



AA Screening Report
of the
Blessington Local Area Plan
2013 - 2019

Wicklow County Council
January 2013



Table of Contents

		page
Section 1	Introduction	1
Section 2	Description of Natura 2000 Sites	4
Section 3	Assessment of Impacts	12
Section 4	Summary and conclusions	25
Appendices	1. References objectives of the working LAP	
	2. Referenced objectives of Wicklow County Development Plan 2010-2016	
	3. i-WeBS Poulaphuca Reservoir Survey Zones	
	4. Blessington Greenway Amenity Walk Documents (AA Screening and Ecological Assessment)	

Section 1 Introduction and Background to Appropriate Assessment

1.1 Introduction

This is the appropriate assessment screening report of the Blessington Local Area Plan (LAP) 2013-2019. This report is being carried out in line with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). The purpose of this report is to assess the likely effects of the Plan either alone or in combination with other projects or plans, on any Natura 2000 site and to consider whether these impacts are likely to be significant and thus require an appropriate assessment.

The report has taken into consideration the European Commissions publication - *Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Articles 6 (3) and (4) of the Habitats Directive 92/43/EEC* (EC 2002), Circular Letters SEA 1/08 & NPWS 1/08 from the Department of the Environment, Heritage and Local Government and *Appropriate Assessment of Plans and Project in Ireland – Guidance for Planning Authorities* (DoEHLG 2009).

1.2 The Blessington LAP

The Blessington LAP will set out an overall strategy for the proper planning and sustainable development of the area defined in the map below.

1.2 The Blessington LAP

The Blessington LAP will set out an overall strategy for the proper planning and sustainable development of the area defined in the Figure 1.1.

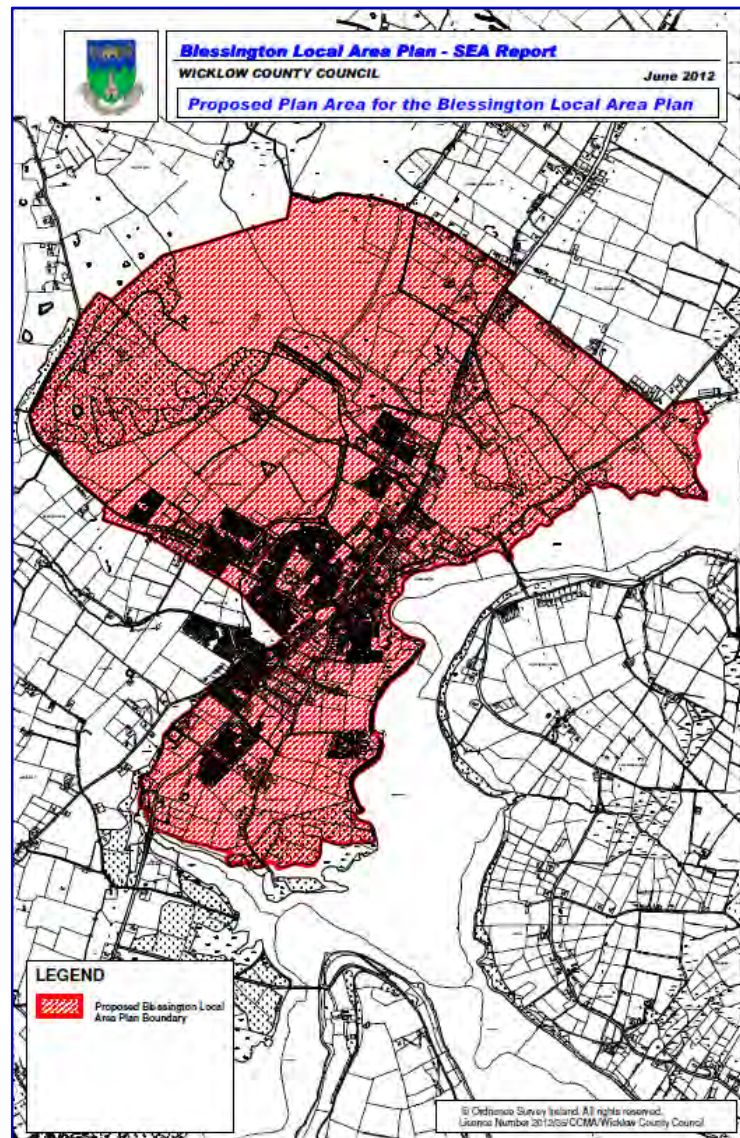


Figure 1.1
Plan Area for Blessington

1.3 Legislative Context

The EU Habitats Directive

The assessment of impacts on Designated European Sites i.e. Special Areas of Conservation & Special Protection Areas, finds its origins in the EU Directive on the Conservation of Habitats, Flora and Fauna (92/43/EEC), more commonly known as the "Habitats Directive" which came into force in 1994 and was transposed into Irish law in 1997. "The Habitats Directive" provides legal protection for habitats and species of European importance.

The Habitats Directive was formulated as a direct result of the continuous deterioration of natural habitats and the increasing impacts on wild species arising in the most part as a result of development and agricultural activity. The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance.

The conservation status of a habitat is defined in Article 1 of the Directive as the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions, as well as the long-term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and the areas it covers within that range are stable or increasing,
- The specific structure and functions which are necessary for its long-term maintenance
- exist and are likely to continue to exist for the foreseeable future,
- The conservation status of its typical species is favourable¹

Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of a EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs), designated under the Habitats Directive and Special Protection Areas (SPAs), designated under the Conservation of Wild Birds Directive (79/409/ECC).

In its implementation, the Habitats Directive introduces the 'Precautionary Principle' approach towards proposals whereby projects can only be permitted having ascertained that there is not likely to be any significant impact on the conservation status of the designated site.

As set out in MN2000², the conservation of natural habitats and habitats of species forms the most ambitious and far-reaching challenge of the Habitats Directive. This is set out in Article 6 of the Directive, which governs the conservation, and management of Natura 2000 sites. In this context Article 6 is viewed as one of the most important of the 24 articles of the directive being the one which determines the relationship between conservation and land use.

Article 6 of the Directive has three main provisions. This structure provides for a clear distinction between Article 6(1) and (2) which define a general regime while Article 6(3) and (4) define the procedures to be applied to specific circumstances.

A) Article 6(1) makes provision for the establishment of the necessary conservation measures, and is focused on positive and proactive interventions. This relates to the development of conservation Management Plans specifically designed for designated sites.

B) Article 6(2) makes provision for avoidance of habitat deterioration and significant species disturbance. Its emphasis is therefore preventive.

¹ Council Directive 92/43/EEC

² MANAGING NATURA 2000 SITES, The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (2000)

C) Article 6(3) and (4) set out a series of procedural and substantive safeguards governing plans and projects likely to have a significant effect on a Natura 2000 site.

Article 6 is seen to reflect the overall aim of the Habitats Directive “promoting biodiversity by maintaining or restoring certain habitats and species at ‘favourable status’ within the context of Natura 2000 sites” while taking into account economic, social, cultural and regional requirements as a means to achieving sustainable development

The Habitats Directive and the Local Area Plan

In accordance with Section Part II, Chapter II, Section 19 of the Planning & Development Act 2000 (the Act), Wicklow County Council has prepared a Local Area 2012 – 2018 for the town of Blessington.

The Planning and Development Acts 2000 (as amended) under section 19 (2) (c) states that a Local Area Plan shall be consistent with the objectives of the development plan, its core strategy, and any regional planning guidelines that apply to the area of the plan and in accordance with section 19 (4) states that the “*The Minister may, for the purposes of giving effect to Directive 2001/42/EC of the European Parliament and Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (No. 2001/42/EC, O.J. No. L 197, 21 July 2001 P. 0030 – 0037), by regulations make provision in relation to consideration of the likely significant effects on the environment of implementing a local area plan*”.

The consequences of this piece of legislation ensure that prior to the plan stage, a formal systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme are carried out. This process is carried out under the SEA Directive (2001/42/EC).

A strategic Environmental Assessment of the Blessington Local Area Plan has been carried out in accordance with this legislation however in addition to this process and following the EU ruling under case 418/04 EC Commission v Ireland, an appropriate assessment screening of the land use plan must be carried out.

An Appropriate Assessment is an assessment carried out under Article 6(3) of the Habitats Directive. As discussed above Article 6(3) alongside Article 6(4) sets out a series of procedural and substantive safeguards governing plans and projects likely to have a significant effect on a Natura 2000 site. Article 6(3) specifically states that:

*“Any plan or project **not directly connected with** or necessary to the management of the site **but likely to have a significant effect** thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”.* This appropriate assessment screening exercise evaluates, based on scientific knowledge the potential impacts of a plan on the conservation objectives of any Natura 2000 site. The impacts assessed include the indirect and cumulative impacts of the plan, considered with any current or proposed activities, developments or policies impacting on the site.

1.4 Stages of the Appropriate Assessment

This appropriate assessment has been prepared in accordance with the European Commission Environment DG document *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, referred to as the “EC Article 6 Guidance Document (EC2000)”. The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and 6(4) of the Habitats Directive, and is viewed as an interpretation of the EU Commission’s document “*Managing Natura 2000 sites. (2002)*”. This Assessment has also has taken into consideration the Department of the Environment, Heritage and Local Government publication

Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (December 2009). This guidance is not a legal interpretation, but represents the current situation and understanding, and is regarded as a work in progress.

Stage 1 of the Methodological Guidance is the screening process, which examines the likely effects of a project, either alone or in combination with other projects or plans upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. This stage of the screening process involves four steps, which fall under the following headings:

1. **Management of the site** - *Involves determining whether or not the project or plan is directly connected with or necessary to the management of the site*
2. **Description of the project or plan** - *Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site*
3. **Characteristics of the site** - *Identifying the potential affects on the Natura 2000 site(s)*
4. **Assessment of Significance** - *Assessing the significance of any effects on the Natura 2000 site(s).*

Stage 2 of the process “Appropriate Assessment” follows Stage 1 where, following screening of the plan, it has been established the plan is likely to have significant, potentially significant or uncertain effects on any Natura 2000 site. Stage 2 involves the following:

- A description of the Natura 2000 sites that will be considered further in the Appropriate Assessment process;
- A description of significant impacts on the conservation feature of these sites likely to occur from the proposed development;
- Recommendations.

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

Section 2 Description of Natura 2000 Sites

2.1 Natura sites located within 10km of the Plan area

This section of the screening process describes the Natura 2000 sites within a 10km radius of the plan area. A 10km buffer zone was chosen as a suitable measure to ensure that all potentially affected Natura 2000 sites are included in the screening process (Map 2).

Table 1 (cSACs) and Table 2 (SPAs) list the Natura 2000 sites that are within a 10km range of the plan area. The Qualifying Features for each SAC site and the Features of Interest and Special Conservation Interests of the SPAs have been obtained through a review of the documentation available on each site from the National Parks and Wildlife Service (NPWS) website www.npws.ie. Each qualifying feature also has a standard EU code and these are presented in brackets.

2.2 Priority Species and Habitats

A number of species and habitats are given 'Priority' status in the Habitats Directive by the EU because they are considered to be particularly vulnerable and are mainly, or exclusively, found within the European Union.

There are no 'Priority Species' known from Ireland.

Priority Habitats are present in Ireland and a number of them are present in County Wicklow's cSACs. These are prefixed with an asterisk in Table 1 (e.g. * Active raised bogs [7110]). The importance of Priority habitats is emphasised at several places in the Directive (Articles 4 and 5 and Annex III), not only in terms of the selection of sites, but also in the measures required for site protection (Article 6) and surveillance (Article 11).

Table 1 Special Areas of Conservation (SACs) within 15km of the Plan boundary

Site Code	Site Name	Qualifying Features	
		Annex 1 Habitat (* Indicates priority habitat)	Annex II Species
002122	Wicklow Mountains	<ul style="list-style-type: none"> • Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea [3130] • Natural dystrophic lakes and ponds [3160] • Northern Atlantic wet heaths with Erica tetralix [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* [6230] • Blanket bog (*active only) [7130] • Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110] • Calcareous rocky slopes with chasmophytic vegetation [8210] • Siliceous rocky slopes with chasmophytic vegetation [8220] • Old sessile oak woods with Ilex and Blechnum in British Isles [91A0] 	Otter (Lutra lutra) [1355]
000397	Red Bog	<ul style="list-style-type: none"> • Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation [3150] • Active raised bogs [7110]* • Transition mires and quaking bogs [7140] 	

Table 2 Special Protection Areas (SPAs) within 15km of the Plan boundary

Site Code	Site Name	Special Conservation Interests & Features of Interest
004063	Poulaphouca Reservoir	<ul style="list-style-type: none"> • Greylag Goose (Anser anser) [A043] • Lesser Black-backed Gull (Larus fuscus) [A183]
004040	Wicklow Mountains National Park	<ul style="list-style-type: none"> • Merlin (Falco columbarius) [A098] • Peregrine (Falco peregrinus) [A103]

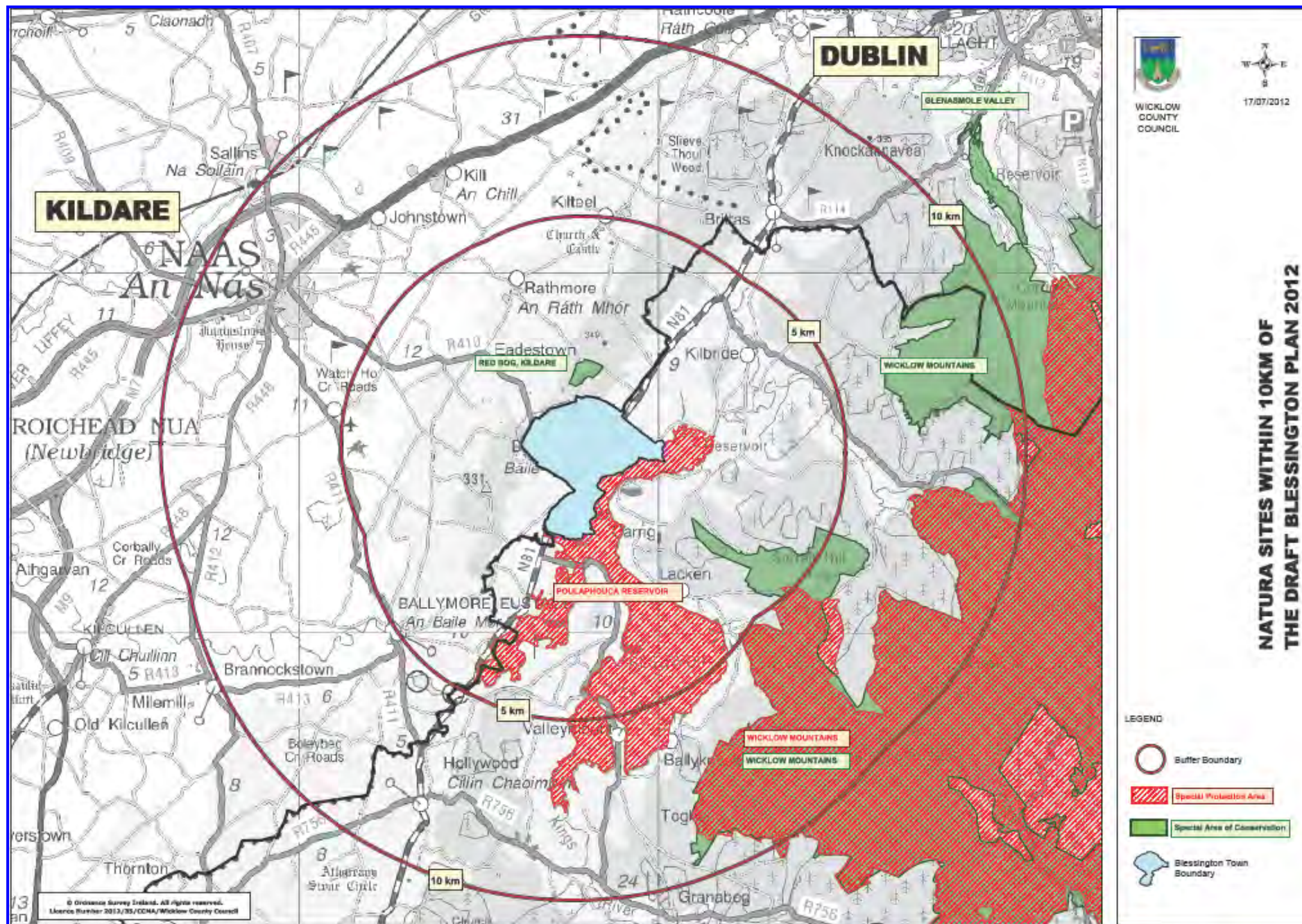


Figure 2.1 Nature 2000 Sites Within a 10 km radius of the Blessington Local Area Plan 2012 - 2018

2.3 Site Synopses (NPWS)

2.3.1 Wicklow Mountains SAC

This site is a complex of upland areas in Counties Wicklow and Dublin, flanked by Blessington Reservoir to the west and Vartry Reservoir in the east, Cruagh Mt. in the north and Lybagh Mt. in the south. Most of the site is over 300m, with much ground over 600m and the highest peak of Lugnaquilla at 925m.

The Wicklow Uplands comprise a core of granites flanked by Ordovician schists, mudstones and volcanics. The form of the Wicklow Glens is due to glacial erosion.

The Wicklow Mountains are drained by several major rivers including the Dargle, Liffey, Dodder, Slaney and Avonmore. The river water in the mountain areas is often peaty, especially during floods.

The topography is typical of a mountain chain, showing the effects of more than one cycle of erosion. The massive granite has weathered characteristically into broad domes. Most of the western part of the site consists of an elevated moorland, covered by peat. The surrounding schists have assumed more diverse outlines, forming prominent peaks and rocky foothills with deep glens. The dominant topographical features are the products of glaciation. High corrie lakes, deep valleys and moraines are common features of this area.

The substrate over much of the area is peat, usually less than 2m deep. Poor mineral soil covers the slopes and rock outcrops are frequent.

The vegetation over most of the site is a mosaic of heath, blanket bog and upland grassland (mostly on peaty soil, though some on mineral soil), with stands of dense Bracken (*Pteridium aquilinum*) and small woodlands mainly along the rivers. Mountain loughs and corrie lakes are scattered throughout the site. The site supports many habitats that are listed on Annex I of the E.U. Habitats Directive.

The two dominant vegetation communities in the area are heath and blanket bog. Heath vegetation, with both wet and dry heath well represented, occurs in association with blanket bog, upland acid grassland and rocky habitats. The wet heath is characterised by species such as Ling (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Cottongrasses (*Eriophorum* spp.), Tormentil (*Potentilla erecta*), Mat-grass (*Nardus stricta*), Bent grasses (*Agrostis* spp.) and bog mosses (*Sphagnum* spp.). In places the wet heath occurs in conjunction with flush communities and streamside vegetation, and here species such as Heath Rush (*Juncus squarrosus*) and *Carex* spp. are found. Dry heath at this site is confined to shallow peaty soils on steep slopes where drainage is better and particularly in sheltered conditions. It is characterised by species such as Ling, Gorse (*Ulex* spp.), Bell Heather (*Erica cinerea*), Bilberry (*Vaccinium myrtillus*), Purple Moor-grass (*Molinia caerulea*) and lichens (*Cladonia* spp.). In places the heath grades into upland grassland on mineral soil, some examples of which correspond to the E.U. Habitats Directive Annex I priority habitat species-rich *Nardus* grassland.

Blanket bog is usually dominated by Cottongrasses, Ling and bog mosses (*Sphagnum* spp.). On steeper slopes there is some flushing and here Purple Moor-grass, Heath Rush, and certain *Sphagnum* species become more common. The Liffey Head blanket bog is among the best of its kind in eastern Ireland, with deep peat formations and an extensive system of dystrophic pools developed among the hummocks and hollows on the bog surface. The vegetation is largely dominated by Ling and Cross-leaved Heath, with Cottongrasses (*Eriophorum vaginatum* and *E. angustifolium*), Deergrass (*Scirpus cespitosus*) and Bog Asphodel (*Narthecium ossifragum*). In drier areas, Bilberry and Cowberry (*Vaccinium vitis-idaea*) are common, while the scarce Bog Rosemary (*Andromeda polifolia*) is also found. Blanket bog occurs over extensive areas of deeper peat on the plateau and also on gentle slopes at high altitudes. Peat erosion is frequent on the peaks - this may be a natural process, but is likely to be accelerated by activities such as grazing.

Due to the underlying rock strata, the water of the rivers and streams tends towards acidity. The water is generally oligotrophic and free from enrichment. The lakes within the area range from the high altitude lakes of

Lough Firrib and Three Lakes, to the lower pater-noster lakes of Glendalough, Lough Tay and Lough Dan. Spectacular corrie lakes (such as Loughs Bray (Upper and Lower), Ouler, Cleevaun, Arts, Kellys and Nahanagan) exhibit fine sequences of moraine stages. The deep lakes are characteristically species poor, but hold some interesting plants including an unusual form of Quillwort (*Isoetes lacustris* var. *morei*), a Stonewort (*Nitella* sp.) and Floating Bur-reed (*Sparganium angustifolium*). The Red Data Book fish species Arctic Char has been recorded from Lough Dan, but this population may now have died out.

Alpine vegetation occurs on some of the mountain tops, notably in the Lugnaquilla area, and also on exposed cliffs and scree slopes elsewhere in the site. Here alpine heath vegetation is represented with species such as Crowberry (*Empetrum nigrum*), Cowberry, Dwarf Willow (*Salix herbacea*), the grey-green moss *Racomitrium lanuginosum* and scarce species such as Mountain Clubmoss (*Diphasiastrum alpinum*), Firmoss (*Huperzia selago*), and Starry Saxifrage (*Saxifraga stellaris*). Some rare arctic-alpine species have been recorded, including Alpine Lady's-mantle (*Alchemilla alpina*) and Alpine Saw-wort (*Saussurea alpina*).

Small areas of old oakwood (Blechno-Quercetum petraeae type) occur on the slopes of Glendalough and Glenmalur, near L. Tay and L. Dan, with native Sessile Oak (*Quercus petraea*) 100-120 years old. On wetter areas, wet broadleaved semi-natural woodlands occur, which are dominated by Downy Birch (*Betula pubescens*). Mixed woodland with non-native tree species also occurs.

The site supports a range of rare plant species, which are listed in the Irish Red Data Book: Parsley Fern (*Cryptogramma crista*), Marsh Clubmoss (*Lycopodiella inundata*), Greater Broom-rape (*Orobancha rapumgenistae*), Alpine Lady's-mantle, Alpine Saw-wort, Lanceolate Spleenwort (*Asplenium billotii*), Small White Orchid (*Pseudorchis albida*) and Bog Orchid (*Hammarbya paludosa*). The latter three species are legally protected under the Flora (Protection) Order, 1999. The rare Myxomycete fungus, *Echinostelium colliculosum*, has been recorded from the Military Road.

Mammals and birds which occur are typical of the uplands. Deer are abundant, mainly hybrids between Red and Sika Deer. Other mammals include Hare, Badger and Otter, the latter being a species listed on Annex II of the E.U. Habitats Directive. Pine Marten has recently been confirmed as occurring within the site. Among the birds, Meadow Pipit, Skylark, Raven and Red Grouse are resident throughout the site. Wheatear, Whinchat and the scarce Ring Ouzel are summer visitors. Wood Warbler and Redstarts are rare breeding species of the woodlands. Dipper and Grey Wagtail are typical riparian species. Merlin and Peregrine Falcon, both Annex I species of the EU Birds Directive, breed within the site. Recently, Goosander has become established as a breeding species.

Large areas of the site are owned by NPWS, and managed for nature conservation based on traditional land uses for the uplands. The most common landuse is traditional sheep grazing. Other land uses include turf-cutting, mostly hand-cutting but some machine-cutting occurs. These activities are largely confined to the Military Road, where there is easy access. Large areas which had been previously hand-cut and are now abandoned, are regenerating. In the last 40 years, forestry has become an important landuse in the uplands, and has affected both the wildlife and the hydrology of the area. Amenity use is very high, with Dublin city close to the site.

Wicklow Mountains is important as a complex, extensive upland site. It shows great diversity from a geomorphological and a topographical point of view. The vegetation provides examples of the typical upland habitats with heath, blanket bog and upland grassland covering large, relatively undisturbed areas. In all ten habitats listed on Annex I of the EU Habitats Directive are found within the site. Several rare, protected plant and animal species occur.

2.3.2 Red Bog cSAC

Red Bog, Kildare is located 3 km north of the village of Blessington in east Co. Kildare, close to the boundary with Co. Wicklow. It comprises a wetland complex of lake, fen and bog situated in a hollow between ridges of glacially-deposited material and underlain by rocks of Ordovician age.

The site is a candidate SAC selected for transition mire, a habitat listed on Annex I of the E.U. Habitats Directive.

The shores of the lake are muddy and support such species as Bog Stitchwort (*Stellaria alsine*), Brooklime (*Veronica beccabunga*) and Soft Rush (*Juncus effusus*). Fringing the lakeshore is a narrow zone with emergent Soft Rush, Water-plantain (*Alisma plantago-aquatica*), Bottle Sedge (*Carex rostrata*), as well as the moss *Climacium dendroides*. In places, particularly at either end of the lake and along its south-eastern side, this zone grades into extensive areas of quaking scraw vegetation of dense Bogbean (*Menyanthes trifoliata*) and Marsh Cinquefoil (*Potentilla palustris*), accompanied by such species as Sharp-flowered Rush (*Juncus acutiflorus*), Cuckooflower (*Cardamine pratensis*), Marsh Speedwell (*Veronica scutellata*), Common Marsh-bedstraw (*Galium palustre*), Water Horsetail (*Equisetum fluviatile*), Common Sedge (*Carex nigra*), Common Spotted-orchid (*Dactylorhiza fuchsii*) and the mosses *Rhytidiadelphus squarrosus* and *Sphagnum squarrosum*. Bulrush (*Typha latifolia*) and areas of Willow scrub (*Salix* spp.) also occur in association with this vegetation.

The deeper water supports submerged aquatic plants such as Water-starwort (*Callitriche*) and Water-crowfoot (*Ranunculus* spp.), while in sheltered areas floating plants including Duckweed (*Lemna minor*) and the liverwort *Riccia fluitans* are found.

At the north-east end of the site bog vegetation has developed, with Ling Heather (*Calluna vulgaris*) and Hare's-tail Cottongrass (*Eriophorum vaginatum*) being the most frequent species. Other bog plants found here include Bog Asphodel (*Narthecium ossifragum*), Cross-leaved Heath (*Erica tetralix*), Tormentil (*Potentilla erecta*), Heath Wood-rush (*Luzula multiflora*), the mosses *Sphagnum palustre*, *S. capillifolium*, *S. subnitens*, *Hypnum cupressiforme*, *Polytrichum commune* and *Dicranum scoparium*, and the lichen *Cladonia portentosa*.

Red Bog is of ornithological significance and breeding birds recorded from the site include Mute Swan, Mallard, Tufted Duck, Coot, Moorhen, Snipe and Black-headed Gull (< 20 pairs).

Gravel extraction, drainage and eutrophication of the wetland from agricultural activities in the surrounding lands all pose a threat to the site.

Red Bog, Kildare is a site of particular conservation significance, supporting as it does, a good example of a transition mire, a habitat that is listed on Annex I of the E.U. Habitats Directive.

2.3.3 Poulaphuca Reservoir SPA

Poulaphuca Reservoir SPA, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the mid-east and south-east regions.

The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the River Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low the exposed lake muds are colonised by an ephemeral flora of annual plant species. Wet grassland areas occur in sheltered bays around the lake but especially in the northern part. Reed Canary-grass (*Phalaris arundinacea*) is the main grass species present, but other plant species characteristic of wet grasslands occur, including Creeping Bent (*Agrostis stolonifera*), Meadowsweet (*Filipendula ulmaria*), Yellow Iris (*Iris pseudacorus*) and Water Mint (*Mentha aquatica*). Sedges (*Carex* spp.) are locally common, while Rusty Willow (*Salix cinerea* subsp. *oleifolia*) scrub is often found associated with the wet grassland. In some places the water washes against grassy banks which are generally less than a metre high, and in a few places there are steep sand and clay cliffs, up to 15m high - these are remnants of the old River Liffey channel. In many places the banks are actively eroding, and a strip of conifers has been planted around much of the perimeter of the reservoir in an attempt to stabilize the banks.

Poulaphouca Reservoir is of international importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. An average peak of 1,058 individuals occurred during the five seasons 1995/96 to 1999/00. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (34), Wigeon (262), Teal (136), Mallard (283), Goldeneye (36), Cormorant (16), Great Crested Grebe (11), Curlew (118) and Mute Swan (17). The site is also used by Grey Heron (12). The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed Gull (1,116), which in Ireland is rare in winter away from the south coast. Black-headed Gull (1,245) and Common Gull (229) also occur. Breeding birds at the site include Great Crested Grebe (several pairs), which is localised in its distribution in eastern Ireland, as well as Snipe and Lapwing.

The principal interest of the site is the Greylag Goose population, which is of international importance. A range of other wildfowl species also occurs, including Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull.

2.3.4 Wicklow Mountains SPA

This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. The underlying geology of the site is mainly of Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area was subject to glaciation and features fine examples of glacial lakes, deep valleys and moraines. Most of site is over 300m, with much ground being over 600m; the highest peak is Lugnaquilla (925m). The substrate over much of site is peat, with poor mineral soil occurring on the slopes and lower ground. Exposed rock and scree are features of the site.

The dominant habitats present are blanket bog, heaths and upland grassland. The bog habitat is usually dominated by Ling (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Cottongrasses (*Eriophorum vaginatum* and *E. angustifolium*), Deergrass (*Scirpus cespitosus*) and Bog Asphodel (*Narthecium ossifragum*). Bog mosses (*Sphagnum* spp.) are well represented. On shallower peats, dry heath is represented by such species as Ling, Gorse (*Ulex* spp.), Bell Heather (*Erica cinerea*), Bilberry (*Vaccinium myrtillus*), Purple Moor-grass (*Molinia caerulea*) and lichens (*Cladonia* spp.). Fine examples of native Oak woodlands are found in the Glendalough area, and include Sessile Oak (*Quercus petraea*) trees of 100-120 years old. Glendalough Lake is a good example of an oligotrophic system.

The site supports good examples of both upland and woodland bird communities. The open peatlands provide excellent foraging habitat for Merlin (5-10 pairs) and Peregrine (*c.* 10 pairs). The Merlins nest in old crows nests, whilst the Peregrines nest on cliffs and crags. Other birds of the open peatlands and scree slopes include Ring Ouzel, now a very rare bird in Ireland, and Red Grouse. The Wicklow uplands are the only regular location in Ireland where Goosander breeds, with the Glendalough lakes being a regular site. This species was proved to be breeding only as recently as 1994 and it is now well established. Whinchat, a localised species in Ireland, breeds within the site.

The Glendalough Oak woods are a regular location for several rare breeding passerines. Redstart is recorded most years and 1-2 pairs probably breed. Wood Warbler is another annual visitor, with perhaps up to 5 pairs in some years. Recently, Garden Warbler has been recorded, whilst Blackcap has a very strong breeding population.

The site, which is within the Wicklow Mountains National Park, is fragmented into about twenty separate parcels of land. Much of the site is State-owned and managed for nature conservation based on traditional land uses for the uplands. The most common landuse is traditional sheep grazing. Other land uses include turf-cutting, mostly by hand though some machine-cutting also occurs. Grazing by sheep and deer in the woodlands can be damaging as it prevents or reduces regeneration. Dublin City is close to the site and amenity use is very high; if not properly controlled, recreational activities could cause disturbance to some bird species.

This site is of high ornithological importance as it supports very good examples of upland and woodland bird communities. Several of the species which occur are very rare at a national level. Two species, Ring Ouzel and Red Grouse, are Red-listed and their status is of high conservation concern. Also of note is that Merlin and Peregrine are both listed on Annex I of the E.U. Birds Directive.

2.4 Conservation objectives

The Habitats Directive aims, *inter alia*, to maintain or restore the favourable conservation status of habitats and species which have been identified as the qualifying features of sites designated as Special Areas of Conservation (SACs) and the Special Conservation Interests of Special Protection Areas (SPAs). These two designations are collectively known as the Natura 2000 network.

A Natura 2000 site's Conservation Objectives are defined by NPWS and are "intended to ensure that the relevant Annex 1 habitats and Annex II species present on a site are maintained in a favourable condition" (Guidelines produced by the DEHLG on Appropriate Assessment 2010).

The DOEHLG Guidelines state that "*The conservation objectives derive from the qualifying interests, the Natura 2000 standard data form, and the management plan for the site, with summary information contained in the site synopsis*".

No 'conservation management plans' or 'conservation statements' have been prepared for Natura sites under evaluation in this document. A Management Plan is available for the Wicklow Mountains National Park which encompasses the Wicklow Mountains SAC and SPA and provides a source of information on management issues and threats.

The process is underway by NPWS for setting detailed site-specific conservation objectives for habitats and species, however as of yet these have not been identified for Natura sites within the scope of the plan area. Generic conservation objectives have been compiled for the SACs and SPAs within the Plan area. These are based on maintaining/restoring the favourable conservation condition of the habitats and species for which sites are selected.

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

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

The NPWS has identified the following as the Conservation Objective for the SACs in Wicklow: *To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected* (see Table 1)

For all the SPAs in Wicklow the NPWS has identified the following as the Conservation Objective: *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA* (See Table 2)

The qualifying features and special conservation interests of the Natura sites are listed in Tables 1 and 2. Further descriptive detail of site characteristics, quality and importance, and vulnerability of these features, are available on the Natura 2000 standard data forms for each site on www.npws.ie. These have been collated and are included in the individual site descriptions in Appendix 1.

Section 3 Assessment of Impacts

3.1 Introduction

Assessment is the process of evaluating the importance or significance of project/plan impacts (whether adverse or beneficial). This is essentially a judgment, built up from the collation of available information and the use of objective criteria and standards.

3.2 Assessment of likely impacts on Natura 2000 sites

This assessment will examine and evaluate the significance on impact, if any of the Blessington LAP on each of the Natura 2000 sites located within 10km of the Plan area.

The possible impacts that might arise from the plan have been examined in the context of a number of factors that could potentially affect the integrity of the Natura 2000 sites. These factors are as follows; Reduction in Habitat area; Disturbance to Key Species; Habitat of Species Fragmentation; Reduction in Species Density; changes in Key Indicators of Conservation Value (Water Quality etc). The assessment of significance is based on Direct¹, Indirect² and Cumulative³ Impact assessment criteria.

Other plans / programmes/ projects considered in the assessment of impacts:

- Wicklow County Development Plan 2010-2016;
- Greater Dublin Area Regional Planning Guidelines 2010-2016;
- National Spatial Strategy 2002-2020;
- Wicklow Mountains Management Plan
- Eastern RBD Management Plan;
- County Wicklow Water Services Investment Programme;
- Local Authority Discharges;
- Ongoing extractive operations in the area;
- Flood Risk Assessment of the LAP
- Kildare County Development Plan 2011-2017

3.3 Screening

Screening determines whether Appropriate Assessment is necessary by examining:

- 1) whether a plan or project can be excluded from Appropriate Assessment requirements because it is directly connected with or necessary to the management of the site and
- 2) the potential effects of the project or plan, either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives and considering whether these effects will be significant

¹ Direct Impacts of the plan on the designated site are those impacts which arise directly from the objectives of the plan i.e. land take, excavation works etc.

² Indirect Impacts of the plan on the designated site relate to those impacts of the plan which have a knock on effect on the designated site i.e. the provision of a new water supply scheme serving the plan area may not be located within a designated site however the abstraction of such water may indirectly impact on the habitat itself.

³ Cumulative Imp[acts are those impacts that arise when individual affects from disparate projects may add up or interact to cause additional effects not apparent when looking at the individual effect at one time or in isolation.

Screening involves the following:

1. Description of the plan or project, and local site or plan area characteristics
2. Identification of relevant Natura 2000 sites and compilation of their qualifying interests and conservation objectives
3. Assessment of likely effects - direct, indirect, or cumulative, undertaken on the basis of available information as a desk study or field survey or primary research as necessary
4. Screening statement with conclusions.

3.3.1 Management of the site

Determining whether or not the project or plan is directly connected with or necessary to the management of the site.

Plans or projects that are directly connected with or necessary to the nature conservation and management of a Natura 2000 site are exempt from the need for Stage 2 Appropriate Assessment. For this exemption to apply, management should be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive, for example the relationship between the plan and the management of the Natura site should be shown to be direct and not a by-product of the plan.

The plan is a land use management plan and is not directly connected with or necessary to the nature conservation management of Natura sites, and as such the exemption does not apply.

3.3.2 Description of the project or plan

Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site

The Blessington LAP

This project / plan (Blessington Local Area Plan) is the adoption under Articles 18-20 of the Planning and Development Act 2000 (as amended) of a land-use framework plan for up to a maximum of 10 years for the town and Blessington and its immediate environs, including land use zoning, development policies and specific objectives. The plan will make provision for the growth of the town to a population of 7,500 in 2022 from 2006 census population of 4,018 in accordance with the Wicklow County Development Plan 2010-2016.

A key aim of the LAP is to set out the vision and overall strategy for the future development of the settlement and from this vision, all policies and objectives can be developed and implemented with the overall aim of achieving this vision.

The key elements of the vision for Blessington are to:

- Improve the quality of life of the resident population of Blessington by planning for and encouraging the provision of high quality housing and employment, social and community facilities, and a range of recreational options, in a quality environment;
- Regulate pressures from both urban and rural development, in particular sporadic development in rural areas and development pressures emanating from south-west Dublin by providing a sustainable settlement and growth strategy to create a compact urban form and to enhance the physical, economic and social profile of Blessington;
- Develop the tourism potential of Blessington as a visitor / tourist destination in itself and in its role as a 'gateway' to the west of the County and Wicklow Mountains.
- Protect the heritage of the existing town of Blessington and its environs along with its identity, in terms of its built and natural heritage and landscape conservation in the area.

This will be achieved by:

- Reinforcing and improving the visual appearance of the central area of the town with particular attention on the town centre area which is a designated architectural conservation area, and encouraging development that will enhance the town's vitality and vibrancy;
- Addressing the problems that arise for the town resulting from a national route passing through the centre of the town and the implications of the re-routing of the N81;
- Improving linkages between the existing main street and the new town centre development and providing further linkages between these areas and the remainder of the plan area;
- Facilitating the provision of infrastructure to meet the demand for development and future population needs in a sustainable manner;
- Promoting and ensuring the protection and suitable recreational and tourism use of natural habitats (in particular the protected habitats of the Poulaphuca Reservoir), cultural heritage, ecological resources, networks, quality landscapes and the protection and enhancement of biodiversity.

The Plan area comprises c. 750ha and 4,018 people live in the area (Census 2011). The overall size of the plan in the context of the county of Wicklow is considered to be moderate with the town being designated as a 'Moderate Growth Town' in the County settlement hierarchy. The Blessington LAP envisages that the population of the town will increase in accordance with the population projections set out in the County settlement hierarchy of the Wicklow County Development Plan 2010-2016, which has designated a population projection of 6,000 people in 2016 and 7,500 in 2022.

The plan will designate lands for new residential and employment development, community use, amenity and open space.

Overall, the plan designates:

- c. 90ha as existing residential development
- c. 63ha for new residential development
- c. 23ha as existing employment use
- c. 87ha for new employment development
- c. 64ha for open space
- c. 21ha for town centre / neighbourhood centre uses
- c. 29ha for community and educational use
- c. 188ha for agricultural use
- c. 4ha for tourism
- c. 67ha conservation zone
- c. 116ha for extractive use

The plan also includes a number of objectives for specific works / projects and public infrastructure including

- the reservation of land for the possible N81 realignment
- the reservation of land for the completion of the partially constructed 'inner relief road'
- the reservation of land for the provision of possible link road between Blessington Bridge and the N81 through 'Doran's Pit'
- the provision of new roads, footpath and cycleways throughout the settlement
- the provision of amenity routes at and to / from amenity areas such as the Poulaphuca Reservoir and Glen Ding.

Features of the plan that could impact upon Natura 2000 sites

The key aspects of the plan that could give rise to direct/indirect impacts upon Natura 2000 sites will principally be:

- i. Direct human disturbance / pressure in the form of land take (though the designation / zoning of land for development or the provision of infrastructure), land drainage, trampling and disturbance by people themselves
- ii. Indirect human disturbance / pressure, for example, in the form of water quality deterioration resulting from a run off of pollutants during construction phases or cultural enrichment from agriculture.

It is essential that the zonings and infrastructural objectives of the plan and the developments that might arise of foot thereof take account of these direct and indirect impacts and ensure adequate buffering and other mitigation measures are put in place.

Objectives of the plan that will contribute towards the protection of Natura 2000 sites in accordance with the requirements of the Habitats Directive have been included by the plan makers and as a result of the SEA process.

1. Loss of habitat, including the development on or removal / drainage of habitats

This land use plan does not make provision for the zoning for development of land in the four Natura 2000 sites under assessment. Furthermore, where the plan boundary adjoins either Natura 2000 site, a 100m-200m wide designated buffer zone is designated within the plan area, within which development will be strictly controlled as follows:-

Permitted in Principle; Projects directly necessary for the management of the Natura 2000 site that are in accordance with the conservation objectives of the Nature 2000 site and that will be developed and managed so as not to affect the integrity of the site, its qualifying interests or its sustaining resources.

Open for Consideration: Projects which do not give rise to significant direct, indirect or secondary impacts on the Natura 2000 site arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects (either individually or in combination with other plans or projects)¹.

Not Permitted: Projects which give rise to significant direct, indirect or secondary impacts on the Natura 2000 site arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects (either individually or in combination with other plans or projects)

Having regard to Birdwatch Ireland annual surveys of bird populations in the Poulaphouca area, which show no sightings of the Greylag Goose and the Whooper Swan in the I-WeBS survey zones immediately to the east and south-east of the plan boundary, a 100m buffer zone is considered reasonable and more than adequate to ensure the protection of the Poulaphouca SPA site.

The north-western boundary of the plan area adjoins the Threecastles survey zone. Surveys of this area have revealed that this is a significant habitat for the Greylag and Whooper Swan. Where the plan is in proximity to this survey zone, the buffer zone is extended to 200m.

The Red Bog cSAC is located 300m outside of the plan boundary (this is the location of the County boundary). While it is not considered necessary to include a buffer zone for this site within the plan for this site the plan only recognises the extent of the existing extractive industries in close proximity to this area while also the re-zoning lands to the south east of this area for a low density employment and amenity park. It is considered that this re-zoning will reduce potential impacts arising from existing activities on this lands within the plan area.

¹ Except as provided for in Section 6(4) of the Habitats Directive, viz. there must be:

- (a) no alternative solution available,
- (b) imperative reasons of overriding public interest for the plan to proceed; and
- (c) adequate compensatory measures in place.

2. Water pollution

Pollution due to wastewater discharges

Blessington wastewater treatment plant discharges treated effluent to the west of the dam, to the Golden Falls Lake, also by permit from the ESB. This discharge point is west of the reservoir, on the west side of the river gorge and is diffused into the Liffey in a westerly direction. Therefore no pollution occurs of the Poulaphuca reservoir waters.

Pollution due to industrial and agricultural activity

This is a land-use plan in the context of the Planning & Development Acts and sets the broad parameters under which lands can be developed and used. The plan has limited role in influencing the operation of agriculture, which is bound by compliance S.I. No. 378 of 200 - European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006.

The plan does however have a role in influencing the location, type and operation of industrial activities (other than those activities that are regulated by the EPA through IPC Licences). Through normal planning control measures with regard to wastes and emissions, which will be reinforced in this plan, no development shall be facilitated that would result in industrial pollution.

3. Disturbance by human activity

With regard to the Poulaphuca SPA, the reservoir is owned by the ESB and it is used under permit from the ESB for boating and fishing and the banks, which are also owned by ESB, are used by people for picnics. Swimming is not permitted in the reservoir. A number of angling clubs are active in the lakes and rivers in the area. Coarse angling and brown trout angling are carried out and the reservoir holds a good supply of roach, perch and pike. Blessington Sailing Club is located on the western shore of the reservoir at Baltyboys (approx 6km from Blessington town centre) and uses two slips into the lake. Blessington rowing club is located on the eastern shore of the reservoir, just north of Blessington Bridge, less than 1km from the town centre. Wind surfing and canoeing also take place on the reservoir, mainly from the Blessington Lakes Activity Centre to the south-east side of the town centre. The reservoir offers the potential for bird watching. The creation of the reservoir also resulted in the development of the 'lake drive', a 35 km (21 miles) route all the way around the lakes by good roads.

No known recreational or other human activity is known to occur on a regular basis on the Red Bog SAC.

With regard to recreational use and other human activity at the Wicklow Mountains SAC / SPA (Wicklow Mountains Natural Park), this site is in state ownership. The main management issues for the site are identified in the National Park Management Plan and are addressed through that structure. Management of the site is addressed through the regulation of access, grazing, peat extraction, recreation and other uses.

The plan does not include infrastructural works objectives in any Natura 2000 site or within 100m of any Natura 2000 site e.g. new road / bridge construction, flood prevention measures, water abstraction, wastewater treatment plants etc.

The plan does include as an objective the possible development of an amenity route around the shores of the reservoir. Some elements of this amenity route have already undergone appropriate assessment screening which found no prima facie case for full Appropriate Assessment. This report is appended to this document. Any further elements of this amenity route would be subject to the same assessment as required by the objectives of this plan.

While the plan will allow an increase in the town population, it is not considered that this growth will result in additional use of the reservoir and its shores to a degree that will result in damage / destruction or other impacts on site integrity, particularly as the site is actively managed and supervised by the ESB.

(Human activity in the form of everyday activity associated with residing / working in or adjacent to the Natura 2000 sites is addressed in Impacts (1) and (2) above, which address the impacts of developing land for human uses and the carrying out of economic activity).

3.3.3 Other Instruments

Numerous other higher-level measures further mitigate potential impacts of the Plan. These measures include EU Directives, national legislation and various guidelines. Principal among these are the following:

The Habitats Directive (HD): The European Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC) (Habitats Directive)

The Water Framework Directive (WFD): The Water Framework Directive 2000/60/EC

The National Biodiversity Plan (NBP): UN Convention on Biological Diversity 1992 – National Biodiversity Plan 2010- 2016 is as a result of this.

The Wildlife Act (WA): Wildlife Act 1976 and Wildlife (Amendment) Act 2000 (Wildlife Act)

The Birds Directive (BD): The 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) (Birds Directive)

The Ramsar Convention (R): Convention on Wetlands of International Importance (Ramsar)

The Bathing Water Directive (BW): Bathing Water Directive (76/160/EEC)

The Urban Waste Water Treatment Directive (WW): (91/271/EEC) (amended by Directive 98/15/EEC)

Table 3.1 Wicklow Mountains SAC

Wicklow Mountains SAC is an extensive upland site comprising much of the Wicklow Mountains and extending into Co. Dublin. The solid geology is mainly Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area has been glaciated and features fine examples of high corrie lakes, deep valleys and moraines. Most of the site is over 300m, with much ground over 600m and the highest peak of Lugnaquilla at 925m. The site includes the headwaters of several major rivers, including the Liffey, the Dargle and the Slaney. The substrate over much of the site is peat, with poor mineral soil on the slopes and lower ground. Exposed rock and scree is a feature. The dominant habitats on the site are blanket bog, heaths and upland grassland.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant avoidance / mitigation objectives	Residual Impacts
<p>Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea [3130]</p> <p>Natural dystrophic lakes and ponds [3160]</p> <p>Northern Atlantic wet heaths with Erica tetralix [4010]</p> <p>European dry heaths [4030]</p> <p>Alpine and Boreal heaths [4060]</p> <p>Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* [6230]</p> <p>Blanket bog (*active only) [7130]</p> <p>Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani) [8110]</p>	<p>Overgrazing</p> <p>Peat extraction</p> <p>Burning</p> <p>Invasive and alien species</p> <p>Recreational activities</p> <p>Erosion</p> <p>Water quality</p> <p>Afforestation</p> <p>Water pollution</p> <p>Clearance of riparian vegetation</p>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected</p>	<p>None</p>	<p>None</p>	<p>None</p>	<p>Blessington LAP</p> <p>BD1 BD2 BD3 BD5 S1 S2 TP3</p>	<p>None</p>
						<p>Wicklow County Development Plan</p> <p>BD2 BD3 BD4 BD5 BD6 BD7 BD8 BD9 WT1 WT2 WT3 WT4 WT5 WT6 SG1 SG2 SG6 GI1 GI2 AW1 AW4 WS2 WS3 WS4 WW2 WW3 WW4 WW5 WW8 FL8 W1 WM2 LT1 LT2 AE1 AE2 AE3 NP1 NP2 NP3 NP4 LP1</p>	

Calcareous rocky slopes with chasmophytic vegetation [8210]							
Siliceous rocky slopes with chasmophytic vegetation [8220]							
Old sessile oak woods with Ilex and Blechnum in British Isles [91A0]							
Otter (<i>Lutra lutra</i>) [1355]							

Assessment

Direct Impacts: Given the physical barrier that exists between the plan area and this site, namely the Poulaphouca Reservoir, it is not considered that the provisions set out in the Blessington LAP will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation, reduction in species density or changes in key conservation values.

The site is in state ownership. The main management issues for the site are identified in the National Park Management Plan and are addressed through that structure. Management of the site is addressed through the regulation of access, grazing, peat extraction, recreation and other uses.

Indirect Impacts: Indirectly, it is not considered that the plan will give rise to any changes in water quality, hydrology or air quality at the site, given the relationship of the plan area and the site, combined with the fact that the waste water generated from the plan area discharges into surface waters some distance downstream of the site, and adequate mitigation measures are in place regarding air and water pollution.

While the plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the plan area, and improving recreational connectivity in the plan area. The Wicklow Mountains National Park Management Plan serves to address any visitor access and recreational issues

Cumulative Impacts: The Blessington LAP sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan, which sets out policies and objectives for the protection of Natura 2000 sites. These provisions are set out in Appendix 1.

The Plan has been prepared in accordance with European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of other strategies and plans are considered insofar as they inform the plan. Any policies or objectives from other plans that are considered necessary to expand upon or re-state in this plan are set out in Appendix 2.

Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Conclusion: Having regard to the purpose and provisions of the plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.2 Red Bog SAC

This site comprises a relatively small wetland which lies between moranic ridges. Open water is a principal habitat though there are no obvious inflowing or out flowing streams. Open water is fringed by various wetland habitats, with bog (raised type), fens and freshwater marsh. Some willow (*Salix* spp.) occurs. The surrounding land is improved grassland. An extensive quarrying operation occurs to the south and east of the site.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation [3150] Active raised bogs [7110]* Transition mires and quaking bogs [7140]	Direct drainage / reclamation Agricultural run-off Lowering of the water table through nearby quarrying activity Dumping Forestry Grazing	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	Blessington LAP BD1 BD2 BD3 S1 Wicklow County Development Plan BD2 BD3 BD4 BD5 BD8 WT1 WT2 WT3 WT6 SG1 GI1 GI2 WS2 RUR1 RUR 2 AGR1 AGR4 FTY1 FTY2 EX1 EX4	None

Assessment

Direct Impacts: Given that the site is outside the plan boundary and outside of the jurisdiction of Wicklow County Council it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

Indirect Impacts: The site is vulnerable to changes in hydrology, the main threat being a lowering of the water table due to land drainage in the locality, resulting for example from agricultural land improvement or quarrying activity. While the provisions of neither the Blessington LAP nor the Wicklow County Development Plan will have direct bearing on the management of such activities given that Red Bog is located within the county of Kildare, hydrological impacts from activities in County Wicklow are possible due to the proximity of the site to the county boundary and the likelihood that the ground water regime that supports the site is likely to be located in both jurisdictions. The implementation of the provisions of the Blessington LAP, the Wicklow County Development Plan, the Eastern Region River Basin Management Plan and good practice in agriculture and quarrying will mitigate potential impacts. This is a land-use plan in the context of the Planning & Development Acts and sets the broad parameters under which lands can be developed and used. The plan has limited role in influencing the operation of agriculture, which is bound by compliance S.I. No. 378 of 200 - European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006.

Part of the site is semi-improved grassland and any intensification of grazing could be damaging. Forestry is widespread in the area and is a general threat.

Cumulative Impacts: The Blessington LAP sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Kildare County Development Plan, which sets out policies and objectives for the protection of Natura 2000 sites.

Conclusion: Having regard to the purpose and provisions of the plan it is considered that the plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.3 Wicklow Mountains SPA

Wicklow Mountains SPA is an extensive upland site, comprising a substantial part of the Wicklow Mountains. The underlying geology of the site is mainly of Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area was subject to glaciation and features fine examples of glacial lakes, deep valleys and moraines. Most of site is over 300 m, with much ground over 600 m and the highest peak of Lugnaquilla at 925 m. The substrate over much of site is peat, with poor mineral soil occurring on the slopes and lower ground. Exposed rock and scree are features of the site. The dominant habitats present are blanket bog, heaths and upland grassland. Fine examples of native Oak woodlands are found in the Glendalough area. The site, which is within the Wicklow Mountains National Park, is fragmented into about 20 separate parcels of land.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Merlin (Falco columbarius) [A098] Peregrine (Falco peregrinus) [A103]	Overgrazing Peat extraction Burning Recreational activities	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA	None	None	None	Blessington LAP BD1 BD2 BD5 S1 T3 T4 Wicklow County Development Plan BD2 BD3 BD4 BD7 BD8 BD9 WH1 WH3 WH5 WH6 WT1 WT2 WT3 WT4 WT5 WT6 SG1 SG2 SG3 SG4 SG6 GI1 GI2 AW1 AW3 AW4 WS1 WS2 WS3 WS4 WS5 WW1 WW2 WW£ WW4 WW5 WW8 WM1 WM 2 WM6 AE1 AE2 AE3 NP1 NP2 NP3 NP4 LP1 RUR1 RUR3 RUR4 RUR5 AGR1 AGR4 AGR5 FTY1 FTY2 FTY3 EX1 EX4	None

Assessment

Direct Impacts: Given the physical barrier that exists between the plan area and this site, namely the Poulaphouca Reservoir, it is not considered that the provisions set out in the Blessington LAP will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation, reduction in species density or changes in key conservation values.

The site is in state ownership. The main management issues for the site are identified in the National Park Management Plan and are addressed through that structure. Management of the site is addressed through the regulation of access, grazing, peat extraction, recreation and other uses.

Indirect Impacts: Indirectly, it is not considered that the plan will give rise to any changes in water quality, hydrology or air quality at the site, given the relationship of the plan area and the site, combined with the fact that the waste water in generated from the plan area discharges into surface waters some distance downstream of the site, and adequate mitigation measures are in place regarding air and water pollution.

While the plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the plan area, and improving

recreational connectivity in the plan area. The Wicklow Mountains National Park Management Plan serves to address any visitor access and recreational issues

Cumulative Impacts: The Blessington LAP sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan, which sets out policies and objectives for the protection of Natura 2000 sites. These provisions are set out in Appendix 2.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of other strategies and plans are considered insofar as they inform the plan. Any policies or objectives from other plans that are considered necessary to expand upon or re-state in this plan are set out in Appendix 1.

Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Conclusion: Having regard to the purpose and provisions of the plan it is considered that the plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.4 Poulaphuca Reservoir SPA

Poulaphuca Reservoir, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the mid-east and south-east regions. The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low exposed lake muds are colonised by an ephemeral flora of annual plant species.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
<p>Greylag Goose (Anser anser) [A043]</p> <p>Lesser Black-backed Gull (Larus fuscus) [A183]</p>	<p>Disturbance by human activity such as recreational use</p> <p>Water pollution</p> <p>Disturbance of feeding grounds</p> <p>Hunting</p>	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA	None	None	None	<p>Blessington LAP BD1 BD2 BD5 S1 S2 TP3 TP4 TP5 TP6</p> <p>Wicklow County Development Plan BD2 BD3 BD4 BD7 BD8 BD9 WH1 WH3 WH5 WH6 WT1 WT2 WT3 WT4 WT5 WT6 SG1 SG2 SG3 SG4 SG6 GI1 GI2 AW1 AW3 AW4 AW7 WS1 WS2 WS3 WS4 WS5 WW1 WW2 WW3 WW4 WW5 WW8 WM1 WM 2 WM6 AE1 AE2 AE3 NP1 NP2 NP3 NP4 LP1 RUR1 RUR3 RUR4 RUR5 AGR1 AGR4 AGR5 FTY1 FTY2 FTY3 EX1 EX4</p>	None

Assessment

Direct Impacts: No part of the plan area is located within the designated site and it is therefore considered that the provisions set out in the Blessington LAP will not cause any direct impacts on this site in terms of reduction in habitat area or habitat fragmentation.

In order to avoid activities in the plan area giving rise to disturbance to key species, species fragmentation or reduction in species density, the plan includes a substantial conservation buffer zone along the site boundary, between 100m and 200m.

Activities arising on foot of this plan will not give rise to direct impact on key conservation values such as water quality or the reduction in feeding sites surrounding the site insofar as they give rise to significant adverse impacts on the protected species.

The quality and quantity of the water in the lake is managed by the ESB. Discharges or abstractions to / from the lake are controlled by licence from the ESB. Potable water for the settlement of Blessington is sourced from the reservoir, from an abstraction point near the Poulaphuca Dam, after which it is treated in the Ballymore Eustace water treatment works in Co. Kildare, before returning to storage reservoirs on the west side of the settlement of Blessington. The water treatment works have been recently upgraded on foot of the findings and recommendations of the Greater Dublin Water Supply Strategic Study (1996) which set out an investment programme up to 2016. This plant is licensed to abstract a maximum of 318MI/d and this was determined through the analyses undertaken for the scheme to be a sustainable amount of water abstraction without impact on the integrity of the Liffey. The current licence allows for sufficient abstraction to service the town of Blessington up to its target population. Therefore this plan will not create a new impact not already addressed in the licence granted.

Wastewater from the plan area is not discharged to the reservoir, as discharges from the Blessington WWTP are to the Goldenfalls lake downstream of the Poulaphuca dam.

With regard to the impact on possible feeding grounds outside the site, but within the plan area, data from i-WeBS suggests that the area to the north of Blessington Bridge is the most frequented area and this plan only provides for development on brownfield lands in this area (Doran's Pit), along with a 200m development buffer. All other lands in this area are zoned for continuing agricultural use.

Lands to the south of Blessington Bridge appear to be less frequented, most likely due to the fact that much of this area is already developed, and this plan allows for limited new development in this area, again with a generous 200m development buffer and maximum retention of agricultural areas.

The plan does not include infrastructural works objectives in any SPA or within 100m of any SPA e.g. new road / bridge construction, flood prevention measures, water abstraction, wastewater treatment plants etc.

Indirect Impacts: While the plan will allow an increase in the town population, it is not considered that this growth will result in additional use of the reservoir and its shores to a degree that will result in damage / destruction or other impacts on site integrity, particularly as the site is actively managed and supervised by the ESB.

The reservoir is owned by the ESB and it is used under permit from the ESB for boating and fishing and the banks, which are also owned by ESB, are used by people for picnics. Swimming is not permitted in the reservoir. A number of angling clubs are active in the lakes and rivers in the area. Coarse angling and brown trout angling are carried out and the reservoir holds a good supply of roach, perch and pike. Blessington Sailing Club is located on the western shore of the reservoir at Baltyboys (approx 6km from Blessington town centre) and uses two slips into the lake. Blessington rowing club is located on the eastern shore of the reservoir, just north of Blessington Bridge, less than 1km from the town centre. Wind surfing and canoeing also take place on the reservoir, mainly from the Blessington Lakes Activity Centre to the south-east side of the town centre. The reservoir offers the potential for bird watching. The creation of the reservoir also resulted in the creation of the 'lake drive', a 35 km (21 miles) route all the way around the lakes by good roads.

The plan does include as an objective the possible development of an amenity route around the shores of the reservoir. Some elements of this amenity route have already undergone appropriate assessment screening which found no prima facie case for full Appropriate Assessment. This report is appended to this document. Any further elements of this amenity route would be subject to the same assessment as required by the objectives of this plan.

It is the purpose of this Plan to establish a framework for the planned, co-ordinated and sustainable development of Blessington. Lands will be designated within the plan boundary for specific purposes with the objectives and policies of the plan guiding the development of these lands in a sustainable manner. Such a land-use plan has no role or impact on the

possible effect of hunting / removal of protected species within or adjacent to the SPA.

Cumulative Impacts: The Blessington LAP sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan, which sets out policies and objectives for the protection of Natura 2000 sites. These provisions are set out in Appendix 1.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of other strategies and plans are considered insofar as they inform the plan. Any policies or objectives from other plans that are considered necessary to expand upon or re-state in this plan are set out in Appendix 2.

Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Conclusion: Having regard to the purpose and provisions of the plan it is considered that the plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

4. Summary and conclusions

4.1 Summary of Assessment of significance

Tables 3.1 to 3.4 assess the potential impact of the Blessington LAP 2012 on Natura 2000 sites situated within 10km of the plan boundary. This assessment has taken in direct, indirect and cumulative potential impacts arising from the provisions and objectives of the plan.

The assessment of each of the four Natura 2000 sites indicates that the plan will not cause any significant adverse impacts on any of these sites.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of other plans, programmes and projects are considered insofar as they inform the plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Having regard to the purpose and provisions of the Plan it is considered that the plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of any Natura 2000 sites.

4.2 Conclusions and Recommendations

The likely impacts that will arise from the Blessington LAP 2013 - 2019 have been examined in the context of a number of factors that could potentially affect the integrity of Natura 2000 sites and have been presented in Tables 3.1-3.4. It is the conclusion of this screening statement that there will be no adverse impacts on the integrity of any Natura 2000 sites located within 10km of the Plan area and that a Stage 2 Appropriate Assessment is not required.

Appendix 1 Provisions of Blessington LAP 2013 - 2019

Section 9 Built and natural heritage

- BD1** To protect the natural, architectural and archaeological heritage of the town, in accordance with the objectives and development standards set out in Chapters 16 and 17 of the County Development Plan as are applicable to Blessington and its environs.
- BD2** No projects giving rise to significant adverse direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects); any projects with the identified potential to impact on Natura 2000 sites shall include Appropriate Assessment screening or full Appropriate Assessment and / or an EIS
- BD3** In the interests of the protection and enhancement of biodiversity in Blessington, it is an objective of this plan to:
- Protect trees, hedgerows and wooded areas (particularly those containing indigenous species), watercourses and other features of the natural landscape
 - Require the planting of indigenous plant and tree species in new developments and in the restoration of former quarry lands
- BD4** To designate Glen Ding Wood as a conservation, Heritage and amenity zone
- BD5** To facilitate the use of natural areas for active outdoor pursuits, subject to the highest standards of habitat protection and management and all other normal planning controls.
- BD6** The Council shall seek to promote access to amenity areas of the plan for the benefit of all, on the basis of co-operation with landowners, recreational users and other relevant stakeholder groups to promote “agreed access” on public and privately owned land in the plan area on the basis of sustainability, consultation and consensus.
- BD7** To protect the Architectural Conservation Area designation of the town centre of Blessington.
- BD8** To facilitate the appropriate refurbishment and renewal of architecturally significant buildings and to accommodate new uses in old buildings to ensure their continued use/preservation;
- BD9** To encourage the retention of original features, which are important to a building's character such as window type, materials, detailing, chimneys, entrances and boundary walls, both within and outside the architectural conservation area.

Section 7 Services

- S1** To implement the objectives and development standards of Chapters 12, 13 and 14 of the County Development Plan as are applicable to Blessington.
- S2** To have regard to the provisions of the '*The Planning System and Flood Risk Management*' Guidelines (DoEHLG 2009) and the Flood Risk Assessment carried out as part of this plan

Section 5 Tourism

- T1** To promote and facilitate improvements to tourism and recreation infrastructure in the Blessington area.

- T2** To improve, as funding allows, the principle access routes and junctions linking Blessington town centre to surrounding tourist attractions such as the lakeshore and its associated villages, the Wicklow Mountains, Russborough House and Glen Ding
- T3** To support and facilitate in co-operation with relevant bodies, the provision of amenity routes around the Poulaphuca reservoir in an environmentally sustainable manner
- T4** To require new developments in proximity to the reservoir / Glen Ding (or between the town centre and these areas) to provide / fund the development of new roads, and pedestrian / cycle linkages between the development and the existing town centre (generally as shown on Figure 5.1 below).

Appendix 2 Provisions of Wicklow County Development Plan 2010-2016

Biodiversity Objectives (Chapter 17)

- BD1** To produce a Local Biodiversity Action Plan (in accordance with the objectives of National Biodiversity Plan 2002), identifying species and habitats of importance at a County level, and identifying and promoting appropriate action for the conservation and management of these.
- BD2** To ensure that the impact of new developments on bio-diversity is minimised and require measures for the protection and enhancement of bio-diversity in all proposals for large developments.
- BD3** To maintain the favourable conservation status of existing and future Natura 2000 sites (SACs and SPA's) and Annex I-*Habitats* and Annex II-*Animal and Plant* species in the County.
- BD4** Any programme, plan or project carried out on foot of this development plan, including any variation thereof, with the potential to impact upon a Natura 2000 site(s) shall be subject to an Appropriate Assessment in accordance with Article 6(3) of the EU Habitats Directive 1992 and "*Appropriate Assessment of plans and projects in Ireland-Guidance for Planning Authorities*" (DoEHLG 2009).
- BD5** To maintain the conservation value of all proposed and future Natural Heritage Areas (NHAs) in Wicklow.
- BD6** The Council recognises the natural heritage and amenity value of the Wicklow Mountains National Park and shall consult at all times with National Park management regarding any developments likely to impact upon the conservation value of the park, or on issues regarding visitor areas.
- BD7** To protect non-designated sites from inappropriate development, where it is considered that such development would unduly impact on locally important natural habitats or wildlife corridors.
- BD8** To facilitate, in co-operation with the relevant statutory authorities and other groups, the identification of valuable or vulnerable habitats of local or regional importance, not otherwise protected by legislation.
- BD9** The National Parks and Wildlife Service will be invited to prioritise the preparation of Management Plans for Natura 2000 Sites. This will facilitate the development of site specific Conservation Objectives in the context of the proper planning and sustainable development of the County.

Woodlands Objectives (Chapter 17)

- WH1** To promote the protection of trees, in particular native species, and those associated with demesne planting, which are of conservation and/or amenity value, as set out in Schedules 17.5 & 17.6 and Maps 17.05 & 17.06 (Volume 2) of this plan.
- WH2** To consider the making of Tree Preservation Orders (TPOs) to protect trees of high value, where it appears that they are in danger of being felled.
- WH3** Development that requires the felling of mature trees of conservation and/or amenity value, even though they may not be listed in the Development Plan, will be discouraged.
- WH4** To discourage the felling of mature trees to facilitate development and encourage tree surgery rather than felling where possible
- WH5** To encourage the preservation and enhancement of native and semi-natural woodlands, groups of trees and individual trees, as part of the development control process, and require the planting of native, and appropriate local characteristic species, in all new developments
- WH6** To encourage the retention, wherever possible, of hedgerows and other distinctive boundary treatment in the County. Where removal of a hedgerow, stone wall or other distinctive boundary treatment is unavoidable, provision of the same type of boundary will be required of similar length and set back within the site in advance of the commencement of construction works on the site.

Water System Objectives (Chapter 17)

- WT1** To implement the *EU Water Framework Directive* and associated River Basin and Sub-Basin Management Plans and the EU Groundwater Directive to ensure the protection, improvement and sustainable use of all waters in the County, including rivers, lakes, ground water, coastal and estuarine waters, and to restrict development likely to lead to a deterioration in water quality.
- WT2** To resist development that would interfere with the natural water cycle to a degree that would interfere with the survival and stability of natural habitats.
- WT3** To prevent development that would pollute water bodies and in particular, to regulate the installation of effluent disposal systems in the vicinity of water bodies that provide drinking water or development that would exacerbate existing underlying water contamination
- WT4** To minimise alterations or interference with river / stream beds, banks and channels, except for reasons of overriding public health and safety (e.g. to reduce risk of flooding); a buffer of 10m along watercourses should be provided free of built development, with riparian vegetation generally being retained in as natural a state as possible. In all cases where works are being carried out, to have regard to Regional Fisheries Board *"Requirements for the protection of fisheries habitat during the construction and development works at river sites"*
- WT5** To promote the development of riverine walks and parks, subject to the sensitivity and / or designation of the riverside habitat, particularly within 10m of the watercourse.

WT6 To ensure that any development or activity with the potential to impact on ground water has regard to the GSI Groundwater Protection Scheme (as shown on Map 17.12, Volume 2)

Soils and Geology Objectives (Chapter 17)

- SG1** Geological and soil mapping where available shall be utilised to inform planning decisions relating to settlement, excavation, flooding, food production value and carbon sequestration, to identify prime agricultural lands (for food production), degraded/contaminated lands (which may have implications for water quality, health, fauna), lands with unstable soils / geology or at risk of landslides, and those which are essential for habitat protection, or have geological significance.
- SG2** 'Sites of Geological Importance' will be protected from inappropriate development at or in the vicinity of the site, such that would adversely affect their existence, or interpretation
- SG3** The Council will consult with the Geological Survey of Ireland as it deems necessary, when dealing with any proposals for major developments, which will entail 'significant' ground excavation, such as quarrying, road cuttings, tunnels, major drainage works, and foundations for industrial or large buildings and complexes.
- SG4** To facilitate public access to 'Sites of Geological Importance', on the principle of "agreed access" subject to appropriate measures being put in place to ensure public health and safety
- SG5** The Council will support efforts by the Geological Survey of Ireland, and other interested bodies regarding promotion of the interpretation of geological heritage in Wicklow, and will encourage the development of a "Wicklow Rock Trail", Geopark or other similar geo-tourism initiatives.
- SG6** To facilitate the exploitation of mineral resources, in an environmentally sensitive manner, in accordance with the policies and control measures set out in Chapter 8.

Green Infrastructure Objectives (Chapter 17)

- GI1** To recognise the importance and contribution of green infrastructure throughout the region for the maintenance of biodiversity and ensuring that the region will be able to, or be ecologically robust enough to, adapt and respond to climate change issues.
- GI2** To apply the principles of green infrastructure to inform the land use planning and development management process in terms of the location, design and layout of new development areas.

Recreational use of natural resources objectives (Chapter 17)

- AW1** To facilitate the use of natural areas for active outdoor pursuits, subject to the highest standards of habitat protection and management and all other normal planning controls
- AW2** The Council shall seek to promote access to amenity areas in the County for the benefit of all, on the basis of cooperation with landowners, recreational users and other relevant stakeholder groups to promote "agreed access" on public and privately owned land in the County on the basis of sustainability, consultation and consensus

- AW3** To protect and promote The Wicklow Way and St. Kevin's Way as permissive waymarked routes in the County. The Council shall work in partnership with relevant stakeholders in relation to management of these routes, and will protect them from inappropriate development, which would negatively infringe upon their use.
- AW4** The Council will preserve the open character of commons land and similar hill land and secure access over paths and tracks through consensus with local landowners, particularly in mountain areas.
- AW5** To facilitate the development of a coastal walking and cycling route between Greystones and Wicklow Town
- AW6** To implement the measures set out in the Bray Head SAAO (Special Amenity Area Order) and investigate the possibility of the designation of further SAAOs in the County (as shown on Map 17.08 (Volume 2) of this plan)
- AW7** To protect the quality of bathing waters and to endeavour to ensure that bathing waters achieve "*sufficient or better status by 2015*" and increase the number of bathing waters classified as "*good*" or "*excellent*", in accordance with the Bathing Water Directive (Directive 2006/7/EC)

Water Objectives (Chapter 12)

- WS1** To facilitate the Wicklow County Council *Water Services Investment Programme*, to provide sufficient storage, supply and pressure of potable water to serve all lands zoned for development and in particular, to endeavour to secure the delivery of the following regional and strategic water supply schemes:
- Wicklow and environs Regional Water Supply Scheme;
 - Arklow Water Supply Scheme;
 - West Wicklow (Stage 2) Water Supply Scheme;
 - Bray and environs Water Supply Scheme;
 - Rathdrum Regional Water Supply Scheme;
- and any other smaller, localised water improvement schemes required during the lifetime of the plan.
- WS2** To protect existing and potential water resources of the County, in accordance with the EU Water Framework Directive, the River Basin Management Plans, the Groundwater Protection Scheme and source protection plans for public water supplies.
- WS3** To require new developments to connect to public water supplies where services are adequate or where they will be provided in the near future.
- WS4** Where connection to an existing public water supply is not possible, or the existing supply system does not have sufficient capacity, the provision of a private water supply will be permitted where it can be demonstrated that the proposed water supply meets the standards set out in EU and national legislation and guidance, would not be prejudicial to public health or would not impact on the source or yield of an existing supply, particularly a public supply.
- WS5** To seek to minimise wastage and demand for water, through
- ongoing monitoring and improvement of the Local Authority controlled water supply system;
 - requiring new developments to integrate water efficiency measures (as set out in Section 12.7 of this chapter).

Wastewater objectives (Chapter 12)

WW1 To facilitate the *Wicklow County Council Water Services Investment Programme* to ensure that all lands zoned for development are serviced by an adequate wastewater collection and treatment system and in particular, to endeavour to secure the delivery of the following regional and strategic wastewater schemes:

- Arklow wastewater collection network and treatment scheme, including the provision of a new WWTP at Seabank;
- Newtownmountkennedy regional collection network and treatment scheme, including the provision of a new WWTP at Leamore, Newcastle;
- Extension of Greystones WWTP;

and any other smaller, localised wastewater improvement schemes required during the lifetime of the plan.

WW2 To ensure that all foul water generated is collected and discharged after treatment in a safe and sustainable manner, having regard to the standards and requirements set out in EU and national legislation and guidance documents. The Planning Authority will continue to monitor the cumulative effect of grants of planning permission on available waste water treatment capacity under the terms of the relevant Waste Water Discharge Licence. Where there is inadequate capacity within a Waste Water Treatment Plant to accommodate new development or where the Waste Water Treatment Plant does not meet the terms of the relevant Waste Water Discharge License to the Planning Authority will:

- (a) Refuse planning permission for the development, or
- (b) Consider granting permission with conditions limiting the commencement of development until facilities are suitably upgraded, so long as this is planned to occur within a reasonable timeframe (not more than 3 years) in accordance with the Local Authority's Water Services Investment Programme.

WW3 Permission will be considered for private wastewater treatment plants for single rural houses where:

- The specific ground conditions have been shown to be suitable for the construction of a treatment plant and any associated percolation area;
- The system will not give rise to unacceptable adverse impacts on ground waters / aquifers and the type of treatment proposed has been drawn up in accordance with the appropriate groundwater protection response set out in the Wicklow Groundwater Protection Scheme (2003);
- The proposed method of treatment and disposal complies with the Environmental Protection Agency "Waste Water Treatment Manuals";
- An annually renewed maintenance contract for the system is contracted with a reputable company / person, details of which shall be provided to the Local Authority;
- In all cases the protection of ground and surface water quality shall remain the overriding priority and proposals must definitively demonstrate that the proposed development will not have an adverse impact on water quality standards and requirements set out in EU and national legislation and guidance documents.

WW4 Private wastewater treatment plants for multi-house developments will not be permitted.

WW5 Private wastewater treatment plants for commercial / employment generating development will only be considered where

- The site is due to be connected to a future public system in the area¹;
- There are no plans for a public system in the area and it can clearly demonstrated that the proposed system can meet all EPA / Local Authority environmental criteria;
- An annually renewed contract for the management and maintenance of the system is contracted with a reputable company / person, details of which shall be provided to the Local Authority.

¹ The developers of the private temporary treatment plants will be required to submit details of how the proposed development will be decommissioned where a connection to the future public sewer is possible and the subject lands returned to their previous state

WW6 Where any application for a private treatment plant would require a discharge licence under the Water Pollution Acts, a simultaneous application for same shall be required to be made when submitting the planning application.

WW7 To require new developments to integrate water efficiency measures, (as set out in Section 12.7 of this chapter).

WW8 To examine the feasibility of connecting of unsewered areas, including individual properties / premises serviced by septic tanks, to existing and planned sewer networks.

Storm & Surface Water Objectives (Chapter 12)

SW1 Ensure the separation of foul and surface water discharges in new developments through the provision of separate networks.

SW2 Ensure the implementation of Sustainable Urban Drainage Systems (SUDS) and in particular, to ensure that all surface water generated in a new development is disposed of on-site or is attenuated and treated prior to discharge to an approved surface water system.

Flood Management Objectives (Chapter 12)

FL1 To prepare flood zone maps for all zoned lands within the County as part of future Local Area Plans.

FL2 Land will not be zoned for development in an area identified as being at high or moderate flood risk (as set out in the Guidelines¹), unless where it is fully justified (through the Justification Test set out in the Guidelines) that there are wider sustainability grounds for appropriate development and unless the flood risk can be managed to an acceptable level without increasing flood risk elsewhere and where possible, reducing flood risk overall.

FL3 Applications for significant new developments or developments in high or moderate flood risk areas shall follow the sequential approach as set out above.

FL4 To prohibit development in river flood plains or other areas known to provide natural attenuation for floodwaters except where the development can clearly be justified with the guidelines 'Justification Test'.

FL5 To limit or break up large areas of hard surfacing in new developments and to require all surface car parks to integrate permeability measures such as permeable paving.

FL6 Excessive hard surfacing shall not be permitted for new, or extensions to, residential or commercial developments and all applications will be required to show that sustainable drainage techniques have been employed in the design of the development.

FL7 To require all new developments to include proposals to deal with rain and surface water collected on site and where deemed necessary, to integrate attenuation and SUDS measures.

FL8 Flood assessments will be required with all planning applications proposed in flood risk areas to ensure that the development itself is not at risk of flooding and the development does not increase the flood risk in the relevant catchment (both up and down stream of the application site). Generally a Flood

¹ DEHLG Consultation Draft Guidelines for planning authorities entitled 'The Planning System and Flood Risk Management'

Impact Assessment will be required with all significant developments and a certificate (from a competent person stating that the development will not contribute to flooding within the relevant catchment) will be required with all small developments of areas of 1 hectare or less.

- FL9** For developments adjacent to all watercourses of a significant conveyance capacity or where it is necessary to maintain the ecological or environmental quality of the watercourse, any structures (including hard landscaping) must be set back from the edge of the watercourse to allow access for channel clearing/ maintenance/ vegetation. A minimum setback of up to 10-15m will be required either side depending on the width of the watercourse.

Solid waste management objectives (Chapter 13)

- WM1** To require all developments likely to give rise to significant quantities of waste, either by virtue of the scale of the development or the nature of the development (e.g. one that involves demolition) to submit a construction management plan, which will outline, amongst other things, the plan for the safe and efficient disposal of waste from the site.
- WM2** To require all new developments, whether residential, community, agricultural or commercial to make provision for storage and recycling facilities (in accordance with the standards set out in Section 13.8 of this chapter).
- WM3** To facilitate the development of existing and new waste recovery facilities and in particular, to facilitate the development of 'green waste' recovery sites.
- WM4** To facilitate the development of waste-to-energy facilities, particularly the use of landfill gas and biological waste.
- WM5** To have regard to the Council's duty under Section 38 (1) of the 1996 Waste Management Act, to provide and operate, or arrange for the provision and operation of, such facilities as may be necessary for the recovery and disposal of household waste arising within its functional area.
- WM6** To facilitate the development of sites, services and facilities necessary to achieve implementation of the objectives of the Wicklow Waste Management Plan.

Hazardous waste & emissions objectives (Chapter 13)

- HW1** To facilitate the development of sites, services and facilities for the disposal of hazardous household wastes in accordance with the objectives of the Wicklow Waste Management Plan.
- HW2** To have regard to the "Major Accidents Directive" (European Council Directive 96/82/EC). This Directive relates to the control of major accidents involving dangerous substances with an objective to prevent major accidents and limit the consequences of such accidents. This policy will be implemented through Development Control, through specific control on the siting of new establishments and whether such a siting is likely to increase the risk or consequence of a major accident.

Litter & illegal dumping objectives (Chapter 13)

- LT1** To facilitate the implementation of the County Litter Management Plan.
- LT2** To proactively pursue enforcement and legal action against perpetrators of illegal dumping and 'fly tipping'.

- LT3** To require all new potentially litter generating developments (such as shops, takeaways, pubs etc) to provide litter / cigarette bins on or directly adjoining the premises and to provide for the cleaning of the adjoining streetscape in accordance with the provisions of Part II Section 6 of the Litter Pollutions Act 1997 and 2003.

Air emissions objectives (Chapter 13)

- AE1** To regulate and control activities likely to give rise to emissions to air (other than those activities which are regulated by the EPA).
- AE2** To require proposals for new developments with the potential for the accidental release of chemicals or dust generation, to submit and have approved by the Local Authority construction and/or operation management plans to control such emissions.
- AE3** To require activities likely to give rise to air emissions to implement measures to control such emissions, to install air quality monitors and to provide an annual air quality audit.

Noise pollution objectives (Chapter 13)

- NP1** To enforce, where applicable, the provisions of the Environmental Protection Agency (EPA) Acts 1992 and 2003, and EPA Noise Regulations 1994.
- NP2** To regulate and control activities likely to give rise to excessive noise (other than those activities which are regulated by the EPA).
- NP3** To require proposals for new developments with the potential to create excessive noise to prepare a construction and/or operation management plans to control such emissions.
- NP4** To require activities likely to give rise to excessive noise to install noise mitigation measures and monitors. The provision of a noise audit may also be required as appropriate.

Light pollution objectives (Chapter 13)

- LP1** To require proposals for new developments with the potential to create light pollution or light impacts on adjacent residence to mitigate impacts (in accordance with the standards set out in Section 13.8 below).

Rural Economic Development Objectives (Chapter 8)

- RUR1** No commercial / industrial development will be permitted in an Area of Outstanding Natural Beauty, except in the case of extractive industries, where it complies with the requirements of Section 8.4 of this plan.
- RUR2** No commercial/ industrial development will be permitted to locate on a national route except where appropriately located on suitably zoned lands within a growth centre.
- RUR3** To permit the development of commercial / industrial developments in rural areas, where it is proven that the proposed development requires to be located in the rural area and will have a positive impact on the location.

- RUR4** It is the objective of the Council to permit the development of small-scale commercial/ industrial developments in rural areas that are not dependent on an existing local resource, subject to compliance with all of the following criteria:
- The proposed development shall be a small-scale industrial / commercial scheme or service and the number employed shall be appropriate in scale to the location and its characteristics, including proximity to the workforce and customers;
 - The proposed development shall be located on the site of a redundant farm building / yard or similar agricultural brownfield site;
 - The nature and scale of the proposed development and the proposed process or activity to be carried out, shall be appropriate to and compatible with, the character of the rural environment of the site at which the development is proposed, and shall not be detrimental to the rural amenity of the surrounding area. In the assessment of planning applications, cognisance shall be taken of the location site vis-à-vis the proximity of the site to the national and regional road network.

- RUR5** To require any proposed commercial / industrial developments in a rural area to comply with the following criteria (in addition to any other relevant objectives of the plan being complied with):
- It shall be of a scale in terms of the number of employees, site area and building size, which is suitable for the location and which is visually sympathetic to the rural surroundings;
 - It shall not give rise to any significant adverse environmental impact, in terms of impact on the scenic value, heritage value and/ or environmental/ ecological/ conservation quality of the area. It shall not have a negative impact on the surrounding area in terms of nuisance, noise, odours or other pollutants;
 - The development shall not result in the creation of a significant traffic hazard and the road network shall be suitable and shall have the capacity for anticipated traffic levels;
 - The development shall not be detrimental to the amenity of nearby properties, and in particular, to the amenity of nearby residential properties;
 - There shall be acceptable proposals for the safe storage and disposal of waste, in a manner that is visually and environmentally acceptable;
 - The site shall be suitable in size such that any housing and commercial activity can be separated, serviced and landscaped accordingly.

Notwithstanding any other objectives set out in this section of the plan, the Planning Authority will refuse permission for any form of development that fails to comply with the above criteria.

All planning applications should include details of the nature and scale of the proposed operation, and include opening hours and anticipated traffic levels. A business plan should also be submitted, where appropriate.

- RUR6** To encourage, where appropriate, home-based economic activity¹ in rural areas including the provision of small-scale individual enterprises. Proposals which involve the change of use and/or new development for purposes of home-based employment will generally be considered favourably where it can be demonstrated that the proposal complies with the following:
- Requirements set out in RUR5;
 - The nature and scale of the proposed development and the proposed process or activity to be carried out, shall be appropriate to and compatible with the character of the rural environment.

- RUR7** The Council will promote improved broadband in rural areas to help the rural economy.

¹ Home based economic activity is defined as small scale commercial/industrial activity carried out by the residents of a house which is subordinate or ancillary to the use of the dwelling as a place of residence.

Agriculture development objectives (Chapter 8)

- AGR1** To facilitate the development of environmentally sustainable agricultural activities, whereby watercourses, wildlife habitats, areas of ecological importance and other environmental assets are protected from the threat of pollution, and where development does not impinge on the visual amenity of the countryside. Developments shall not be detrimental to archaeological and heritage features of importance.
- AGR2** To encourage and facilitate agricultural diversification into suitable agri-businesses. Subject to all other objectives being complied with, the Council will support the alternative use of agricultural land for the following alternative farm enterprises:
- Specialist farming practices, e.g. organic farming, horticulture, specialised animal breeding, deer and goat farming, poultry, flower growing, forestry, equine facilities, allotments, bio-energy production of crops and forestry, organic and speciality foods;
 - Suitable rural enterprises.
- AGR3** To protect agricultural or agri-business uses from incompatible uses, which are more suited to being located within an urban settlement.
- AGR4** To ensure that agricultural developments do not cause increased pollution to watercourses. Developments will be required to adhere to the Nitrates Directive (91/676/EC), and the EC (Good Agricultural Practice for Protection of Waters) Regulations 2009, with regard to storage facilities, concerning the protection of waters against pollution caused or induced by nitrates from agricultural sources. Developments will be required to comply with relevant measures, which operate to protect water quality from pollution by agricultural sources. The disposal and storage of agricultural waste shall comply with the standards required by Council.
- AGR5** To permit the development of new, appropriately located and designed agricultural buildings, which are necessary for the efficient and environmentally sound use of the agricultural practice. New buildings will only be permitted in cases where there are no suitable redundant buildings on the farm holding which would accommodate the development and where the Council is satisfied that the proposal is necessary for the efficient operation of the farm. Developments shall be compatible with the protection of rural amenities, and should not create a visual intrusion in the landscape or be the cause of an environmental nuisance.
- AGR6** To encourage proposals for farm shops¹ where it can be clearly demonstrated that:
- The products to be sold are primarily produce grown on the farm holding;
 - The scale and scope of the retailing proposed will not harm the viability or retail facilities in any nearby town or village;
 - The proposed shop is operated by the owner of the farm and is ancillary to the main use of the property for agricultural activities.

¹ Farm shops refer to premises primarily for the sale of produce originating from the farm holding or the local area.

Forestry Objectives (Chapter 8)

- FTY1** To facilitate afforestation in appropriate locations, in accordance with the 'Wicklow Indicative Forestry Strategy' (Wicklow County Council, 2002), and in co-operation with forestry operators and the Forest Service.
The Wicklow Indicative Forestry Strategy was produced by the Council in 2002, in consultation with the Forest Service. The strategy is intended to be a tool of assistance to planners in dealing with proposals for forestry applications. The strategy includes a list of areas that are preferred for afforestation and a list of areas where afforestation would be inappropriate by virtue of landscape, soil type, settlement or environmental grounds. The strategy also includes a series of objectives which are intended to guide planning decisions. The Council will have particular regard to developments that are located in the areas included in 'Table 3: Areas Sensitive to Afforestation', and as per the Strategy, should be consulted on all forestry grant applications in these areas.
- FTY2** To promote afforestation in co-operation with relevant agencies, including the Forest Service (Department of Agriculture, Fisheries and Food) and forestry operators and to ensure that afforestation is undertaken in a manner that is consistent with the principle of 'sustainable forest management'. The Council will only permit development that complies with the following:
- The development is compatible with the protection of the environment, and does not cause pollution or degradation of wildlife habitats, natural waters or areas of ecological importance;
 - The development does not have a negative visual impact on the scenic quality of the countryside, and is of an appropriate nature and scale to the surrounding area;
 - The development is not detrimental to archaeological or other historic/heritage features;
 - The Council will permit forestry development where it is considered that the roads infrastructure (in terms of design, width, surfacing etc.), which is to serve the development, can accommodate the proposed development. No development will be permitted that will result in damage to roads infrastructure or undue nuisance to other road users. The Council may apply a special financial levy to certain developments for works that are required to be undertaken to the road network.
- FTY3** To promote the use of forests for appropriate recreation purposes and to facilitate the development of appropriate recreation facilities at suitable locations. The recreational use of forests will only be permitted where it can be demonstrated that the recreational use is compatible with the other forest objectives, functions and values of the forest, such as timber production, sensitive habitats and important archaeology. Developments will only be permitted that are acceptable in terms of other planning considerations, including the provision of acceptable infrastructure such as roads, carparking, water and sewerage infrastructure.
- FTY4** To promote County Wicklow as a 'centre of excellence' in the forestry research and management field. The Council will facilitate the development of forestry research/ interpretative centres, at appropriate locations.
- FTY5** To promote the use of native hardwood species using seed of native provenance where possible in afforestation schemes. The use of native species or a broadleaf / conifer mixture and age class diversity can enhance the visual impact and biodiversity of forests.
- FTY6** To encourage the development of farm forestry as a means of promoting rural diversity and strengthening the rural economy.
- FTY7** To encourage the development of forestry for timber biomass which can be used as a renewable energy source.

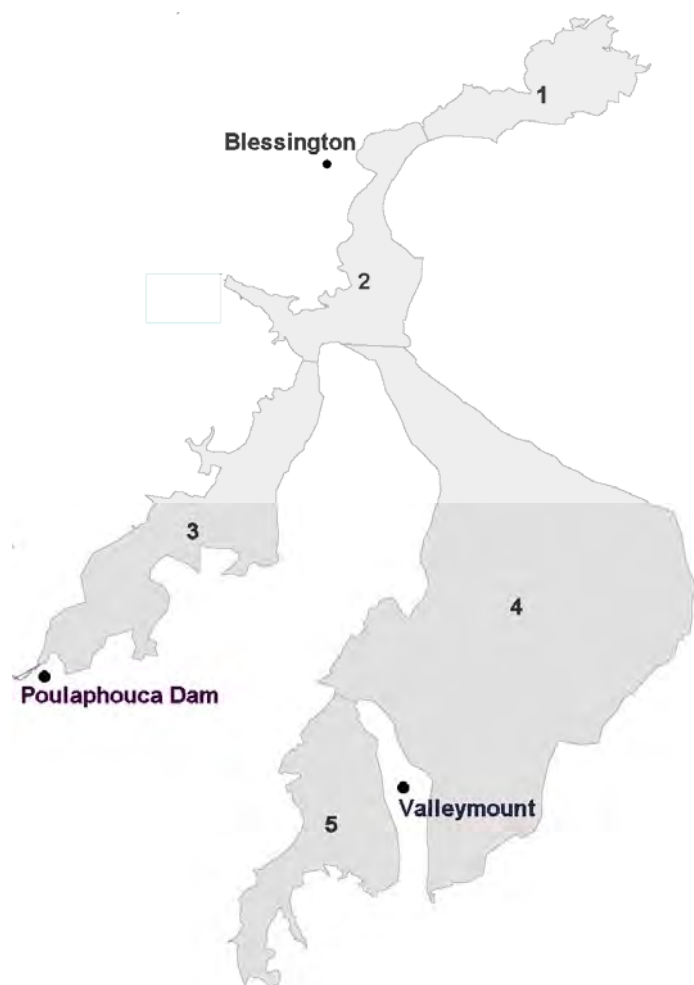
Extractive Industry Objectives (Chapter 8)

- EX1** To facilitate and encourage the exploration and exploitation of minerals in the County in a manner, which is consistent with the principle of sustainability and protection of residential, environmental and tourism amenities.
- EX2** To encourage the use, development and diversification of the County's indigenous natural rock industry, particularly where it can be shown to benefit processing, craft or other related industries.
- EX3** To support and facilitate the development of related and spin-off industries of the extractive industry such as craft and monumental stone industries and the development of the mining and industrial tourism heritage. Consideration will be given to the development of such related industries within or in association with existing operations of worked out mines or quarries where this does not conflict with other objectives and objectives of the plan.
- EX4** To have regard to the following guidance documents (as may be amended, replaced or supplemented) in the assessment of planning applications for quarries and ancillary facilities:
- *'Quarries and Ancillary Activities: Guidelines for Planning Authorities' (2004, DoEHLG);*
 - *'Environmental Management Guidelines – Environmental Management in the Extractive Industry (Non Scheduled Minerals)'; EPA 2006;*
 - *'Archaeological Code of Practice between the DoEHLG and the Irish Concrete Federation' 2009;*
 - *'Geological Heritage Guidelines for the Extractive Industry', 2008;*
 - *'Wildlife, Habitats and the Extractive Industry – Guidelines for the protection of biodiversity within the extractive industry', NPWS 2009.*

Appendix 3

i-WeBS Poulaphuca Reservoir Survey Zones

2. Poulaphouca Reservoir



SPA:	IE0004063 (1,949 ha)	OS Map(s):	56
IBA:	IE107 (1,949 ha)	Grid Reference:	O000100
Lat/Long:	53°10'N 06°30'W	County:	Wicklow

pNHA (Poulaphouca Reservoir 2212 ha), Wildfowl Sanctuary (area unknown).

Site Description

Poulaphouca (or Blessington) Reservoir is located to the east of the towns of Blessington and Ballymore Eustace in northwest Wicklow. Further, it is sandwiched between the county boundary with Kildare and the Wicklow Mountains to the east. The reservoir was created in 1938 by damming the River Liffey, which flows into the northern end, for the purpose of generating electricity from hydropower. The reservoir is also fed by the Kings River which enters at the southern end near Lockstown. It has a maximum depth of 10 m, and visibility is restricted to approximately 1 m due to high peat and silt suspension in the water (Matthews and Reynolds 1995).

The shoreline of the reservoir is mostly sandy with grassy banks which are generally less than 1 m high. The steep sand and clay cliffs of up to 15 m in height that occur in a few locations are remnants of the old River Liffey channel. In many places these banks are actively eroding, and a strip of conifers has been planted around much of the perimeter of the reservoir in an attempt to stabilise the banks and to reduce pollution (Matthews and Reynolds 1995).

Subsites

Total count area: 1,970 ha.

Table 1. Subsite coverage at Poulaphouca Reservoir between 1994/95 and 2000/01.

Map ID	Subsite	Grid	No. counts	No. seasons
1	Threecastles	O005155	18	3
2	Blessington to Baltyboys Bridge Carrig	N9812	14	3
3	SW of Baltyboys-Bloshina Bridge to Poulaphouca	N9710	8	3
4	Valleymount	N990070	8	2
5	Southern arm-Valleymount-mouth of King's River	N9807	16	3
	Entire Site	N9910	15	3

Habitat: Reservoir & adjacent grassland.

Boundary relationship: The SPA is entirely contained within the count area.

Poulaphouca Reservoir has been counted at least once each season since 1995/96 inclusive. During the early seasons, it was covered as one entire count unit, with counts of smaller sections occasionally submitted. Since the 2000/01 season, this site has been routinely divided into five count units.

Waterbirds

Number of regularly occurring species: 19
Mean wildfowl 96-00: 1,345
Mean waders 96-00: 143
Mean gulls 96-00: 1,992

Table 2. Waterbirds occurring in significant concentrations at Poulaphouca Reservoir between 1994/95 and 2000/01 (see *Structure of site accounts* for further explanation).

Species	94-98	95-99	96-00	Month	% Flyway	% National	Rank	% change (WWS)
National								
Greylag Goose	684	701	760	Jan	0.8	19.0	3	+194
Gulls								
Lesser Black-backed Gull	702	651	694	Oct	0.1	-	6	

Poulaphouca Reservoir is nationally important for Greylag Goose. This species roosts on the lake by night and feeds during the day in surrounding fields, particularly those to the north of the site near Threecastles and to the south near Poulaphouca Dam. The reservoir is also regularly used by significant numbers of Lesser Black-backed Gull, particularly as a night-time roost during the autumn (Nairn and Crowley 1998).

Overall waterbird numbers have declined (by 45%) since the *Winter Wetlands Survey (1984-86)*. This includes declines in Whooper Swan (64%), Wigeon (58%), Teal (75%), Mallard (76%) and Curlew (54%). In contrast, Greylag Goose numbers have increased significantly.

Waterbird species recorded (peak count): Little Grebe (4), Great Crested Grebe (17), Cormorant (15), Grey Heron (10), Mute Swan (21), Bewick's Swan (2), Whooper Swan (33), Pink-footed Goose (6), Greenland White-fronted Goose (1), Greylag Goose (950), Shelduck (17), Wigeon (234), Teal (203), Mallard (237), Pintail (1), Shoveler (6), Pochard (24), Tufted Duck (12), Scaup (4), Goldeneye (28), Coot (6), Moorhen (26), Ringed Plover (5), Golden Plover (149), Lapwing (42), Little Stint (1), Curlew Sandpiper (4), Dunlin (28), Jack Snipe (1), Snipe (12), Black-tailed Godwit (4), Curlew (238), Redshank (1), Greenshank (1), Green Sandpiper (2), Mediterranean Gull (1), Black-headed Gull (2144), Common Gull (736), Lesser Black-backed Gull (1419), Herring Gull (126), Great Black-backed Gull (487).

Activities and Threats

Poulaphouca Reservoir provides most of the drinking water supply to Counties Dublin and north Wicklow. The increasing water demands of the reservoir in recent years have lowered the water levels further upstream in the River Liffey. Concerns have been raised on the ability of the reservoir to function as a fisheries resource, and as a source of wastewater dilution.

There have been occasional conflicts with farmers in relation to goose grazing around the site. As such, the geese are particularly sensitive to disturbance by shooting in the area.



Poulaphouca Reservoir

Threecastles

Species	1% National	1% International	2003/04	2004/05	2005/06	2006/07	2007/08	Peak	Mean
Mute Swan	110	110	1		2	3	2	3	2
Whooper Swan	130	210		19	20	14	15	20	14
Greylag Goose	50	870	505	235	464	100	258	505	312
Wigeon	820	15,000	55	40	46	3	43	55	37
Teal	450	5,000	200	28	137	47	87	200	100
Mallard	380	20,000	299	132	224	174	220	299	210
Tufted Duck	370	12,000			3		1	3	1
Goldeneye	95	11,500	5	5	11	2	16	16	8
Great Northern Diver		50					1	1	0
Little Grebe	25	4,000	1	2		3		3	1
Great Crested Grebe	55	3,600		2	2	4	6	6	3
Cormorant	140	1,200	6	5	4	9	5	9	6
Grey Heron	30	2,700	1	1	2	2	3	3	2
Moorhen	20		1	2		5	2	5	2
Coot	330	17,500				2		2	0
Oystercatcher	680	10,200			1			1	0
Ringed Plover	150	730		1				1	0
Lapwing	2,100	20,000	15	1	93	45	51	93	41
Snipe		20,000	2	1	10		8	10	4
Curlew	550	8,500	31	2	6	38	40	40	23
Common Sandpiper			1					1	0
Black-headed Gull		20,000	16	340	74	140	90	340	132
Lesser Black-backed Gull		4,500	15	40	230	140	112	230	107
Herring Gull		13,000				139		139	28
Great Black-backed Gull		4,800	4					4	1

* Note there has been a taxonomic change within the wildfowl, which are now headed by swans and geese.

The counts presented in the table refer to the peak counts of species in each I-WeBS season. Site peak and mean are calculated as the peak and mean of peak counts respectively over the seasons specified. Blank cells within columns which contain positive values for one or more species constitute zero for those species.



Poulaphouca Reservoir

SW of Baltyboys-Bloshina Bridge to Poulaphouca Dam

Species	1% National	1% International	2003/04	2004/05	2005/06	2006/07	2007/08	Peak (03-07)	Mean (03-07)
Mute Swan	110	110	5		17	6	2	17	6
Whooper Swan	130	210					15	15	3
Wigeon	820	15,000	27	18	17	14	77	77	31
Teal	450	5,000	10	3	48	36	7	48	21
Mallard	380	20,000	36	20	35	9	38	38	28
Pochard	380	3,500				2		2	0
Tufted Duck	370	12,000	3			3		3	1
Goldeneye	95	11,500	2	5	7	2	2	7	4
Little Grebe	25	4,000	2	3				3	1
Great Crested Grebe	55	3,600	2	7	3	2	4	7	4
Cormorant	140	1,200	2	3	6	3	1	6	3
Little Egret		1,300				1		1	0
Grey Heron	30	2,700	6	1	1	1	1	6	2
Moorhen	20		25	3			17	25	9
Snipe		20,000			1			1	0
Black-headed Gull		20,000	52	110	88	126	60	126	87
Lesser Black-backed Gull		4,500				80	5	80	17

Blessington to Baltyboys Bridge Carrig

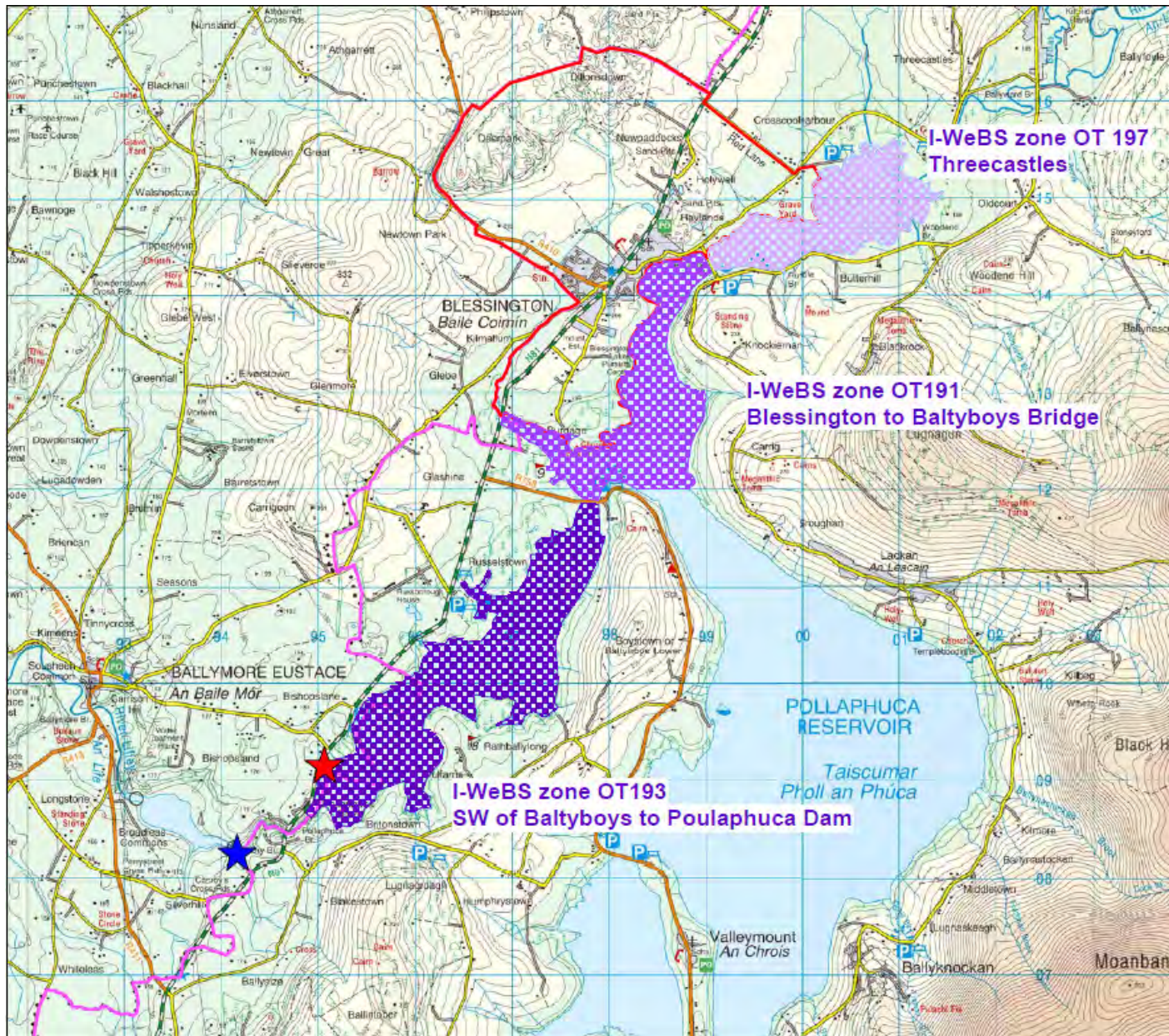
Species	1% National	1% International	2003/04	2004/05	2005/06	2006/07	2007/08	Peak (03-07)	Mean (03-07)
Mute Swan	110	110	2		3	5		5	2
Whooper Swan	130	210					1	1	0
Wigeon	820	15,000	37	21	21		15	37	19
Teal	450	5,000	44		30	18	26	44	24
Mallard	380	20,000	15	7	41	6	25	41	19
Pochard	380	3,500	1					1	0
Tufted Duck	370	12,000		1			1	1	0
Goldeneye	95	11,500	1	2	4	2	7	7	3
Little Grebe	25	4,000		2	2			2	1
Great Crested Grebe	55	3,600	1	1	1	1	2	2	1
Cormorant	140	1,200	2	2	2	1	2	2	2
Grey Heron	30	2,700	1	1	2	2	2	2	2
Moorhen	20		2	2	13	4	11	13	6
Coot	330	17,500	3					3	1
Lapwing	2,100	20,000			16			16	3
Dunlin	880	13,300	1				1	1	0
Snipe		20,000					3	3	1
Curlew	550	8,500				16		16	3
Black-headed Gull		20,000	70	38	120	80	24	120	66
Lesser Black-backed Gull		4,500	1	1	30	9		30	8
Herring Gull		13,000	1					1	0

* Note there has been a taxonomic change within the wildfowl, which are now headed by swans and geese.

The counts presented in the table refer to the peak counts of species in each I-WeBS season. Site peak and mean are calculated as the peak and mean of peak counts respectively over the seasons specified. Blank cells within columns which contain positive values for one or more species constitute zero for those species.

AA Screening Assessment
Of the
Blessington Local Area Plan
2013 – 2019

I-WeBS (Irish Wetland Bird Survey
Zones)



Legend

— PROPOSED PLAN BOUNDARY

— COUNTY BOUNDARY

★ BLESSINGTON WWTP
DISCHARGE POINT

★ WATER SOURCE
BALLYMORE EUSTACE
WATER PLANT

Appendix 4

Blessington Greenway Amenity Walk Documents (AA
Screening and Ecological Assessment)

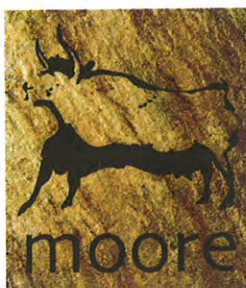
Appropriate Assessment Screening

**as required under Article 6(3) of the Habitats Directive
(Council Directive 92/43/EEC)**

16th March 2012

**Blessington Russborough Greenway
Blessington, Co. Wicklow**

Prepared by: Moore Group – Environmental Services



On behalf of Wicklow County Council

All maps produced under licence from Ordnance Survey Ireland
Licence No. EN 002008© Ordnance Survey Ireland Government of Ireland

1. Introduction

The Habitats Directive (Council Directive 92/43/EEC) requires that all plans and projects must be screened for potential impact on Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). This process aims to establish whether a full Appropriate Assessment as required by Article 6 of the Directive is required in any particular case.

This report presents a screening assessment for the installation of a cycling/walking trail referred to as the Blessington Russborough Greenway at Blessington, Co. Wicklow. The project is located adjacent to the Poulaphouca Reservoir SPA (Site Code 004063).

It has been prepared by Moore Group - Environmental Services for Blessington Community Forum and Wicklow County Council in accordance with Articles 6(3) and 6(4) of the Habitats Directive. The report was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has 18 years experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements in both terrestrial and aquatic habitats.

1.1 Background - The Habitats and Birds Directives

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the EU. Under the Directive member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a European Union context.

The Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs

and SPAs. Article 6(3) and 6(4) of the Directive set out key elements of the system of protection including the requirement for Appropriate Assessment of plans and projects (see Appendix A). Article 6(3) of the Habitats Directive requires an appropriate assessment of any plan or project likely to have a significant effect on an SAC or SPA.

1.2 Screening for Appropriate Assessment

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

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

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.

Screening has been undertaken in fulfillment of the requirements of the Habitats Directive and taking into account the Department of the Environment, Heritage and Local Government's Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

2. Methodology

The Habitats Directive (Council Directive 92/43/EEC) requires that all plans and projects must be initially screened for potential impact on Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). This process aims to establish whether a full Appropriate Assessment as required by Article 6 of the Directive is required in any particular case.

Screening has been undertaken in accordance with the Guidance on Appropriate Assessment in Ireland (DoEHLG, 2009) which comprises the following steps:

1. Description of the Project and local site characteristics,
2. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives,
3. Assessment of likely effects – direct, indirect and cumulative – undertaken on the basis of available information as a desk study or field study or primary research as necessary,
4. Screening Statement with conclusions.

3. Description of the Project

This report presents a screening assessment for the installation of a cycling/walking trail referred to as the Blessington Russborough Greenway at Blessington, Co. Wicklow. The project site is located adjacent to the Poulaphouca Reservoir SPA (Site Code 004063). The location of the project and study area is presented in Figures 1 - 3 below.

It is proposed to lay a mixture of tarmac and crushed limestone track in order to create a walking and cycling trail or greenway in two loops extending from Blessington to Russellstown near the entrance to Russborough, see Figure 2. The trail will start at the Avon Rí Hotel in the townland of Burgage More and continuing along existing orienteering tracks adjacent to the hotel grounds to Burgage Castle. The trail will return to the hotel via existing rough walking tracks and otherwise continue to the local road at Burgage and then along the existing local roads back to the hotel completing the first or northern loop.

From Burgage the trail is proposed to continue with new track being laid along the perimeter of the SPA and local agricultural land on the north side of Burgage Inlet. There is an archaeological feature in this area consisting of an inner enclosure and outer circular mound that will require the trail to be raised on boardwalk for a length of approximately 40m. The boardwalk will be comprised of inert recycled plastic composite. The trail continues over two streams which will require culverting to meet the N81.

It will cross the inlet adjacent to the N81 and will be facilitated here by Wicklow County Council along the road verge with no major work apart from a safety barrier between the trail and the road. There would be no changes to the existing fence crossing the inlet travelling south on the N81.

The trail will continue along the N81 and turn left onto the old Burgage Moyle lane leading to ESB owned lands at the end of the lane in the townland of Burgage Moyle. The trail will then follow the perimeter of conifer plantation avoiding reedbed and join an old lane from Burgage Moyle to Russellstown.

The trail will link to Russellstown car park and loop through a small section of conifer plantation including a small section of the lakeshore and returning to the car park via what is known locally as Featherbed Lane (the old road to Baltyboys) and from there back to Burgage retracing the trail along the N81 and back to Burgage.

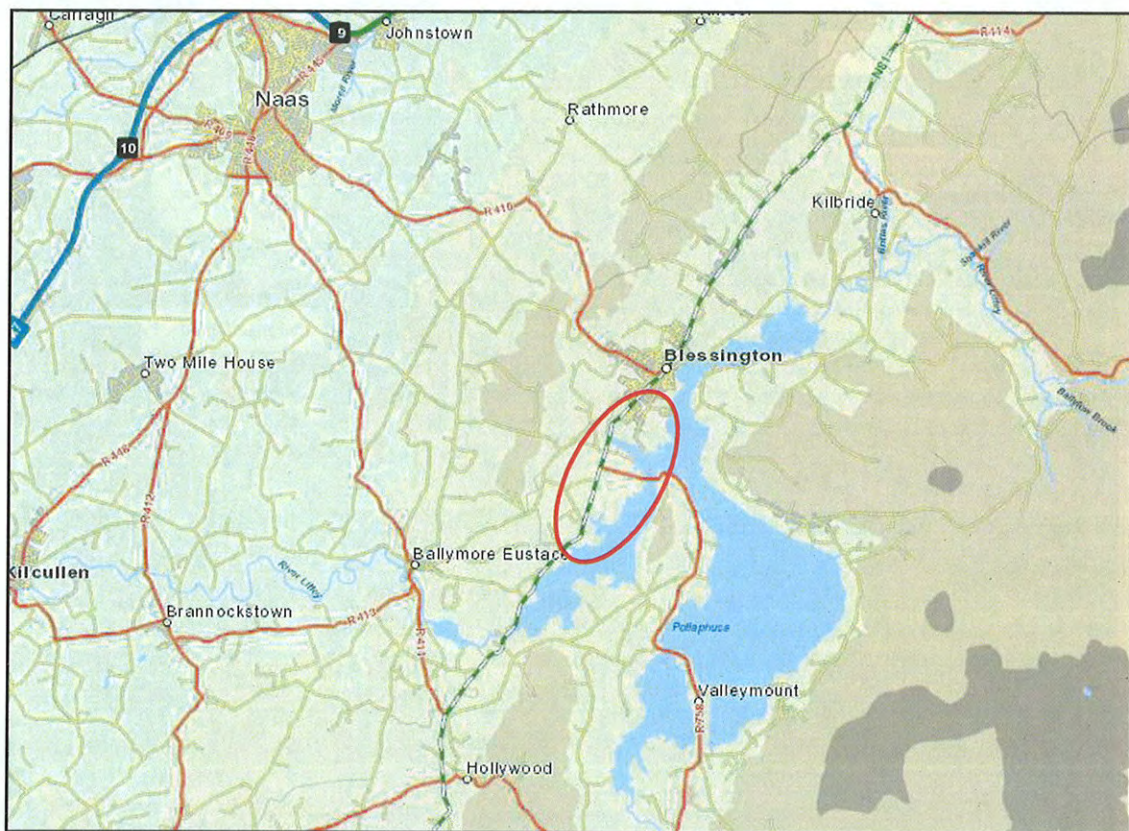


Figure 1. Showing the study area between Blessington and Russborough, Co. Wicklow.



Figure 2. Showing the path of the trails overlain on aerial photography of the study area
(adapted from Google Earth).

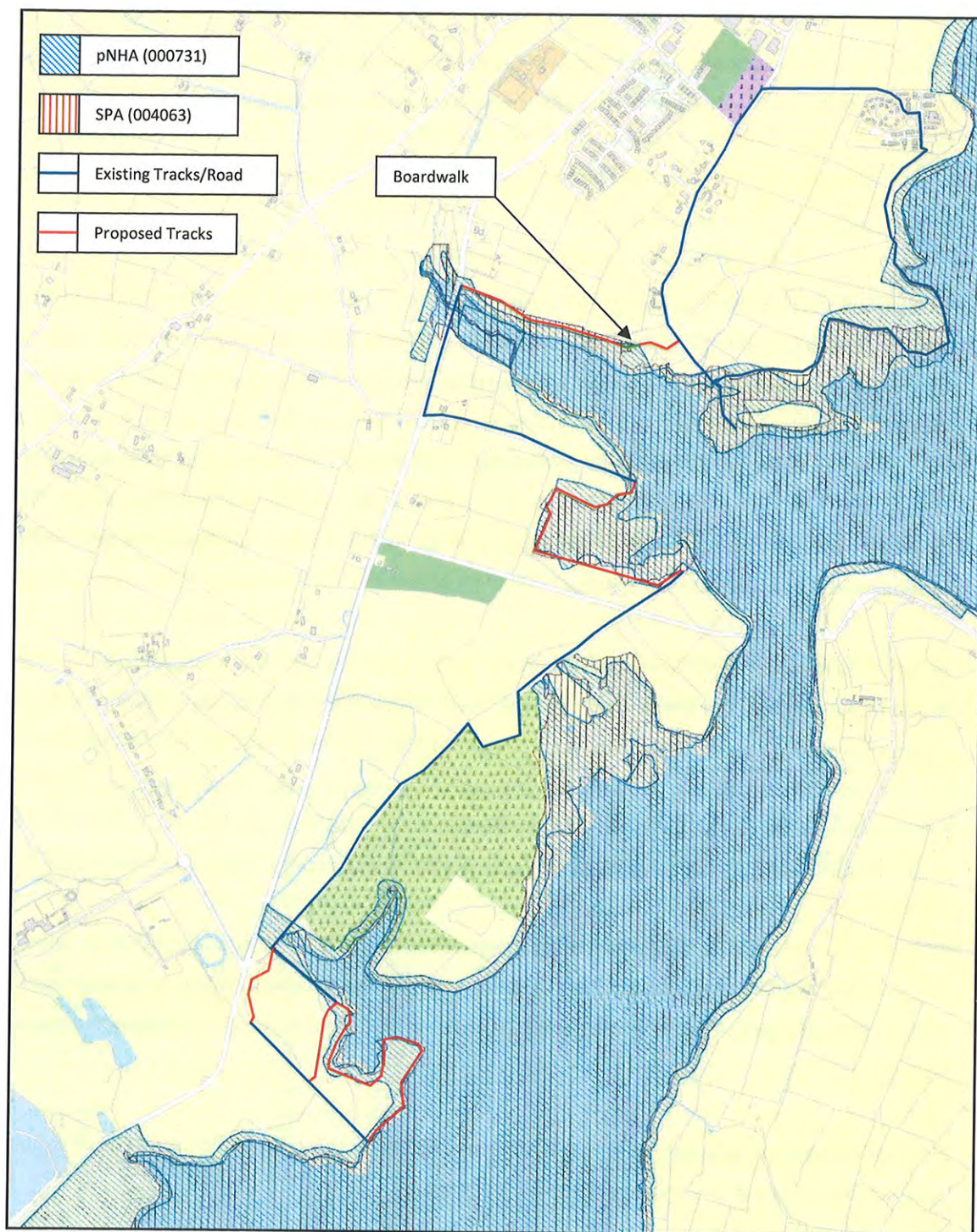


Figure 3. Showing the outline of designated areas in relation to the trail.

4. Identification of Natura 2000 sites

The site of the proposed development is located partly within in the Poulaphouca Reservoir SPA (004063). An excerpt from the Site Synopsis for the SPA is presented below. The full site synopsis is presented in Appendix B.

4.1 Poulaphouca Reservoir SPA (004063)

Poulaphouca Reservoir SPA, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the Mideast and south-east regions. The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the River Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low the exposed lake muds are colonised by an ephemeral flora of annual plant species.

Poulaphouca Reservoir is of international importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. An average peak of 1,058 individuals occurred during the five seasons 1995/96 to 1999/00. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (34), Wigeon (262), Teal (136), Mallard (283), Goldeneye (36), Cormorant (16), Great Crested Grebe (11), Curlew (118) and Mute Swan (17). The site is also used by Grey Heron (12).

The principal interest of the site is the Greylag Goose population, which is of international importance. A range of other wildfowl species also occurs, including Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull.

Generic Conservation Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

- [wintering] *Anser anser* (Greylag Goose)
- [wintering] *Larus fuscus* (Lesser Black-backed Gull)

5. Identification of potential impacts to Natura 2000 sites & assessment of Significance

5.1. Potential Impacts

The majority of tracks are existing tracks that are used by the public and there would be no significant impact from upgrading these tracks to accommodate cyclists and walkers.

The main concern is with regard to disturbance from machinery on the north side of Burgage Inlet and adjacent to reedbed at Burgage Moyle. There are no rare or protected habitats or flora under the route of the proposed track in these areas. However, disturbance during construction may have a temporary impact on waterbirds such as Teal and Great Crested Grebe.

Early consultation with the Local NPWS Conservation Rangers established that the main concentration of Greylag Geese is located in the area of Threecastles to the north of the lake. This species roosts on the lake at night and feeds during the day in surrounding fields, particularly those to the north of the site near Threecastles and to the south near Poulaphouca Dam (Crowe, 2005).

These species are not regularly recorded in the areas where new track will be laid. This was assessed through desktop record from the Irish Wetland Bird Survey for the subsite containing the area in which the project would be implemented, see Table 1 below.

Blessington to Baltyboys Bridge Carrig									
Species	1% National	1% International	2005/06	2006/07	2007/08	2008/09	2009/10	Peak	Mean
Mute Swan	110		3	5		2	11	11	4
Whooper Swan	130	210			1			1	0
Wigeon	820	15,000	21		15	25	13	25	15
Gadwall	20	600						0	0
Teal	450	5,000	30	18	26	24	91	91	38
Mallard	380	20,000	41	6	25	34	7	41	23
Tufted Duck	370	12,000			1			1	0
Goldeneye	95	11,500	4	2	7	4		7	3
Great Northern Diver		50				1		1	0
Little Grebe	25	4,000	2			4	5	5	2
Great Crested Grebe	55	3,600	1	1	2	3		3	1
Cormorant	140	1,200	2	1	2	3	1	3	2
Grey Heron	30	2,700	2	2	2	1	1	2	2
Moorhen	20		13	4	11	10	6	13	9
Coot	330	17,500				1	7	7	2
Lapwing	2,100	20,000	16					16	3
Dunlin	880	13,300			1			1	0
Snipe		20,000			3			3	1
Curlew	550	8,500		16				16	3
Redshank	310	3,900				3		3	1
Black-headed Gull		20,000	120	80	24	41	10	120	55
Lesser Black-backed Gull		4,500	30	9				30	8

Table 1. IWeBS counts for the Burgage Inlet subsite area.

Greylag Geese have not been recorded in this area for the last five seasons and Lesser Black-backed Gulls have not been recorded for the last three seasons.

Additionally, fieldwork carried out over three site visits employing vantage point watches at Burgage Inlet confirmed the lack of records for the SPA qualifying species this area. Therefore, there would be no direct impact on Greylag Geese or Lesser Black-backed Gull.

There are no trees to be felled as part of the project and there would be no impact on bats as a result of the project.

No otter holts were found near any of the proposed new track areas, therefore it is highly unlikely that the works would have any direct impact on otters.

The proposed route of new trails at Burgage Moyle avoids areas where frogs were recorded and there would be no significant impact on their habitats.

The Sika deer in the study area are used to disturbance from walkers and the local gun club and will not be affected by the project.

5.2. Indirect Impacts

Any significant deterioration in water quality that would affect the Poulaphouca Reservoir SPA could be considered significant. However, the proposed works are small in scale and temporary in nature and avoidance measures outlined in Section 6 of the Ecological Assessment will avoid indirect downstream impacts on this Natura 2000 site.

Bankside works will follow: 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites', which is available from the Regional Fisheries Board website. These will include as a minimum the following precautionary measures:

- (1) No machinery should enter the lake.
- (2) Refueling of machinery will not take place at the lake side.

Additionally, in order to avoid potential disturbance to waterbirds other than those listed as conservation interests for the SPA, the trail between the medieval enclosure at Burgage and the N81 will be lined with

a line of willow on the lake side in the area from the medieval enclosure to the N81. The Willow will be of local provenance and be planted at the same time as the trail is laid in this area. This will act as a noise barrier and reduce any potential disturbance during the operational phase of the project.

5.3. In-combination Effects

A review of the Wicklow County Council Planning webpage revealed that there have been two other planning applications for the Townland of Burgage.

One application relates to the demolition of a lean-to at an existing dwelling at Burgage Manor (Pl. Ref. 12/6090). The second relates to a change in design to a previously permitted application for 49 housing units at Burgage More (Pl. Refs. 11/4936 and 04/1662). There would be no in-combination effects from these projects.

There are no other plans or projects for the development at Burgage or Russellstown that would have in-combination impacts on the adjacent Natura 2000 Site.

Any new applications will be assessed on a case by case basis by Wicklow County Council with regard to the requirement for AA Screening as a minimum.

6. Concluding Statement

There would be no direct impacts on the adjacent Natura 2000 site. There would be no indirect impacts on Greylag Geese or Lesser Black-backed Gull.

Given the avoidance of indirect impacts on water quality during construction, there would be no indirect impacts on the adjacent Natura 2000 site.

There would be no significant impact on the conservation objectives of the Poulaphouca Reservoir SPA.

A finding of no significant effects report is presented in Appendix C in accordance with the EU Commission's methodological guidance (European Commission, 2001).

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2001) 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).

Appendix A

Article 6(3) and (4) of the Habitats Directive

3. Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

4. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

Appendix B

National Parks and Wildlife Service Site Synopsis

SITE SYNOPSIS**SITE NAME: POULAPHOUCA RESERVOIR SPA****SITE CODE: 004063**

Poulaphouca Reservoir SPA, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the Mideast and south-east regions. The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the River Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low the exposed lake muds are colonised by an ephemeral flora of annual plant species. Wet grassland areas occur in sheltered bays around the lake but especially in the northern part. Reed Canary-grass (*Phalaris arundinacea*) is the main grass species present, but other plant species characteristic of wet grasslands occur, including Creeping Bent (*Agrostis stolonifera*), Meadowsweet (*Filipendula ulmaria*), Yellow Iris (*Iris pseudacorus*) and Water Mint (*Mentha aquatica*). Sedges (*Carex* spp.) are locally common, while Rusty Willow (*Salix cinerea* subsp. *oleifolia*) scrub is often found associated with the wet grassland. In some places the water washes against grassy banks which are generally less than a metre high, and in a few places there are steep sand and clay cliffs, up to 15 m high - these are remnants of the old River Liffey channel. In many places the banks are actively eroding, and a strip of conifers has been planted around much of the perimeter of the reservoir in an attempt to stabilize the banks.

Poulaphouca Reservoir is of international importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. An average peak of 1,058 individuals occurred during the five seasons 1995/96 to 1999/00. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (34), Wigeon (262), Teal (136), Mallard (283), Goldeneye (36), Cormorant (16), Great Crested Grebe (11), Curlew (118) and Mute Swan (17). The site is also used by Grey Heron (12).

The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed Gull (1,116), which in Ireland is rare in winter away from the south coast. Black-headed Gull (1,245) and Common Gull (229) also occur.

Breeding birds at the site include Great Crested Grebe (several pairs), which is localised in its distribution in eastern Ireland, as well as Snipe and Lapwing.

The principal interest of the site is the Greylag Goose population, which is of international importance. A range of other wildfowl species also occurs, including Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull.

2.3.2005

Appendix C
FINDING OF NO SIGNIFICANT EFFECTS REPORT
Finding no significant effects report matrix

Name of project or plan

Blessington Russborough Greenway.

Name and location of the Natura 2000 site(s)

The project is located adjacent to the Poulaphouca Reservoir SPA (Site Code 004063).

Description of the project or plan

It is proposed to lay a mixture of tarmac and crushed limestone track in order to create a walking and cycling trail or greenway in two loops extending from Blessington to Russellstown near the entrance to Russborough. The trail will start at the Avon Rí Hotel in the townland of Burgage More and continuing along existing orienteering tracks adjacent to the hotel grounds to Burgage Castle. The trail will return to the hotel via existing rough walking tracks and otherwise continue to the local road at Burgage and then along the existing local roads back to the hotel completing the first or northern loop.

From Burgage the trail is proposed to continue with new track being laid along the perimeter of the SPA and local agricultural land on the north side of Burgage Inlet. It will cross the inlet adjacent to the N81 and will be facilitated here by Wicklow County Council along the road verge with no major work apart from a safety barrier between the trail and the road and the path itself. There would be no changes to the existing fence crossing the inlet travelling south on the N81.

The trail will continue along the N81 and turn left onto the old Burgage Moyle lane leading to ESB owned lands at the end of the lane in the townland of Burgage Moyle. The trail will then follow the perimeter of conifer plantation avoiding reedbed and join an old lane from Burgage Moyle to Russellstown.

The trail will link to Russellstown car park and loop through a small section of conifer plantation including a small section of the lakeshore and returning to the car park via what is known locally as Featherbed Lane (the old road to Baltyboys) and from there back to Burgage retracing the trail along the N81 and back to Burgage.

Is the project or plan directly connected with or necessary to the management of the site(s)

No

Are there other projects or plans that together with the projects or plan being assessed could affect the site

A review of the Wicklow County Council Planning webpage revealed that there have been two other planning applications for the Townland of Burgage.

One application relates to the demolition of a lean-to at an existing dwelling at Burgage Manor (Pl. Ref. 12/6090). The second relates to a change in design to a previously permitted application for 49 housing units at Burgage More (Pl. Refs. 11/4936 and 04/1662). There would be no in-combination effects from these projects.

There are no other plans or projects for the development at Burgage or Russellstown that would have in-combination impacts on the adjacent Natura 2000 Site.

Any new applications will be assessed on a case by case basis by Wicklow County Council with regard to the requirement for AA Screening as a minimum.

The assessment of significance of effects

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

The majority of tracks are existing tracks that are used by the public and there would be no significant impact from upgrading these tracks to accommodate cyclists and walkers.

The main concern is with regard to disturbance from machinery on the north side of Burgage Inlet and adjacent to reedbed at Burgage Moyle. There are no rare or protected habitats or flora under the route of the proposed track in these areas. However, disturbance during construction may have a temporary impact on waterbirds such as Teal and Great Crested Grebe.

Early consultation with the Local NPWS Conservation Rangers established that the main concentration of Greylag Geese is located in the area of Threecastles to the north of the lake. This species roosts on the lake at night and feeds during the day in surrounding fields, particularly those to the north of the site near Threecastles and to the south near Poulaphouca Dam (Crowe, 2005).

Any significant deterioration in water quality that would affect the Poulaphouca Reservoir SPA could be considered significant if it were to occur.

Explain why these effects are not considered significant.

There would be no direct impact on Greylag Geese or Lesser Black-backed Gull.

These species are not regularly recorded in the areas where new track will be laid. This was assessed through desktop record from the Irish Wetland Bird Survey for the subsite containing the area in which the project would be implemented.

Additionally, fieldwork carried out over three site visits employing vantage point watches at Burgage Inlet confirmed the lack of records for the SPA qualifying species this area.

Any significant deterioration in water quality that would affect the Poulaphouca Reservoir SPA could be considered significant. However, the proposed works are small in scale and temporary in nature and avoidance measures outlined in Section 5.2 of this report will avoid indirect downstream impacts on this Natura 2000 site.

List of agencies consulted: provide contact name and telephone or e-mail address

NPWS DAU Manager.Dau@ahg.gov.ie
BirdWatch Ireland – Alan Lauder, Chief Executive

Response to consultation

The Department would have no objection to the application for exemption per se as long as Wicklow County Council is satisfied that the proposal is compliant with the relevant regulations and is cognisant of the designation of the Reservoir as a Natural Heritage Area and Special Protection Area for Birds. We (the Department) recommend that any scrub clearance work is not carried out within the period 1st March-31st August 2012, in accordance with section 40 of the Wildlife Act 1976 as amended 2000 and request further consultation with regard to the Appropriate Assessment of the project.

Data collected to carry out the assessment**Who carried out the assessment**

Moore Group Environmental Services.

Sources of data

NPWS database of designated sites at www.npws.ie
IWeBS database, BirdWatch Ireland

Level of assessment completed

Desktop Assessment combined with Habitat Assessment and Bird Surveys

Where can the full results of the assessment be accessed and viewed

Wicklow County Council Planning Section.

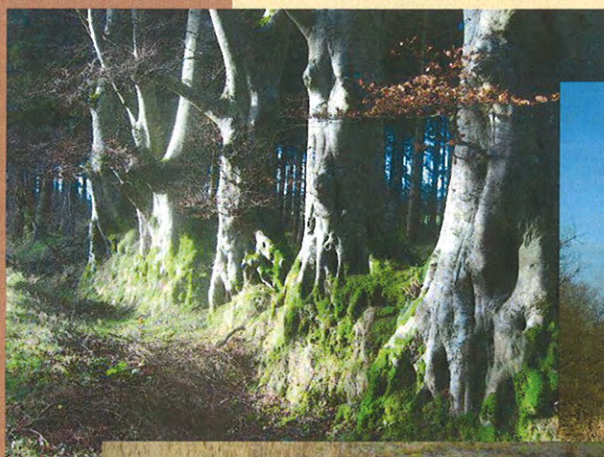
Overall Conclusions

There would be no direct impacts on the adjacent Natura 2000 site. There would be no indirect impacts on Greylag Geese or Lesser Black-backed Gull.

Given the avoidance of indirect impacts on water quality during construction, there would be no indirect impacts on the adjacent Natura 2000 site.

There would be no significant impact on the conservation objectives of the Poulaphouca Reservoir SPA.

Blessington – Russborough Greenway Ecological Assessment



Prepared By

**Ger O'Donohoe M.Sc.
Moore Group**

**16th March 2012_Rev1
Job No.: 11146**

All maps produced under licence from Ordnance Survey Ireland
Licence No. EN 0020008© Ordnance Survey Ireland/Government of Ireland



TABLE OF CONTENTS

PAGE:

<u>1. INTRODUCTION</u>	4
1.1. GENERAL BACKGROUND	4
1.2. METHODOLOGY	4
1.2.1. RELEVANT GUIDELINES AND LEGISLATION	5
1.2.2. DESK STUDY	6
1.2.3. FIELD SURVEYS	
<u>2. PROJECT DESCRIPTION</u>	7
<u>3. HABITATS & FLORA</u>	10
3.1. DESIGNATED CONSERVATION AREAS	10
3.2. HABITAT DESCRIPTIONS	11
<u>4. FAUNA</u>	20
4.1. BIRDS	20
4.2. BATS	23
4.3. OTTERS	24
4.4. BADGERS	24
4.5. DEER	24
4.6. AMPHIBIANS	24
<u>5. ECOLOGICAL EVALUATION & IMPACT PREDICTION</u>	24
5.1. DIRECT IMPACTS	25
5.2. INDIRECT IMPACTS	26
<u>6. MITIGATION MEASURES</u>	26
<u>7. RESIDUAL IMPACTS</u>	27
<u>8. REFERENCES & BIBLIOGRAPHY</u>	28

EXECUTIVE SUMMARY

Moore Group was commissioned by Blessington Community Forum to carry out an Ecological Assessment and Appropriate Assessment Screening of the proposed project to form a walking and cycling greenway between Blessington and Russborough, Co. Wicklow.

Given that Blessington Lake or Poulaphouca Reservoir is designated as a Special Protection Area (SPA) an Appropriate Assessment Screening Report was also compiled by Moore Group and can be viewed as a separate document. The results of the present ecological assessment have been used to inform the Appropriate Assessment process on behalf of Wicklow County Council.

Eleven main habitat types were recorded during fieldwork. These include the reservoir itself, mixed broadleaved woodland, conifer plantation, recently-felled woodland, immature woodland, wet alder-ash-willow woodland, reedbed and wet grassland and bramble scrub.

The primary concern with regard to the project is with regard to the conservation objectives of the SPA. The main objective is to maintain the species for which the SPA is selected at a favourable status. These species are Greylag Goose and Lesser Black-backed Gull. The AA Screening Report established that there would be no significant effect on the Poulaphouca Reservoir SPA.

This ecological assessment has established that the main concern is with regard to disturbance from machinery on the north side of Burgage Inlet and at Burgage Moyle. There are no rare or protected habitats or flora under the route of the proposed track. However, disturbance during construction may have a temporary impact on waterbirds such as Teal and Great Crested Grebe.

It is possible that the increased use of a new trail from Burgage Castle to the N81 may impact on waterbirds in terms of disturbance once the trail becomes operational.

There would be no impact on mammals or amphibians from the implementation of the project.

Mitigation measures are proposed that will avoid potential impacts in waterbirds during the construction stage and avoid disturbance during the operational phase. Standard construction mitigation will be implemented by the contractor to avoid potential impacts on the reservoir water quality.

If the mitigation measures are employed by the contractor, there would be no residual impacts on the Poulaphouca Reservoir SPA or pNHA.

1. INTRODUCTION

1.1. GENERAL BACKGROUND

Moore Group was commissioned by Blessington Community Forum to carry out an ecological assessment of the proposed laying of tracks on existing forest trails, laneways and road to form a walking and cycling greenway between Blessington and Russborough, Co. Wicklow. Blessington Community Forum intends to apply to Wicklow County Council for a letter of exemption from planning for the project. The location of the Greenway near Blessington is presented on Figure 1. A more detailed map of the Greenway is presented overlain on the Google Aerial photos in Figure 2 and details are provided in the project description in Section 2.

The aims of this Ecological Impact Assessment are to:

- Review baseline ecological data for the project,
- Determine the ecological value of the habitats present in the study area,
- Assess the impact of the proposed development on any ecological features of value,
- Recommend mitigation measures to reduce or prevent any negative impacts,
- Identify any residual impacts after mitigation,
- Identify any positive impacts and promote the natural heritage of the study area.

Given that Blessington Lake or Poulaphouca Reservoir is designated as a Special Protection Area (SPA) an Appropriate Assessment Screening Report was also compiled by Moore Group and can be viewed as a separate document. The results of the present ecological assessment have been used to inform the Appropriate Assessment process on behalf of Wicklow County Council.

1.2. METHODOLOGY

1.2.1. Relevant Guidelines and Legislation

This ecological assessment was completed with regard to the following policy documents and legislation:

- EU Habitats Directive 92/43/EEC
- EU Birds Directive 79/409/EEC
- Wildlife Act, 1976 and Wildlife (Amendment) Act, 2000
- Flora (Protection) Order, 1999
- Habitat Survey Guidelines (Heritage Council, 2011)
- Guidance on information to be contained in Environmental Impacts Assessments (EPA, 2001)

- Wicklow County Development Plan (2010 - 2016)
- Wicklow County Biodiversity Plan (2010 - 2015)

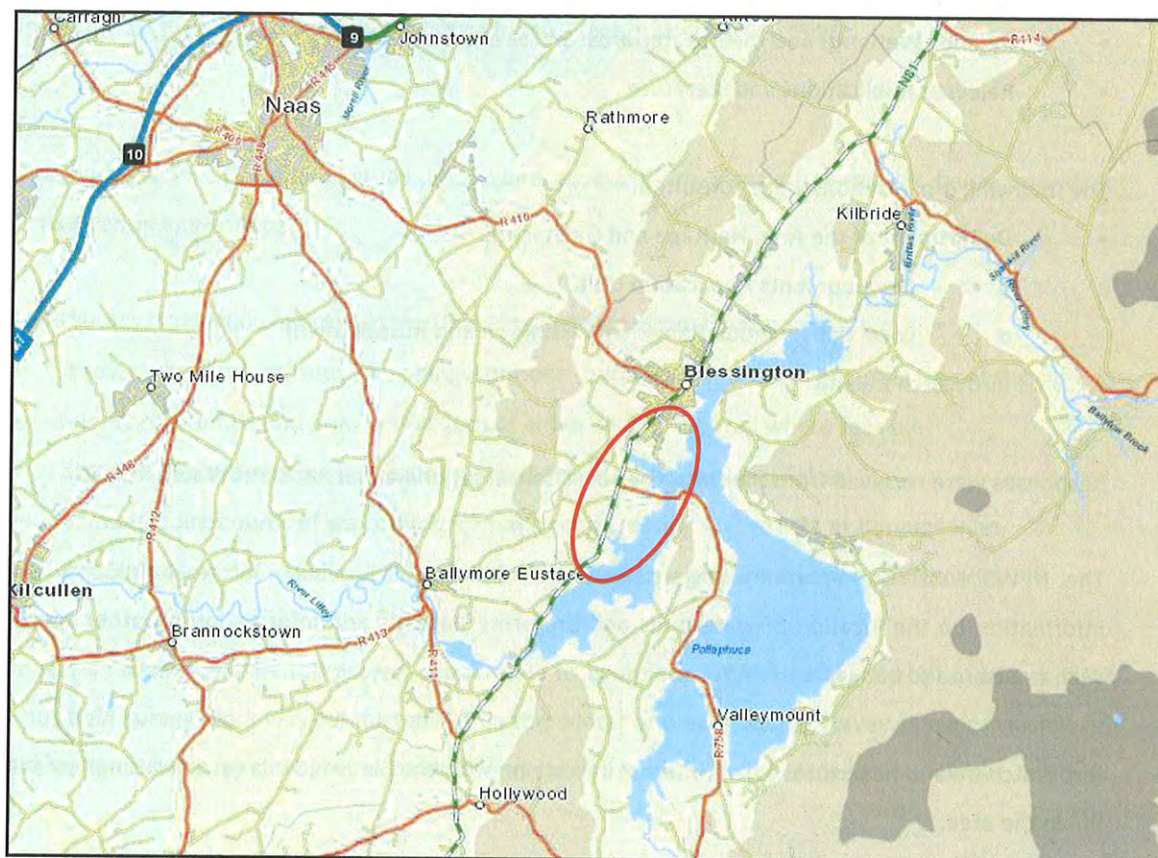


Figure 1. Showing the study area between Blessington and Russborough, Co. Wicklow.

1.2.2. Desk Study

A desktop study was carried out to collect any available information on the local ecological environment.

The following resources assisted in the production of this report:

- Ordnance Survey Ireland maps
- OSI Aerial photography
- Google Earth Aerial photography
- National Parks and Wildlife Service (NPWS) Mapviewer (<http://webgis.npws.ie/npwsviewer/>)
 - o Designated sites (SACs, SPAs, pNHAs)
 - o Records of protected species from 10km squares
- National Biodiversity Data Centre (<http://www.biodiversityireland.ie/biodiversity-data/access-biodiversity-data/>)

- Wicklow County Council
(<http://www.wicklow.ie/Apps/WicklowBeta/Heritage/Biodiversity.aspx>)
- BirdWatch Ireland IWEBS database
- Irelands Wetlands and their Waterbirds: Status and Distribution (Crowe, O., 2005)
- Relevant publications and literature

The following organisations were consulted:

- Department of the Arts, Heritage and Gaeltacht;
 - o Developments Application Unit
 - o Local Conservation Rangers (Blessington and Russelstown)
- BirdWatch Ireland

Responses were received from the DAU, the Local Conservation Rangers and BirdWatch Ireland.

The NPWS Local Conservation Rangers were very helpful in providing informal guidance and information on the location of waterbirds and preferred habitats and information on other species such as otters and badgers.

BirdWatch Ireland has expressed an interest in working with the Forum to increase awareness of bird life in the area.

The following response was received from the DAU;

The Department would have no objection to the application for exemption per se as long as Wicklow County Council is satisfied that the proposal is compliant with the relevant regulations and is cognisant of the designation of the Reservoir as a Natural Heritage Area and Special Protection Area for Birds. We [the Department] recommend that any scrub clearance work is not carried out within the period 1st March-31st August 2012, in accordance with section 40 of the Wildlife Act 1976 as amended 2000 and request further consultation with regard to the Appropriate Assessment of the project.

1.2.3. Field Surveys

Field surveys were conducted by Moore Group on the 1st January, 17th January, 1st February and 21st February 2012.

Flora and habitats

Flora and habitats were surveyed using guidance outlined in the Heritage Council Habitat Survey Best Practice & Guidance (2011). Habitat types were identified and classified using A Guide to Habitats in Ireland (Fossitt, 2000). Plant nomenclature follows that of Webb *et al.* 1996.

Fauna

The habitats in the general study area were assessed for signs of usage by fauna species of conservation importance.

Field surveys undertaken included the following detailed assessments:

- A search for Otter spraints (droppings) or holts (burrows) within 20m of either side of the trail,
- Survey of habitats and flora within 10m of either side of the trail where feasible,
- Searches for bird nesting points (in reedbed and burrows, e.g. Kingfisher)
- Vantage point counts of waterbirds from the road crossing on the N81 at Burgage Inlet,
- General surveys of woodland and passerine species along existing and proposed tracks.

It was a requirement by the project proponents to complete surveys before the 1st of March 2012. Thus field survey work was conducted within the winter and early spring survey season, which is not the optimum time for surveying all habitats and species but is for waterbirds.

In general, the majority of lakeside habitats present were widespread and common, supporting commonly occurring flora species. Based on the survey results, it was determined that further specialist or full-season survey work for flora and fauna species would not be necessary in order to assess the impacts of the proposed works.

2. PROJECT DESCRIPTION

It is proposed to lay a mixture of tarmac and crushed limestone track in order to create a walking and cycling trail or greenway in two loops extending from Blessington to Russelstown near the entrance to Russborough, see Figure 2. The trail will start at the Avon Rí Hotel in the townland of Burgage More and continuing along existing orienteering tracks adjacent to the hotel grounds to Burgage Castle. The trail will return to the hotel via existing rough walking tracks and otherwise continue to the local road at Burgage and then along the existing local roads back to the hotel completing the first or northern loop.

From Burgage the trail is proposed to continue with new track being laid along the perimeter of the SPA and local agricultural land on the north side of Burgage Inlet. There is an archaeological feature

in this area consisting of an inner enclosure and outer circular mound that will require the trail to be raised on boardwalk for a length of approximately 40m. The boardwalk will be comprised of inert recycled plastic composite. The trail continues over two streams which will require culverting to meet the N81.

It will cross the inlet adjacent to the N81 and will be facilitated here by Wicklow County Council along the road verge with no major work apart from a safety barrier between the trail and the road and the laying of a path. There would be no changes to the existing fence crossing the inlet travelling south on the N81.

The trail will continue along the N81 and turn left onto the old Burgage Moyle lane leading to ESB owned lands at the end of the lane in the townland of Burgage Moyle. The trail will then follow the perimeter of conifer plantation avoiding reedbed and join an old lane from Burgage Moyle to Russelstown.

The trail will link to Russelstown car park and loop through a small section of conifer plantation including a small section of the lakeshore and returning to the car park via what is known locally as Featherbed Lane (the old road to Baltyboys) and from there back to Burgage retracing the trail along the N81 and back to Burgage.



Figure 2. Showing the path of the trails overlain on aerial photography of the study area (adapted from Google Earth).

3. HABITATS & FLORA

3.1. DESIGNATED CONSERVATION AREAS

Blessington Lake or Poulaphouca Reservoir is designated as a proposed Natural Heritage Area (pNHA) and as a Special Protection area for Waterbirds. A detailed map of the study area can be seen Figure 3 below. Existing tracks are indicated in blue and proposed new trails are indicated in red.

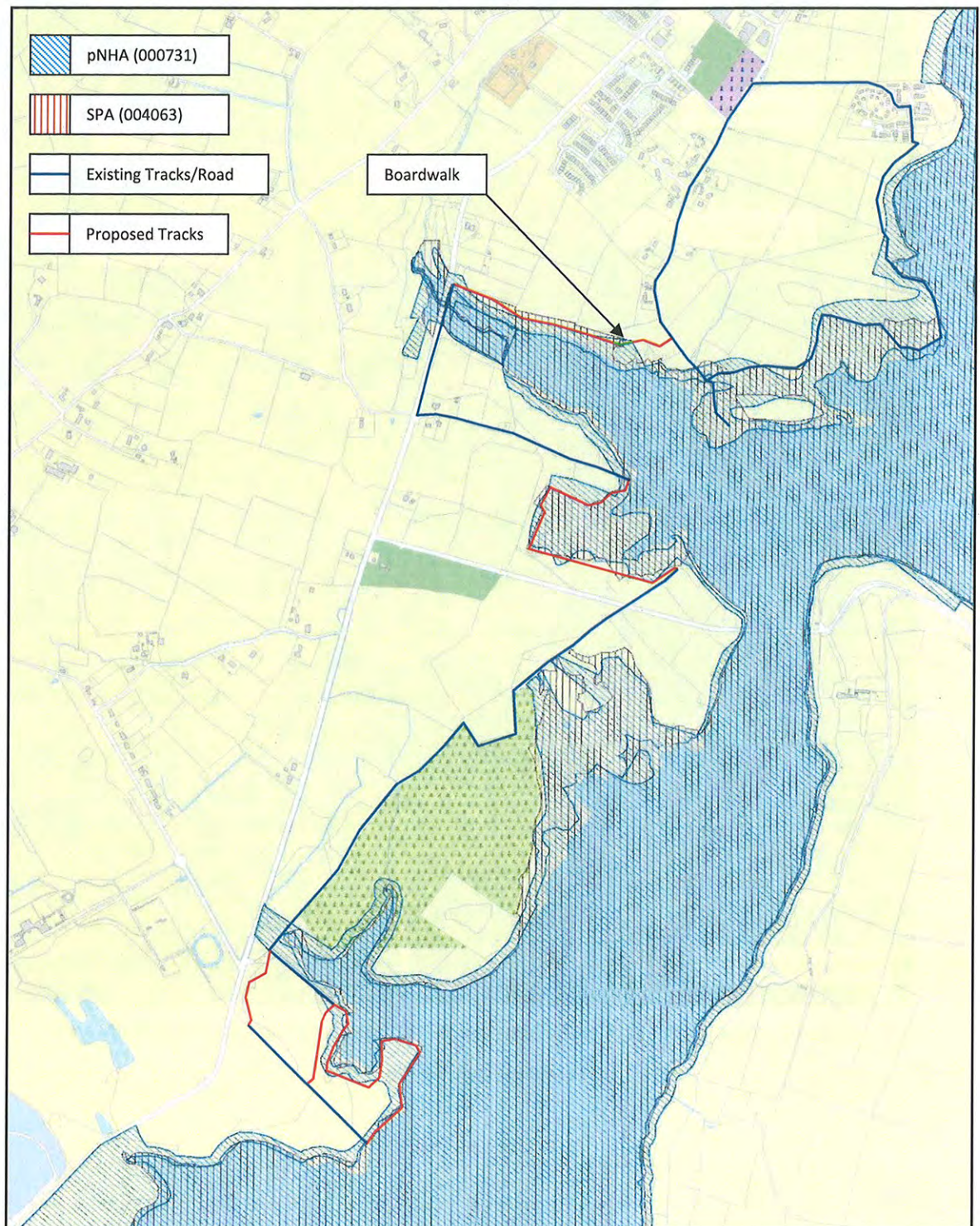


Figure 3. Showing the outline of designated areas in relation to the trail.

Detailed descriptions of the nature conservation areas are presented in the Appropriate Assessment Screening Report to be read in conjunction with this ecology assessment. The following paragraphs are taken from the Site Synopsis for the Special Protection Area. For information on the pNHA, readers are directed from the NPWS website to the Site Synopsis of the SPA.

Poulaphouca Reservoir SPA (004063) & Poulaphouca Reservoir pNHA (000731)

Poulaphouca Reservoir SPA, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the Mideast and south-east regions. The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the River Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low the exposed lake muds are colonised by an ephemeral flora of annual plant species.

Poulaphouca Reservoir is of international importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. An average peak of 1,058 individuals occurred during the five seasons 1995/96 to 1999/00. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (34), Wigeon (262), Teal (136), Mallard (283), Goldeneye (36), Cormorant (16), Great Crested Grebe (11), Curlew (118) and Mute Swan (17). The site is also used by Grey Heron (12).

The principal interest of the site is the Greylag Goose population, which is of international importance. A range of other wildfowl species also occurs, including Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull.

3.2. HABITAT DESCRIPTIONS

The general habitats under the footprint of existing and proposed track are presented in Figure 4 below. Rather than describe each habitat type the track route from north to south is described and habitats encountered are described.

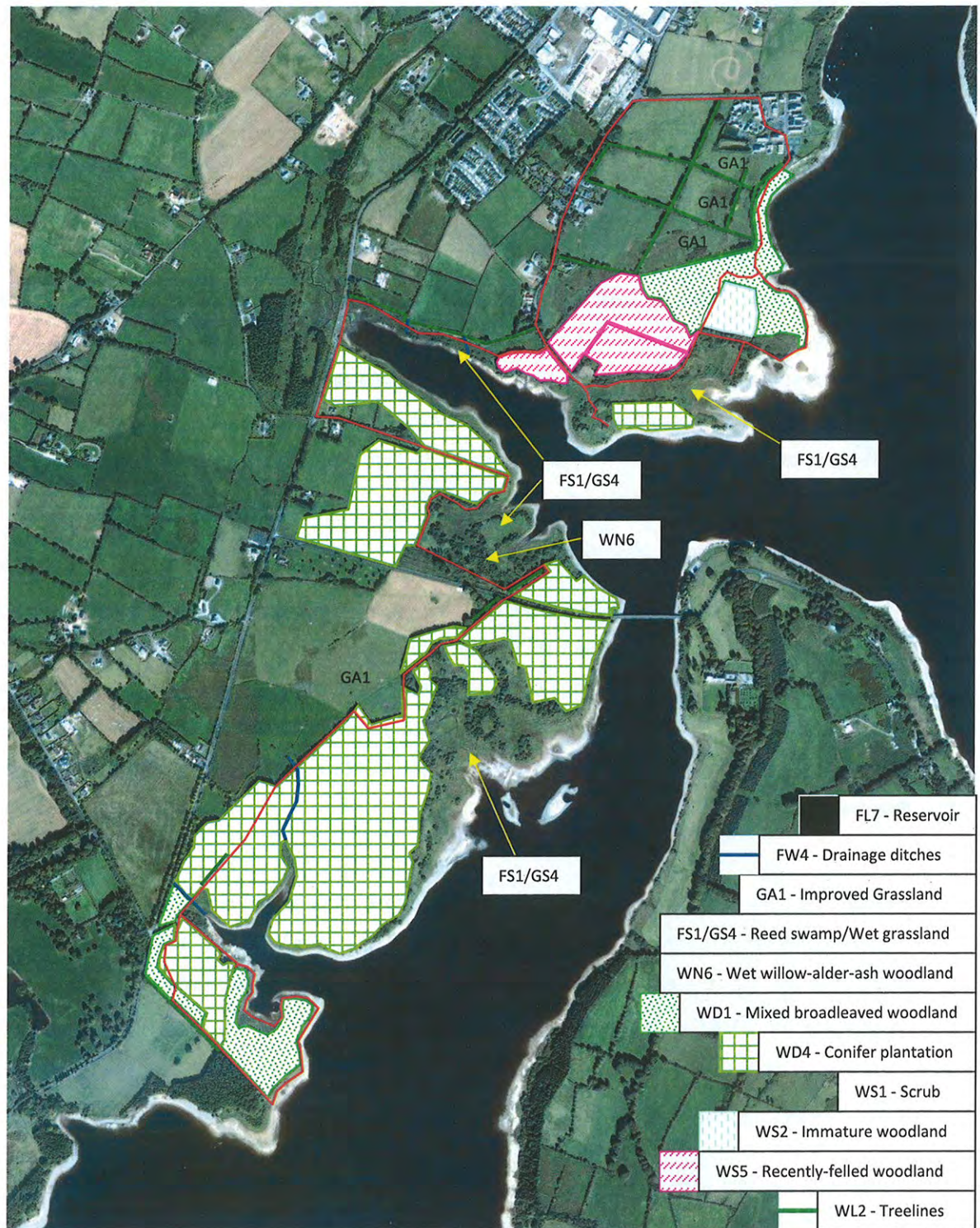


Figure 4. Habitats recorded in the study area.

The largest and most important habitat is that of the reservoir or lake itself (FL7). The reservoir feeds the greater Dublin area and depending on demand and rainfall, there can be large variations in the level

of the surface water. The lake supports large numbers of waterfowl for which it is designated as a proposed Natural Heritage Area and SPA.

The greenway commences at hotel complex at Avon Rí and follows an existing trail through Mixed broadleaved woodland (WD1). Tree species include Beech *Fagus sylvatica*, Ash *Fraxinus excelsior* and Willows *Salix* sp (Photo 1).



Photo 1. Showing the start of the existing trail at the Avon Rí Hotel.

The existing walks from the hotel to the lakeshore have been modified by the adventure centre facilities to include a mountain biking/BMX course and two Orienteering courses. The Red orienteering course leads to the lake shore following the shore around a small headland on the bare gravel and sand adjacent to the Reservoir (FL7). The white orienteering course splits to the right and travels through an area of Immature woodland (WS2). This area has been planted predominantly with Oak and Ash. The understorey is densely colonised by Bramble *Rubus fruticosus* agg. and Rosebay willowherb *Epilobium angustifolium* scrub (WS1).

Both orienteering trails meet and cross an area of recently felled woodland (WS5). The area has been highly disturbed after felling and only scattered semi-mature ash are left standing in a dense undergrowth of bramble scrub (WS1)(Photo 2).



Photo 2. Showing the area of recently felled woodland leading to Burgage Castle.

From this area of felled woodland the trail leads to Burgage Castle and returns via an existing gravel track to the end of the local road at Burgage and back to the hotel ground via the Burgage Road.

From Burgage the trail will travel along the north side of Burgage Inlet toward the main road (N81). The start of the track crosses another area of recently felled woodland toward the remains of a medieval enclosure. The felling appears to have stopped at the enclosure. After the enclosure the trail will follow the line of the boundary fence on higher ground toward the N81. There a number of rough drainage ditches draining the adjacent improved grassland. Where these drain into the lake, the ground is wetter and areas of Reed swamp (FS1) have grown with the predominant species being Reed canary grass *Phalaris arundinacea* on higher ground and Common reed *Phragmites australis* lower down and on the lake shore. Other species include Creeping buttercup *Ranunculus repens*, Lesser celandine *Ranunculus ficaria* and Lesser spearwort *Ranunculus flammula* in wetter areas. Black Bog-rush *Schoenus nigricans* was also recorded occasionally in small clumps as was Reed Sweet-grass *Glyceria maxima*. Scattered trees included Crack willow *Salix fragilis*, Ash and Beech. Water starwort *Callitriche stagnalis* was recorded in wet areas. Rushes including Soft rush *Juncus effusus* and Hard rush *Juncus inflexus* are also common.

Moving closer to the N81 the ground became drier as the distance between the lake shore and the higher ground increased. The ground is covered by a dense growth of bramble scrub with more common grasses including Creeping Bent *Agrostis stolonifera* and Cocks-foot *Dactylis glomerata*. The

lake shore is densely colonised by Common reed and Meadowsweet *Filipendula ulmaria* was also recorded (Photo 3). The area in general was crossed with numerous tracks from deer and walkers and dogs.



Photo 3. Showing the area around Burgage inlet.

The trail will cross the N81 at Burgage Inlet and continue to the end of the old land at Burgage Moyle. The lane is flanked on either side with conifer plantation consisting of European Larch *Larix decidua*, Scot's Pine *Pinus sylvestris* and Sitka Spruce *Picea sitchensis*. The trail then turns to the south and follows a line of Beech trees forming the border of the Conifer plantation over what was once improved grassland and has now become rough grassland. The lower terrain closer to the lake has become reedbed with Reed canary grass *Phalaris arundinacea* being the predominant species. There is a small shallow pool in this area which supported a large number of mating frogs. The surrounding reedbed area is crossed by deer tracks (Photos 4 & 5).



Photo 4. Showing the area of reedbed at Burgage Moyle.



Photo 5. Frogs in the area of reedbed at Burgage Moyle.

The reedbed is surrounded by scattered trees including Willow *Salix* sp., Beech, Alder *Alnus glutinosa* and occasional Ash. For this reason portions of Wet willow-alder-ash woodland habitat (WN6) were

considered present. The trail moves close to the local road to Baltyboys Bridge and follows the line of a boundary fence over small sections of reedbed. It passes between waterlogged beech and Alder and meets the end of the old path between Burgage and Russelstown (Photos 6 & 7).



Photo 6. Showing the route of the trail near the road to Baltyboys Bridge looking south.



Photo 7. Showing the end of the old path from Russelstown to Burgage.

The trail continues on through the conifer plantation along the remains of the path from Russelstown to Burgage (Photo 8) with a small detour into the plantation where a rough dirt track was laid by the ESB to facilitate walker between the two areas (Photo 9).



Photo 8. Showing the old path from Russelstown to Burgage.



Photo 9. Showing the forest track in conifer plantation between Russelstown and Burgage.

The trail passes through mixed conifer plantation of Spruce and Larch and there are a number of fine old beech trees on sections of the path. These would have been planted at the time of Russelstown House being established and may be up to 300 years old. There are also a number of old Ash trees along the path (Photo 10).



Photo 10. Showing the forest track in conifer plantation.

The Russelstown loop of the trail continues from Russelstown car park along the lake shore and around the headland where Russelstown House once stood. The shore here is comprised of gravel and sand with occasional patches of Reed canary grass. The trail leads to the end of what is locally known as Featherbed Lane, once a lane leading to the now submerged Baltyboys Bridge.

The trail will also cut from the lake side car park through mixed conifer and broadleaved woodland to Featherbed Lane forming a shorter woodland loop. The ground on this section of the trail was prepared for the track laying prior to the 1st of March in agreement with the NPWS. Further west along the lane the trail again cuts through the mixed conifer and broadleaved woodland to join the trail at Russelstown car park. Again the ground on this section of the trail was prepared for the track laying prior to the 1st of March in agreement with the NPWS.

4. FAUNA

4.1. BIRDS

Most species of birds in Ireland are protected under the Wild life Act 1976/Wild life Amendment Act 2000.

The importance of Poulaphouca Reservoir to birds is reiterated in the Site Synopsis for the SPA:

Poulaphouca Reservoir is of international importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. An average peak of 1,058 individuals occurred during the five seasons 1995/96 to 1999/00. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (34), Wigeon (262), Teal (136), Mallard (283), Goldeneye (36), Cormorant (16), Great Crested Grebe (11), Curlew (118) and Mute Swan (17). The site is also used by Grey Heron (12).

The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed Gull (1,116), which in Ireland is rare in winter away from the south coast. Black-headed Gull (1,245) and Common Gull (229) also occur. Breeding birds at the site include Great Crested Grebe (several pairs), which is localised in its distribution in eastern Ireland, as well as Snipe and Lapwing. The principal interest of the site is the Greylag Goose population, which is of international importance. A range of other wildfowl species also occurs, including Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull.

Early consultation with the Local NPWS Conservation Rangers established that the main concentration of Geese is located in the area of Threecastles to the north of the lake. This species roosts on the lake at night and feeds during the day in surrounding fields, particularly those to the north of the site near Threecastles and to the south near Poulaphouca Dam (Crowe, 2005).

The main area of concern with regard to the proposed trails is that at Burgage Inlet. High numbers of waterbirds have previously been recorded in the inlet along with Great Crested Grebes who have attempted to nest in the inlet in previous years.

To this end Vantage Point watches were undertaken on three dates from the N81 at Burgage Inlet and on either side of the inlet near Burgage Castle and on the opposite shore on the 17/01/12, on 01/02/12 and on 22/02/12.

The results of vantage point watches are summarised as follows:

17/01/12; 14xTeal, 8xMallard (all near the N81)

There was little activity early in the morning as a dog walker had been out before me. The counts are from the afternoon.

01/02/12; 46xTeal; 22xMallard, 1xLittle Grebe, 1x Great Crested Grebe; 1x Heron; 1x Moorhen

The Teal flock were mostly concentrated near the N81 early in the morning and dispersed over much of the inner inlet through late morning. The Little Grebe dived and foraged close to the N81 all morning.

The Heron was recorded in the morning on the north side of the inlet about half way up. The Great Crested Grebe dived the middle of the inlet and I got it again later toward more open water on the south side.

The Mallard were recorded again later in the day near Burgage Tower.

22/02/12; 32xTeal; 4xMallard(2 pair); 2xMoorhen; 2xGreat Crested Grebe; 2xGoldeneye

A third of the Teal flock were concentrated near the N81 at dawn. Larger numbers were recorded later at 10am spread through out the inlet. The Mallard were recorded again later near the end of the old land at Burgage Moyle.

The Great Crested Grebes were attempting to build a nest at the edge of the vegetation toward the centre of the inlet nearest the N81.

The Goldeneye swam toward the middle of the inlet, only the male dived. The heron flew over the inlet and landed on the southern shore midway up opposite where it was recorded previously.

Burgage Inlet forms part of the subsite monitored by the Local Conservation Rangers for the BirdWatch Ireland IWeBS survey (the Irish Wetland Bird Survey). It is located in the Blessington to Baltyboys Bridge Carrig subsite.

The counts presented in the Table 1 below refer to the peak counts of species in each I-WeBS season. Site peak and mean are calculated as the peak and mean of peak counts respectively over the seasons specified. Blank cells within columns which contain positive values for one or more species constitute zero for those species.

Blessington to Baltyboys Bridge Carrig									
Species	1% National	1% International	2005/06	2006/07	2007/08	2008/09	2009/10	Peak	Mean
Mute Swan	110		3	5		2	11	11	4
Whooper Swan	130	210			1			1	0
Wigeon	820	15,000	21		15	25	13	25	15
Gadwall	20	600						0	0
Teal	450	5,000	30	18	26	24	91	91	38
Mallard	380	20,000	41	6	25	34	7	41	23
Tufted Duck	370	12,000			1			1	0
Goldeneye	95	11,500	4	2	7	4		7	3
Great Northern Diver		50				1		1	0
Little Grebe	25	4,000	2			4	5	5	2
Great Crested Grebe	55	3,600	1	1	2	3		3	1
Cormorant	140	1,200	2	1	2	3	1	3	2
Grey Heron	30	2,700	2	2	2	1	1	2	2
Moorhen	20		13	4	11	10	6	13	9
Coot	330	17,500				1	7	7	2
Lapwing	2,100	20,000	16					16	3
Dunlin	880	13,300			1			1	0
Snipe		20,000			3			3	1
Curlew	550	8,500		16				16	3
Redshank	310	3,900				3		3	1
Black-headed Gull		20,000	120	80	24	41	10	120	55
Lesser Black-backed Gull		4,500	30	9				30	8

Table 1. IWeBS counts for the Burgage Inlet subsite area.

Apart from waterbirds, there were a number of typical woodland and passerine species recorded while walking the route of the trails. These are presented in Table 2 below.

The status of each species is listed based on BirdWatch Ireland's species of Conservation Concern. Green list species are widespread and not under threat, Amber and Red Species are of greater conservation concern. Of the bird species recorded only Starling is of amber concern with the remaining species of green list conservation status. Starlings are Amber-listed in Ireland due to moderate recent decline in large parts of its European population. The Irish population is currently stable.

Birds	Scientific name	BWI Status	Habitat Type
Blackbird	<i>Turdus merula</i>	Green	Dense woodland to open moorland, common in gardens
Blue Tit	<i>Parus caeruleus</i>	Green	Broadleaved woods, especially birch and oak, less in conifers, gardens, widespread in winter
Chaffinch	<i>Fringilla coelebs</i>	Green	Hedgerows, gardens and farmland
Great Tit	<i>Parus major</i>	Green	Woods, hedges, gardens
Greenfinch	<i>Carduelis chloris</i>	Green	Open woodland, gardens and farmland
Jackdaw	<i>Corvus monedula</i>	Green	Towns, cities, farmland, parkland, woodland, sea cliffs
Magpie	<i>Pica pica</i>	Green	Farmland, open country with scattered trees or bushes, increasingly in urban areas
Robin	<i>Erythacus rubecula</i>	Green	Woodland, gardens and parks
Woodpigeon	<i>Columba palumbus</i>	Green	Gardens, woods, hedges
Hooded Crow	<i>Corvus cornix</i>	Green	Farmland, grassland, parks and wooded suburbs, sea shores
Starling	<i>Sturnus vulgaris</i>	Amber	Widespread
Wren	<i>Troglodytes troglodytes</i>	Green	Low cover anywhere, especially woodlands

Table 2. Common woodland and parkland birds recorded in the study area.

4.2. BATS

No evidence of bats was found, however, it is likely that in such a large area of woodland that many species would occur. The National Biodiversity website was consulted and the Landscape Conservation for Irish Bats metadata was consulted with regard to the suitability of the study area for bats. Russelstown and the majority of the conifer plantation in the area scores 26.33 for all bats. The index scores from 0 – 100 with a score of 100 being most suitable for bats. The area including Burgage and Baltyboys scores 33.33. In short, it is more likely that bats would be associated with mixed broadleaved woodland and treelines of Burgage than the conifer plantation at Russelstown.

4.3. OTTERS

Otters (*Lutra lutra*) are protected under the Wildlife Act 1976 and the Wildlife Amendment Act 2000. As species of international importance they are listed in Annex II and Annex IV of the EU Habitats Directive. They are also listed as a red data species in Ireland (Whilde 1993). Red data species are those whose distribution is limited or who are in threat of serious decline. Evidence of Otter includes spraints, slides and holts adjacent to water courses. No evidence of activity was sighted during the present survey. However, records have been returned to the local conservation ranger for the wider area.

4.4. BADGERS

Badgers (*Meles meles*) are a protected species in Ireland and are listed in Appendix III of the Bern Convention as a species to be protected and whose exploitation must be regulated (Hayden and Harrington 2000). They are legally protected under the Wildlife Act (1976 amended 2000). Badgers are typical of woodland and farmland. In Ireland they inhabit a range of habitats below 500m where flooding does not take place (Hayden and Harrington 2000). All habitats along the route of newly proposed tracks were surveyed. Hedge banks, scrub and woodland were searched as thoroughly as possible for setts or any signs of activity. No signs of badger activity were found along the route of the greenway.

4.5. DEER

Sika deer (*Cervus nippon*) were recorded on each visit to the study area. They are part of a herd that wanders between Russelstown and Burgage where tracks were observed frequently.

4.6. AMPHIBIANS

Common Frog (*Rana temporaria*) are protected under the Wildlife (Amendment) Act 2000. Numerous adults were recorded migrating to the lake in the vicinity of the stream flowing into the inlet at Russelstown and in the aforementioned pond and reedbed at Burgage Moyle.

5. ECOLOGICAL EVALUATION & IMPACT PREDICTION

The ecological value of the sites was assessed following the guidelines set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (2006).

Judgements on the evaluation were made using geographic frames of reference, e.g. European, National, Regional or Local.

The primary concern is with regard to the potential impacts of the project on the conservation objective of the SPA:

Objective: To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

- [wintering] *Anser anser* (Greylag Goose)
- [wintering] *Larus fuscus* (Lesser Black-backed Gull)

The Appropriate Assessment Screening Report for this project has found that there would be no potential impacts on the Greylag Geese or Lesser Black-back Gull populations or their habitats.

The species of conservation concern are not regularly recorded in the areas where new track will be laid. This was assessed through desktop record from the Irish Wetland Bird Survey for the subsite containing the area in which the project would be implemented.

Greylag Geese have not been recorded in this area for the last five seasons and Lesser Black-backed Gulls have not been recorded for the last three seasons.

Additionally, fieldwork carried out over three site visits employing vantage point watches at Burgage Inlet confirmed the lack of records for the SPA qualifying species this area. Therefore, there would be no direct impact on Greylag Geese or Lesser Black-backed Gull.

5.1. DIRECT IMPACTS

The majority of tracks are existing tracks that are used by the public and there would be no significant impact from upgrading these tracks to accommodate cyclists and walkers.

The main concern is with regard to disturbance from machinery on the north side of Burgage Inlet. There are no rare or protected habitats or flora under the route of the proposed track. However, disturbance during construction may have a temporary impact on waterbirds such as Teal and Great Crested Grebe.

It is possible that the increased use of a new trail from Burgage Castle to the N81 may impact on waterbirds in terms of disturbance once the trail becomes operational.

The habitats in mixed woodland at Russelstown consisted of wet grassland and a woodland understorey of bramble scrub and all species were relatively common. Therefore, these works will not lead to any significant impacts upon habitats or rare flora.

There are no trees to be felled as part of the project and there would be no impact on bats as a result of the project.

No otter holts were found near any of the proposed new track areas, therefore it is unlikely that the works would have an impact on otters.

The proposed route of new trails at Burgage Moyle avoids areas where frogs were recorded and there would be no significant impact on their habitats.

The Sika deer in the study area are used to disturbance from walkers and the local gun club and will not be affected by the project.

There would be no significant impacts on the Poulaphouca Reservoir pNHA.

5.2. INDIRECT IMPACTS

Any significant deterioration in water quality that would affect the Poulaphouca Reservoir SPA could be considered significant. However, the proposed works are small in scale and temporary in nature and mitigation measures outlined below in Section 6 will avoid indirect impacts on this downstream Natura 2000 site.

6. MITIGATION MEASURES

Works between the medieval enclosure at Burgage and the N81 will be undertaken as the last phase of the implementation of the project in order to allow the Great Crested Grebes time to nest and hatch their young if nest building is successful this year. The breeding season ranges from April to June and so works will be postponed until the beginning of July for this area.

Bankside works will follow: 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites', which is available from the Regional Fisheries Board website. These will include as a minimum the following precautionary measures:

- (1) No machinery should enter the lake.
- (2) Refueling of machinery will not take place at the lake side.

The trail between the medieval enclosure at Burgage and the N81 will be lined with a line of willow on the lake side in order to reduce disturbance impacts on waterbirds in the area from after the raised boardwalk after the medieval enclosure to the N81. The Willow will be of local provenance and be planted at the same time as the trail is laid in this area.

7. RESIDUAL IMPACTS

If the above mitigation measures are employed by the contractor, there would be no residual impacts on the Poulaphouca SPA or pNHA.

The development of walking/cycling trails at Blessington, Burgage and Russborough presents an opportunity to raise awareness of biodiversity, wildlife and birdlife in the area and in the region. The Forum intends to erect an information board at or near the archaeological feature at Burgage to include information on the history of the feature. Information on birdlife will also be included on the board with photos provided of bird species that can be seen and ways to enjoy the wildlife without disturbing it.

BirdWatch Ireland have expressed interest in working with the Forum on increasing this awareness. This may lead to the installation of bird hides or increased awareness in a general eco-tourism context.

There may be potential to explore methods of improving the habitat for waterbirds, for example the installation of a floating reed nesting habitat for the Great Crested Grebe could be a project for local schools, BirdWatch Ireland and the NPWS.

8. REFERENCES & BIBLIOGRAPHY

- Bailey, M. & Rochford J. 2006.** Otter Survey of Ireland 2004/2005. Irish Wildlife Manuals, No. 23. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin, Ireland.
- Blamey, M., Fitter, R. & A. Fitter. 2003.** Wild Flowers of Britain & Ireland. A&C Black, London.
- Cope, T. & Gray, A. 2009.** Grasses of the British Isles. BSBI Handbook No. 13.
- Crowe, O. 2005.** Irelands Wetlands and their Waterbirds: Status and Distribution. BirdWatch Ireland.
- Curtis T.G.F. & McGough H.N. 1988.** The Irish Red Data Book. 1. Vascular Plants. The Stationery Office, Dublin.
- Fossitt, J.A. 2000.** Guide to Habitats in Ireland. The Heritage Council.
- Haslam, S., Sinker, C. & P. Wolseley. 1982.** British Water Plants. Field Studies Council Publications (Rev. 1995).
- Hayden, T. & Harrington, R. 2001.** *Exploring Irish Mammals*. Town House, Dublin.
- Joint Nature Conservancy Council. 1993.** Phase I Habitat Survey Techniques. JNCC.
- Jermy A.C., Simpson, D.A., Foley, M.J.Y. & Porter, M.S. 2007.** Sedges of the British Isles. BSBI Handbook No. 1, Ed. 3.
- Svensson, L. et al. 1999.** *Bird Guide*. Harper Collins Publishers, London.
- Webb, D.A., Parnell, J. and Doogue, D. 1996.** An Irish Flora. Dundalgan Press, Dundalk.
- Whilde A. 1993.** Irish Red Data Book 2: Vertebrates. HMSO, Belfast.

LEGISLATION SOURCES

Government of Ireland, 1976, *Wildlife Act, 1976*, Stationery Office, Dublin.

Government of Ireland, 2000, *Wildlife (Amendment) Act, 2000*, Stationery Office, Dublin.

Birds Directive (79/409/EEC) Council Directive of 2 April 1979 on the conservation of wild birds.

Habitats Directive (92/43/EEC) Council Directive of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.