and bio-diversity value of these systems.
- **GI 33** Promote the provision of Green Roofs and/ or Living Walls in developments where expansive roofs are proposed, such as industrial, retail and civic developments.

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