



Parks & Landscape Services Section, Municipal Services Department

**Proposed Development of Fernhill Park &
Gardens, Stepside, Co. Dublin with Works
within the Curtilage of the Protected
Structure (Fernhill House)
PC/PKS/01/17**

Appendix 1 - Appropriate Assessment Screening Report

**Report for Screening for Appropriate Assessment
for the development of Fernhill Park and Gardens as a Regional Public Park
in accordance with the requirements of Article 6(3) of the EU Habitats Directive**



FINAL REPORT

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1. INTRODUCTION

1.1 Background

This report has been prepared by Faith Wilson (an independent ecological consultant and licensed bat specialist) who was appointed by Dún Laoghaire-Rathdown County Council to prepare a report for Screening for Appropriate Assessment for the development of Fernhill Park and Gardens, Stepside, County Dublin **as a Regional Public Park** in accordance with the requirements of Article 6(3) of the EU Habitats Directive. This report contains the information required for the competent authority (in this instance Dún Laoghaire-Rathdown County Council) to undertake a screening exercise for Appropriate Assessment (AA).

Fernhill Park and Gardens is located on the Enniskerry Road, Stepside, Co. Dublin as shown by the purple line boundary on **Figure 1.1** below.

Fernhill Gardens and House is a unique estate situated on the outskirts of Dublin City at the foothills of the Dublin Mountains. The entire property extends to approximately 34 Hectares and includes c. 12.7 Hectares of non-residential agricultural land, while the main house is set within parkland and mature woodland extending to c. 21.1 Hectares. The property also includes staff accommodation set over two yards, a kitchen garden and the remains of a plant nursery and a gate lodge. Two small watercourses flow through the property. These have been diverted to feed a number of ornamental ponds within the gardens. A public right-of-way runs through the property. The southern edge of the property contains a conifer plantation and open hillside with heath and exposed rock.

The proposed development comprises of the development of Fernhill as a Regional Public Park as shown in **Appendix 1**. The site is to be developed as a Regional Public Park to include new entrances, roads, car parking, active recreation, play, paths, woodland walks, gardens, ponds and wetlands, meadows, tearooms, public toilets and staff facilities, community garden and all ancillary civil, building and landscaping works.

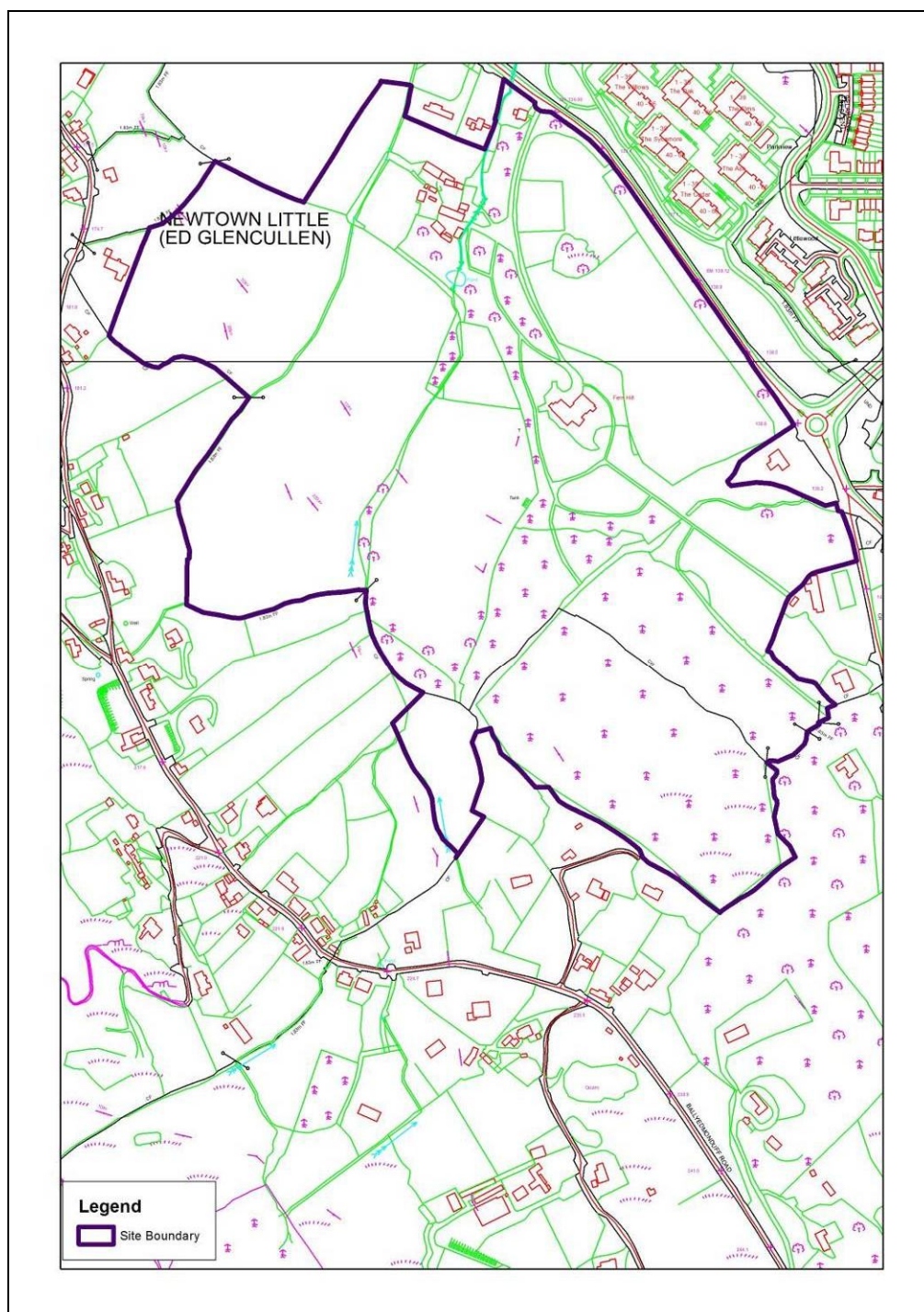


Figure 1.1 Fernhill Park and Gardens under the ownership of Dun Laoghaire Rathdown as indicated by the purple line boundary.

Given the potential sensitivity of the site an ecological impact assessment was also conducted and accompanies the planning application.

1.2 Relevant Legislation – European Habitats Directive

The aim of the European Habitats Directive (Council Directive 92/43/EEC on the conservation of wild habitats and of wild fauna and flora) is to create a

network of protected wildlife sites across Europe, which are to be maintained at a favourable conservation status.

Each member state must designate their most important natural areas as Special Areas of Conservation (SAC). The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as NATURA 2000 and includes SACs (Special Areas of Conservation) for protected habitats and species and SPAs (Special Protection Areas) for birds, which are designated under the European Birds Directive (Council Directive 79/409/EEC as amended by Directive 2009/147/EC).

It is a requirement of the Habitats Directive ((92/43/EEC) that the competent consent authority, which is either the planning authority or on planning appeal An Bord Pleanála, must ensure that a proposal, which is likely to have a significant effect on an SAC or SPA, is authorised only to the extent that the authority is satisfied it will not adversely affect the integrity of the area and that an appropriate assessment of the implications of the development for the conservation status of the site is undertaken.

The European Parliament, in a communication to the European Council in September 2000, states: The implementation of the European Habitats Directive and Birds Directive, both with respect to species conservation and with respect to the establishment of the Natura 2000 network, is one of the most important tools for achieving the objectives of the Convention on Biological Diversity in the European Union and member states (European Parliament 2000).

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of a designated European site but which has the potential to have implications for the site in view of the site's conservation objectives.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected 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.

Article 6(4) states:

If, in spite of a negative assessment of the implications for the [Natura 2000] 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, Member States 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.

The European Communities (Birds and Natural Habitats) Regulations 2011 were implemented to transpose the Habitats Directive and the Birds Directive into Irish law as well as addressing transposition failures identified in the Court of Justice of the European Union (CJEU) judgements. This report has taken into consideration the relevant requirements of the Planning and Development Act, 2000 (as amended by the Planning and Development Act 2010). References to Natura 2000 sites throughout this report are to be taken as referring to European sites as defined in the above Planning Act.

1.3 Methodology

This report has been prepared with regard to the following guidance documents where relevant:

- *Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate General, 2001)
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC* (EC Environment Directorate General, 2000)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities Circular NPW 1/10 & PSSP 2/10*
- *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision)
- *Guidelines for Good Practice, Appropriate Assessment of Plans under Article 6(3) Habitats Directive* (International Workshop on Assessment of Plans under the Habitats Directive, 2011)
- *Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC*. Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Over-riding Public Interest, Compensatory Measures, Overall Coherence. Opinion of the European Commission (European Commission, January 2007)

There are four stages in an Appropriate Assessment as outlined in the European Commission Guidance Document (2001), summarised below:

• Stage 1: Screening

The first step to establishing if an appropriate assessment is required is referred to as 'screening' and its purpose is to determine on the basis of a preliminary assessment and objective criteria if the plan or project, alone or in

combination with other plans or projects, could have a significant effect on a Natura 2000 site in view of the sites conservation objectives. The process identifies any likely impacts upon a Natura 2000 Site, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

- **Stage 2: Appropriate Assessment**

This step considers the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other plans or projects, to the site's structure and function and its conservation objectives. Additionally, where there are deemed to be adverse impacts, an assessment of the potential mitigation of those impacts is considered.

- **Stage 3: Alternative Solutions**

This stage examines alternative means of achieving the objectives of the project or plan that aim to avoid adverse impacts on the integrity of the Natura 2000 site.

- **Stage 4: Imperative Reasons of Overriding Public Interest**

This stage is the main derogation process outlined in Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project which will have adverse effects on the integrity of a Natura 2000 site to proceed.

This report consists of one stage in Appropriate Assessment; a report for Screening for Appropriate Assessment (Stage 1) was prepared.

2. SCREENING FOR APPROPRIATE ASSESSMENT

2.1 Project Description

The nature and extent of the proposed development is outlined below and the overall Plan drawing **2315-02 - Outline Design - Overall** is given in **Appendix 1**. This description of the proposed works should be read in conjunction with the supporting drawings and reports submitted as part of the Part 8.

The existing Fernhill estate is to be developed as a Regional Public Park to include new entrances, both pedestrian and vehicular from the Enniskerry Road and Rosemont School, roads, car parking, active recreation, play, paths with seating/resting areas, woodland walks, gardens, ponds and wetlands, meadows, new boundaries, restoration of existing Coach House as a park tearooms, demolition of 1970s bungalow, new tower building for use as public toilets and staff/community facilities, new sports building, new dwelling unit, community garden and all ancillary civil, building and landscaping works with some works within the curtilage of the Protected Structure (Fernhill House). The nature and extent of the proposed development is outlined below. This description of the proposed works should be read in conjunction with the supporting drawings and reports.

Entrances:

- New vehicular entrance shared with Rosemont School.
- Existing entrance on the Enniskerry Road to be upgraded for pedestrian use and occasional vehicular use.
- New pedestrian entrance off the Enniskerry Road in close proximity to the roundabout at Belarmine.

Boundaries:

- Deer proof timber post and steel mesh fencing along the southern, eastern and western boundaries.
- New mesh fencing with gates to match either side of the right of way.
- New piers, steel gates and railings to all entrances for visual permeability and prominence.
- Boundaries to be planted with a suitable screening mix where appropriate.

Shared Surface Avenue:

- Shared surface avenue along the western boundary up to the Road Field incorporating pinch points and ramps.
- Informal car park for approximately 44 cars west of the access road in close proximity to the boundary of Rosemont School.
- Pathway to a pedestrian gate on the boundary with Rosemont School for direct access. Control of this gate will be by Rosemont School in accordance with the parks opening hours.
- Informal coach parking alongside the shared surface avenue.

Road Field:

- Car park for approximately 49 cars along the northern boundary screened from the south with woodland planting. The required quantity of electrical charge points will also be included at appropriate locations.
- Shared surface plaza with sculptural focal point to act as turning circle. Shared surface road linking to the 9 Acre Field.
- Extensive cut and fill of the existing ground to create the formal active recreation area. Low retaining walls south of the car park area with terracing of slopes south of the active recreation area for viewing.
- Steps to provide access with a long children's slide on the slope with stair lift incorporated in design for disabled access.
- Sports building and viewing area with storage for equipment and goals (see further details below).
- Formal grass active recreation space (approx. 11,750 sq. m) with sand capping for intensive use suitable for multiple sports and games.
- Two lane running track around the active recreation area (400m long).
- Circuitous route around the field including a flat viewing space with extensive seating. Bridge linking the Road Field to the 9 Acre Field to the south.
- Woodland screen planting to boundaries.

9 Acre Field:

- Car park for approximately 70 cars including a minimum of 7 no. disabled spaces along the northern boundary screened to the south by mounding and tree planting.
- Area directly south of the car park to be a playful landscape incorporating grass mounds, sculpture, ornamental planting, toddler play area as well as small wind turbines.
- Perimeter path network with open grassland, grass meadow, screen planting and dogs-off-leash areas for large and small dogs.
- Two bridges linking to the Wood Field.

Wood Field:

- Weir constructed to form a linear pond with spill over wetland to attenuate in flash flooding events.
- Wide path at the north of the field to incorporate extensive linear seating.
- Perimeter path network with links to gardens and right of way.
- Grass meadows, tree and woodland screen planting.
- Historic stone lined water channel to be exposed in the field.
- Long linear flying fox following the slope to the south of the field.
- Additional shelterbelt planting alongside existing woodlands.

Woodland:

- Boardwalk path network to be put in place with extensive seating, resting and viewing areas - to also act as outdoor classrooms. Movement of pedestrians off the boardwalk to be restricted in certain locations to protect the forest floor and ecology.
- Old woodland tracks to be retained and restored for pedestrian and maintenance access.
- Native woodland planting to be introduced at appropriate locations.

- Opportunities for a small orienteering course to be explored as well as an area for den building.
- Firebreak to be put in place along the southern boundary under the 220 kva power lines.

Broadwalk & Gardens:

- The gardens including the plant collections, existing Broadwalk and garden trails to be restored in a sustainable manner. New tree and shrub planting to be introduced at appropriate locations to improve overall visitor experience. Ornamental gardens to be managed as semi-natural wild, in line with the Robinsonian Wild style of gardening.
- New boardwalk path network with extensive seating, resting and viewing areas. The boardwalk will improve access around the gardens and address steep falls and existing steep circulation through the gardens. Movement of pedestrians off the boardwalk to be restricted to protect the sensitive parts of the gardens.
- Low timber and steel fencing to be put in place around the gardens with gates at appropriate locations. The fencing will act to ensure the gardens are protected while retaining their existing tranquil feel. Dogs will be not be allowed in the gardens.
- Opportunities for permanent and temporary sculpture to be considered throughout the gardens. A focal point at the end of Broadwalk to be put in place to address its current abrupt ending.

Meadow:

- New path network to follow the line of the historic roadway parallel to the Enniskerry Road with links to the Avenue and house. Extensive linear seating to be put in place to take advantage of the aspect.
- Additional woodland screen planting to be introduced along the northern boundary.
- Species rich grasslands to be managed by light natural grazing for 2-3 months of the year with steel fence in place. During the remaining parts of the year, grass tracks will be cut through the meadows and picnic tables placed in appropriate locations.
- Natural wetland area to the west to be maintained and managed as same.
- Existing carpark to be removed with planting and grassland extended.

Ornamental Gardens - West of Avenue:

- The ornamental gardens including the plant collections and garden trails to be restored in a sustainable manner. New tree and shrub planting to be introduced at appropriate locations to improve overall visitor experience. Ornamental gardens to be managed as semi-natural wild, in line with the Robinsonian Wild style of gardening.

Kitchen Garden:

- Kitchen Gardens to be managed as community gardens where local people learn to grow fruit and vegetables while also maintaining some of the more ornamental aspects of the gardens.
- Access to certain parts of the Kitchen Gardens will be restricted to the public except for pre-determined times.
- Existing glass houses and buildings to be restored for horticultural use.

Right of Way:

- The Right of Way will be upgraded in line with the upgrade of the paths in the Three Rock Mountains using locally sourced and naturally occurring materials.
- Some orientation points and information to be put in place along its route.
- There will be no access to Fernhill from dusk to dawn. The Right of Way will remain open at all times.

Drainage:

The drainage has been designed in accordance with the GSDS with attenuation in soft areas where possible. Surface water design has been undertaken using best practice and integrated Sustainable Urban Drainage Systems in order to replicate the natural characteristics of rainfall run-off from the proposed development. As well as attenuating the water on site, the quality of the surface water will be improved while also providing an amenity through good quality integrated design.

- The Surface water drainage design primarily relates to the new shared surface avenue, the Road Field and the 9 Acre Field. From sample boreholes in this area, the ground percolation appears to be good. Hard standing areas have been designed to be permeable where possible and allow natural infiltration into the ground. For non-permeable paving, surface water run-off has been designed to be directed towards the soft landscape areas, swales and filter drains where it will naturally infiltrate into the ground. Some storage attenuation zones are also proposed in order to reduce the run-off from the site.
- The remaining parts of the site will naturally infiltrate into the ground as they do so at present.
- Rain water harvesting will take place around all buildings for watering trees and shrubs.

Play:

- Main natural adventure play space to be developed in the old orchard area of the park. Its setting in an existing clearance in the woods with the stream alongside and with its proximity to main park facilities makes it the ideal location. The play space will include some adventurous and challenging play units while always encouraging free and natural play using existing resources on site.
- Small fenced off toddler play area to be developed in close proximity.
- Further natural play will be encouraged throughout by strategically placing suitable items which will encourage free play and exploration of nature and the environment.

Outdoor Exercise Equipment:

- Outdoor exercise equipment to be strategically placed in the most appropriate location(s) to encourage physical activity which will be suitable for all age groups. This will have an energy generating component which will tie into the overall Sustainability Strategy.

Existing Buildings:

- The existing Gate-Lodge just off the Enniskerry Road is currently in use as a residence for a member of staff. It is envisaged that this use as a residence will be maintained.
- The existing Coach House building in the middle of the site is being developed as a tearooms/café. The building is to be upgraded, conserved and restored with a modest extension to the west. The ground floor will incorporate a servery and a seating area with a double height space. Staff preparation and other facilities will be situated on the 1st floor mezzanine above the servery area.
- The existing Bungalow building opposite the Coach House is to be demolished and a new building put in place on or close to its existing footprint.
- The existing building to the east of the bungalow will be upgraded and renovated for use as a shop or community facility.
- The existing shed/store buildings will be retained for storage and locating plant as required.
- The development of Fernhill House is outside of the scope of this Part 8. It is envisaged that this will be developed for a wide community use – subject to extensive studies and a further Part 8.

Proposed Buildings:

- New Tower building on or close to the footprint of the existing bungalow. This building will be a contemporary design responding to its setting and location. It will incorporate public toilets, staff facilities, community facilities and external seating/viewing areas.
 - New sports building at the upper level of the active recreation space. This building will be a contemporary design incorporating timber cladding and a green roof. This building consists of changing rooms, bag store, toilets (accessible externally) with a storage cage alongside for goals, etc.
 - New modest eco-type residential unit located below an existing barn structure to the north of the Coach House.
- All new buildings will be designed to meet with the requirements of the Near Zero Energy Building standards and will tie in with the overall Sustainability Strategy.

Services:

- Existing low voltage overhead power lines as well as other overhead lines throughout the estate to be undergrounded.
- New watermain, sewage, and ducting for electricity, fibre and utilities to be laid on the existing avenue and new shared surface avenue.
- New low voltage LED lighting columns will be put in place along the new shared surface avenue and in the car park in the 9 Acre Field. Additional bollard lights will be put in place from the car park to Fernhill House along the accessible path.
- Should a small sub-station be required, this will be located along the new avenue and screened from view where possible.

Area Under Lifetime Tenancy:

- This area will be developed as a staff depot yard upon completion of the lifetime tenancy agreement.

Other:

- Extensive bicycle parking (included some covered parking) to be put in place at the entrances and car parks and in close proximity to the proposed tearooms.
- Ducting for fibre will be put in place in order to develop the park as a Smart Park.
- Sensory spaces to be developed in appropriate locations along with age friendly initiatives.
- Opportunities for permanent or temporary sculpture to be reviewed at detail design stage.

2.2 Ecological Constraints Study

An ecological constraints study was carried out to inform the development of the lands at Fernhill as a public park and gardens (Wilson, 2016) and an ecological and horticultural assessment of the proposed development is presented in full in **Appendix 7 of the Part 8 Planning Report**.

This study aimed to collate the available information on the ecological environment potentially impacted by the proposed development. The National Parks and Wildlife Service (NPWS) of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRGA) database of designated conservation areas and NPWS and records of rare and protected plant species were checked with regard to the lands at Fernhill.

Information on protected species of fauna and flora listed for protection under Annex II of the EU Habitats Directive (92/43/EEC), Annex I of the Birds Directive (79/409/EEC) and the Wildlife (Amendment) Act (2000) was also sought from NPWS and published sources. Recent, high resolution, colour aerial photographs were also used to identify and map potential habitats.

2.3 Receiving environment

Fernhill Estate was developed on the slopes of the Dublin Mountains at the base of Three Rock Mountain on well drained, shallow acidic soils with frequent outcropping bedrock of the underlying granite. There is a variety of soil types present within the estate – the majority of the soils are Acid Brown Earths/Brown Podzolics, but there are also some Acidic Gley Soils (Lithosols/Regosols) and some Peaty Podzols on the higher ground.

The underlying granite was quarried locally and it is likely that it was this natural resource that attracted the Darley family (a family of builders, stonecutters, developers and architects) to the property initially in the late 1700s. They developed the estate at Fernhill through a series of planting of what would have been previously unenclosed hillside with woodlands and parkland creating shelterbelts of larch and Scot's Pine which then sheltered the developing garden.

The Darley's developed the garden in the 'Robinsonian' style mixing trees, shrubs, perennials and bulbs side by side in a naturalistic setting. Connections with the National Botanic Gardens ensured a steady stream of calcifuges which could not be grown at Glasnevin and a fine collection of tree rhododendrons to which camellia's, azalea's and magnolia's were added are one of the main features of Fernhill. There are also a number of fine specimen trees such as giant redwoods, western hemlock, west Himalayan spruce, eucalyptus and others.

2.3.1 Habitats

The main habitats present within Fernhill include the house (BL3) and gardens, which are surrounded by mature trees in open parkland (WD5) and mixed broadleaved/conifer woodland (WD2). Two small watercourses which are best described as upland eroding streams (FW1) flow through the property and diverted via a culvert into a series of artificial ponds and pools (FL8) forming a water garden within the rockery and along one of the streams.

The large field between the main house and the Enniskerry Road is known as the 'Front Lawn' and has been managed as permanent pasture grazed by cattle for over a century. This is a good example of species rich neutral grassland (GS1) which has never been artificially fertilised, ploughed or reseeded. This forms an extremely rare grassland habitat within the Dun Laoghaire Rathdown area as the majority of such pastures have been lost through agricultural intensification and improvements with subsequent losses for species diversity as well as through ongoing urbanisation of the county. This field received an application of lime only once in the last fifty odd years (Robert walker, pers. comm.), but was never fertilised. The linear shelterbelts (WD2) and treelines (WL2) which provide shelter for the garden remain and were added to over the years following tree losses, gales and fires.

The three large fields to the south-west of the house have been managed for agricultural purposes. They were managed as grazing/meadow with cattle

for many years and occasionally cut for haylage or silage. These lands all show signs of agricultural improvement and are best described as improved agricultural grassland (GA1)/semi-improved grassland (GS). They are known from east to west as 'Wood Field', 'Swimming Pool Field' and 'Brenda's Field' (Robert walker, pers. comm.). These fields would have been managed as permanent pasture under the ownership of the Walker family but were temporarily put under various arable crops (oats and barley) for three or four years in the 1970s, (Robert walker, pers. comm.).

The upper slopes of the property were planted in the late 1970s with Scot's pine, Coriscan Pine, European Larch, Norway Spruce, Japanese Larch, Logdepole Pine, Beech and Sitka spruce and these small conifer plantations (WD4) are in need of intervention and thinning.

On the margins of these are areas of scrub (WS3) and some old field systems have become wooded with native oak birch holly woodland (WN1) as grazing with livestock in these areas ceased. In the south east of the property an open area of acid grassland (GS3) remains which has become encroached by dense bracken (HD1), scrub (WS3) and the beginnings of native oak birch holly woodland (WN1) in the absence of grazing. A habitat map for Fernhill is presented below in **Figure 2.2**.

The gardens are a mixture of planting of ornamental trees and shrubs (WS3) including ginkgo, magnolias, camellia, azaleas, handkerchief tree, tulip tree, Japanese maples, tree peony, hydrangeas, ceanothus, hebes, dogwoods and species of Australasian origin which were brought from the Walker families summer home on Rosdohan Island, Co. Kerry. These include tree ferns, Pittosporums, Eucryphia, Podocarps and Pseudopanax amongst others.

A diverse range of herbaceous and alpine species were also planted in many instances in broad naturalistic drifts in the Robinsonian style below mature trees and shrubs and along the edges of the diverted watercourse and ponds within the rockery at the rear of the main house and along the stream which adjoins the upper yard. A plant nursery (BC2) was established by Robert Walker in the lower yard and remains of this are still present there. Jonathan Burnett (a nephew of Robert's) also ran a successful landscaping company based in Fernhill and remnants of some of his planting material are stored in the old orchard which is located to the north west of the main house. A large volume of old garden waste, cuttings, brash, etc. (ED5) is stored at the northern edge of the kitchen garden.

The kitchen garden (BC4) is surrounded by a high beech treeline (WL2) to the south west, stone walls (BL1) in some locations and a hedgerow (WL1) along the northern edge. The internal box hedging, espalier fruit trees and many elements of the fruit and vegetable beds remain. These were interspersed with planting of herbaceous species and borders including Peonies, Monkshead, Delphiniums and a fine collection of old fashioned tea roses.

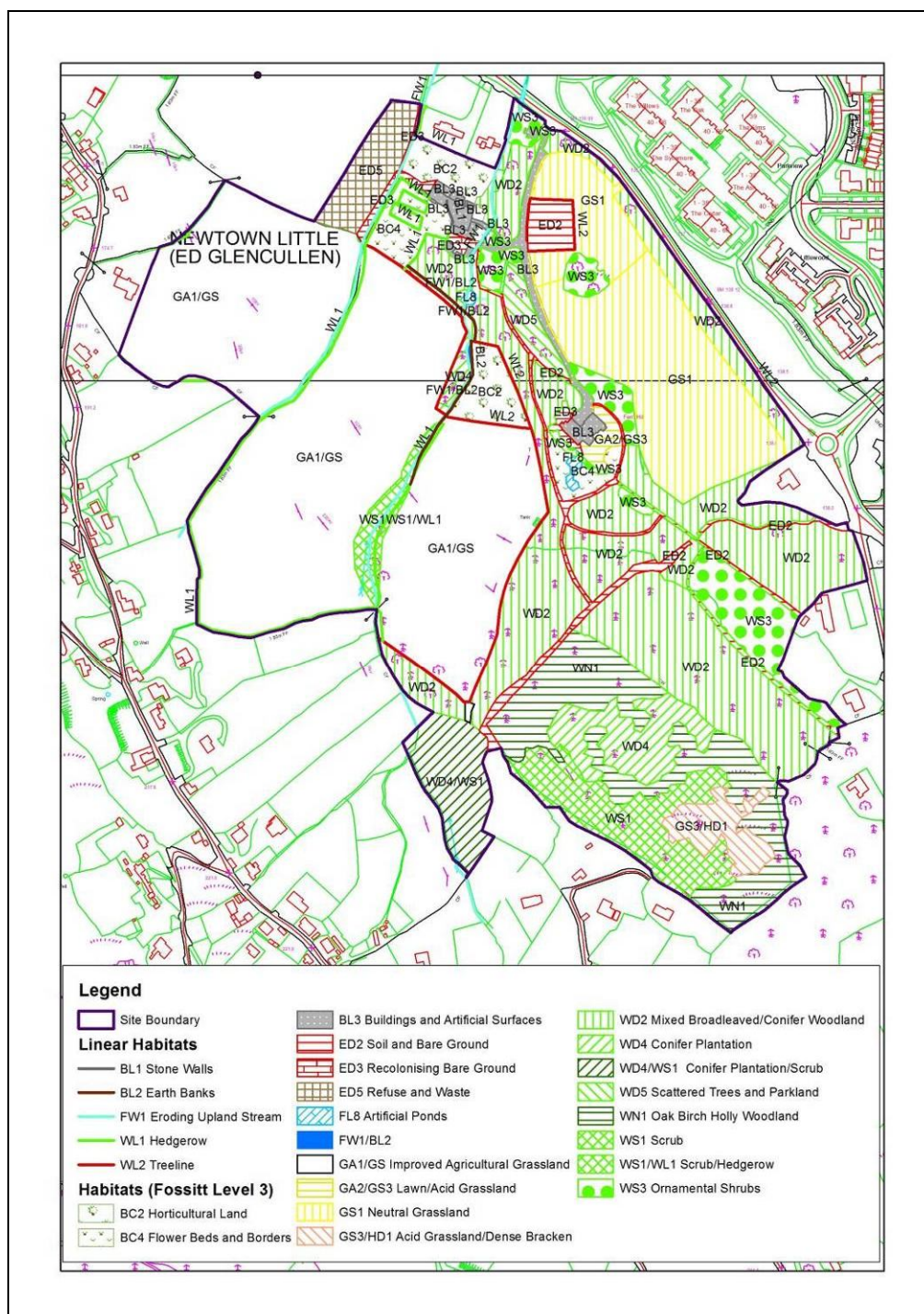


Figure 2.2. A habitat map (to Fossitt Level 3) of Fernhill House and Gardens.

2.3.2 Rare, Scarce and Threatened Flora

The following rare, scarce or threatened plant species are recorded from the 10km square (O12) in which Fernhill house and gardens is located:

- Red hemp nettle (*Galeopsis angustifolia*), this is a species of calcareous gravels and eskers, there are historic records of this species from Dundrum, Two Rock and Three Rock Mountain, it was last recorded from forestry roads in the area in the late 1960s.

- Great burnet (*Sanguisorba officinalis*), this is a species of dry banks and lakeshores, there are historic records of this species from Templeogue.
- Small white orchid (*Pseudorchis alba*), this a species of acid grassland/heathland, there are historic records of this species from Three Rock Mountain.
- Bog orchid (*Hammarbya paludosa*), this is a species of wet flushes in peatlands, there are historic records of this species from the 10km square but the location is not detailed.
- Lesser snapdragon (*Misopates orontium*), this is a species of arable fields, there are historic records of this species from Bellaley Park.

There are no recent historic records for any of these species from Fernhill.

2.3.3 Invasive Species

There are a number of invasive species present within Fernhill some of which would have been deliberately planted within the gardens (as was recommended by William Robinson) and are now recognised as being invasive in nature.

It is from such garden locations that these plants have spread into the wider countryside causing a threat to native habitats. Within the confines of a managed garden where they are controlled they are less of a concern however some species are listed under the Birds and Natural Habitats Regulations 2011. These include Japanese knotweed (*Fallopia japonica*), Three Cornered Leek (*Allium triquetrum*), Giant Rhubarb (*Gunnera tinctora*), Rhododendron (*Rhododendron ponticum*) and American Skunk Cabbage (*Lysichiton americanus*).

Cherry laurel (*Prunus laurocerasus*) is present within the woodlands and in the nineteenth century a formal laurel lawn was created and maintained along the broadwalk – this is also visually covers the right of way which passes below. This is a rare garden feature and is one of only two such extant features in Irish gardens today (Bowe, undated). The laurel lawn was manually cut on an annual basis to retain its form and in recent years this has to some extent been maintained by browsing deer.

Elsewhere in the estate laurel has spread quite significantly through the areas of mature woodland and in some cases could be considered to be negatively impacting these wooded areas and in need of a dedicated eradication/control strategy, but in other areas small clearings and openings have been retained as a result of browsing pressure from deer which have controlled its spread.

Other non-native species which are becoming invasive or have the potential to do so within the gardens include Himalayan honeysuckle/pheasantberry (*Leycesteria formosa*), a species of St. John's-wort (*Hypericum* sp.) and winter heliotrope (*Petasites fragrans*). Agricultural weeds such as ragwort (*Senecio jacobaea*) (which occurs in the back fields) and thistles (*Cirsium* sp.), which are beginning to spread on the front lawn, were previously managed and controlled on an annual basis through hand pulling and topping as part of the ongoing estate management in Fernhill.

2.3.4 Fisheries

Fernhill Park and Gardens is located within the Loughlinstown-Coastal river catchment. As shown on the EPA Envision Map Viewer, there are two tributaries of the Barnacullia Stream which rise on Three Rock Mountain and flow through Fernhill then passing under the Dundrum – Enniskerry road. The Barnacullia Stream, then passes through lands at Stepside and converges with the Carrickmines Stream north of the M50. This flows into the Shanganagh River, which ultimately flows into Killiney Bay at Shankhill. The water quality of the Barnacullia Streams is currently unknown.

The water quality of the Shanganagh River is classified as 'Good' (i.e. Q4), as recorded at Commons road but upstream near the Wyattville road overpass from Cherry wood the water quality is classified as 'Moderate' (i.e. Q3 - 4,) indicating some localised pollution. The water quality of the Killiney Bay coastal waterbody is 'Unpolluted'. As such, there have been no breaches of the EPA's threshold values for nutrient enrichment, accelerated plant growth, or disturbance of the level of dissolved oxygen normally present under the EPA's "Trophic Status Assessment Scheme" classification (EPA 2015).

Inland Fisheries Ireland report that the Loughlinstown system is exceptional in that it is an urban river system which supports migratory sea trout as well as resident brown trout and note that salmonid waters constraints apply to any development works within the catchment.

2.3.12 Assessment of Ecological Significance

The main interest in Fernhill is in the mosaic of habitats present which include mature trees and woodland, the watercourses and ponds, a variety of grassland habitats, scrub and the buildings, one of which at present contains a confirmed bat roost.

Fernhill is of importance for a variety of fauna including bats, badgers, deer and other mammals.

In an increasingly urbanised environment Fernhill provides an important feature of biodiversity/green infrastructure within the county connecting the uplands to the coast via two watercourses.

As surrounding lands have become developed for housing, schools and other urban uses the lands at Fernhill have been continuously managed for agriculture in a relatively non-intensive way.

The diversity of planting and variety of species is also likely to be of importance for a variety of pollinators which are sure to find a rich nectar source here throughout the year be it from natural habitats or from cultivated garden species.

3. ASSESSMENT OF RELEVANCE OF PROPOSED DEVELOPMENT TO NATURA 2000 SITES

In line with the European Commission Methodological Guidance (EC (2001)) and the DoEHLG Guidance (DoEHLG (2010)) a review of all Natura 2000 sites that could be potentially affected by the proposed development of the lands at Fernhill was made using the NPWS online map viewer.

These included any Natura 2000 sites within or adjacent to Fernhill, and any Natura 2000 sites within the likely zone of impact of the proposed development (a 15km radius) including those downstream.

In addition to the identified Natura 2000 sites consideration is also given to relevant species listed under Annexes I and II and IV of the Birds and Habitats Directives respectively.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are habitats of international significance that have been identified by NPWS and submitted for designation to the EU.

SAC is a statutory designation, which has a legal basis under the EU Habitats Directive (92/43/EEC) as transposed into Irish law through the European Communities (Natural Habitats) Regulations, 1997, which were amended in 1998, 2005 and 2011. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in the Court of Justice of the European Union (CJEU) judgements.

A Special Protection Area (SPA) is a statutory designation, which has a legal basis under the EU Birds Directive (79/409/EEC). The primary objective of SPAs is to maintain or enhance the favourable conservation status of the birds for which the SPAs have been designated.

The obligations imposed in relation to SACs and SPAs (or "European Sites") are set out in the Planning Acts and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011). The main implication of this designation is that any project likely to have a significant adverse impact on the integrity of a "non priority" site of international importance for nature conservation may only be carried out for "imperative reasons of overriding public interest, including those of a social or economic nature".

The lands proposed for development as a public park and gardens at Fernhill are not currently designated for any nature conservation purposes under international conservation legislation. Best practice recommends assessing Natura 2000 sites located within 15km of a proposed plan or project. This assessment confirmed that there are 14 Natura 2000 designated sites located within 15km of Fernhill. These include;

- Ballyman Glen SAC (Site Code: 000713)
- Knocksink Wood SAC (Site Code: 000725)
- Bray Head SAC (Site Code: 000714)
- South Dublin Bay SAC (Site Code: 000210)
- North Dublin Bay SAC (Site Code: 000206)
- Glenasmole Valley SAC (Site Code: 001029)
- Glen Of The Downs SAC (Site Code: 00719)
- Wicklow Mountains SAC (Site Code: 002122)
- Carrigower Bog SAC (Site Code: 000716)
- Rockabill to Dalkey Island SAC (Site Code: 003000)
- Dalkey Islands SPA (Site Code: 004172)
- South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024)
- Wicklow Mountains SPA (Site Code: 004040)
- North Bull Island SPA (Site Code: 004006)

There are ten Special Areas of Conservation (SAC) within a 15km radius of Fernhill as detailed above and shown on **Figure 3.1** below. The closest of these is Wicklow Mountains SAC, which is c.3.3km to the south west of Fernhill. There are four Special Protection Areas (for birds) (SPAs), the closest of these is the Wicklow Mountains SPA, which is within 4.1km to the south west.

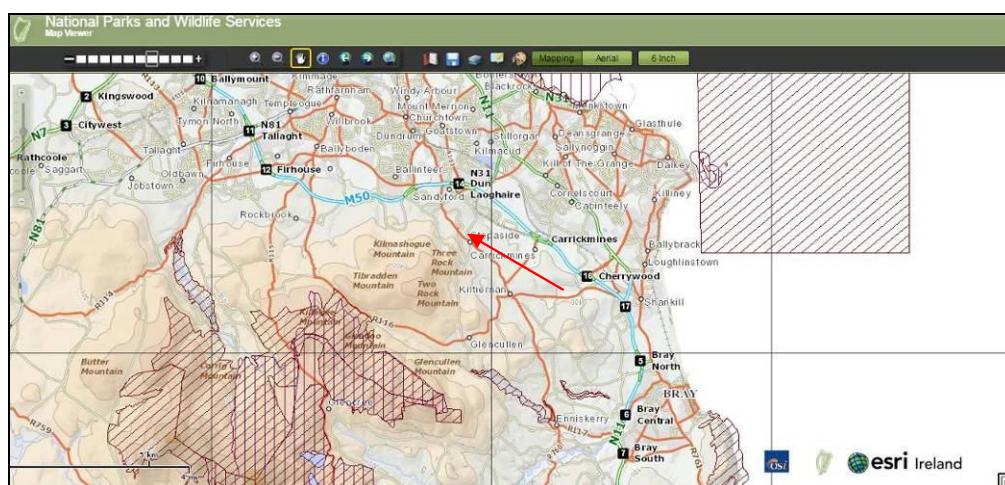


Figure 3.1. Designated areas in the vicinity of the lands at Fernhill (Source: National Parks and Wildlife Service). The indicative location of the lands is indicated by the red arrow.

National Conservation Designations

The boundary of Fitzsimon's Wood pNHA is within 770m to the north of the boundary of Fernhill Park and Gardens, while the Dingle Glen pNHA is 3km away to the south east beyond Kiltiernan village.

Proposed NHAs are habitats or sites of interest to wildlife that have been identified by NPWS. These sites become NHAs once they have been formally advertised and land owners have been notified of their designation. NHAs are protected under the Wildlife (Amendment) Act, 2000, from the date they are formally proposed. NHA is a statutory designation according to the

Wildlife (Amended) Act, 2000 and requires consultation with NPWS if any development impacts on a pNHA.

Some of the SAC and SPA sites, and a number of other sites in the general area are designated as proposed Natural Heritage Areas (24 in total). These include:

- Ballybetagh Bog pNHA (Site Code: 0001202)
- Ballyman Glen pNHA (Site Code: 000713)
- Booterstown Marsh pNHA (Site Code: 001025)
- Bray Head pNHA (Site Code: 000714)
- Carrigower Bog pNHA (Site Code: 000716)
- Dalkey Coastal Zone And Killiney Hill pNHA (Site Code: 001206)
- Dargle River Valley pNHA (Site Code: 001754)
- Dingle Glen pNHA (Site Code: 001207)
- Dolphins, Dublin Docks pNHA (Site Code: 000201)
- Fitzsimon's Wood pNHA (Site Code: 001703)
- Glen of the Downs pNHA (Site Code: 000719)
- Glenasmole Valley pNHA (Site Code: 001209)
- Glencree Valley pNHA (Site Code: 001755)
- Grand Canal pNHA (Site Code: 002104)
- Great Sugarloaf pNHA (Site Code: 001769)
- Kilmacanogue Marsh pNHA (Site Code: 000724)
- Knocksink Wood pNHA (Site Code: 000725)
- Loughlinstown Woods pNHA (Site Code: 001211)
- Lugmore Glen pNHA (Site Code: 001212)
- North Dublin Bay pNHA (Site Code: 000206)
- Powerscourt Waterfall pNHA (Site Code: 001767)
- Powerscourt Woodland pNHA (Site Code: 001768)
- Royal Canal pNHA (Site Code: 002103)
- South Dublin Bay pNHA (Site Code: 000210)

NHAs are considered to be of national importance, while SACs and SPAs are of international importance for nature conservation. Fitzsimon's Wood pNHA, Dingle Glen pNHA, Loughlinstown Woods pNHA and Ballybetagh Bog pNHA all form part of the wider network of lands preserved for biodiversity in the immediate vicinity of Fernhill and act as stepping stones between the Natura 2000 sites in the Dublin/Wicklow Mountains and the coast.

Natura 2000 Site Conservation Objectives:

Detailed site management plans are available for many of the Natura 2000 sites identified as outlined in the reference list above, and generic conservation objectives are identified for those remaining. The conservation objectives for each of the Natura 2000 sites outlined above are summarised below in **Table 3.1**. This screening report has examined the generic and detailed conservation objectives for each Natura 2000 site and the attributes and targets for each conservation objective and has not identified any potential risk of significant impact on any of these targets.

Table 3.1. Designated Natura 2000 sites within a 15km radius of the proposed development at Fernhill.

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
002122	Wicklow Mountains SAC	3.3km south-west	<ul style="list-style-type: none"> • (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea • (3160) Natural dystrophic lakes and ponds, • (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>, • (4030) European dry heaths, • (4060) Alpine and Boreal heaths, • (6230) Species-rich Nardus grasslands, on siliceous substrates in mountain areas, • (7130) Blanket bog (*active only), • (8110) Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani), • (8210) Calcareous rocky slopes with chasmophytic vegetation, • (8220) Siliceous rocky slopes with chasmophytic vegetation, • (9990) Blanket bog (not active), 	<p>NPWS (2016) Conservation objectives for Wicklow Mountains SAC [002122]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</p> <p>To maintain the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected:</p> <ul style="list-style-type: none"> • (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea • (3160) Natural dystrophic lakes and ponds, • (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>, • (4030) European dry heaths, • (4060) Alpine and Boreal heaths, • (6230) Species-rich Nardus grasslands, on siliceous substrates in mountain areas, • (7130) Blanket bog (*active only), • (8110) Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani), • (8210) Calcareous rocky slopes with chasmophytic vegetation, • (8220) Siliceous rocky slopes with chasmophytic vegetation, • (9990) Blanket bog (not active), • (1355) Otter (<i>Lutra lutra</i>), • Peregrine falcon (<i>Falco peregrinus</i>),

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
			<ul style="list-style-type: none"> • (1355) Otter (<i>Lutra lutra</i>), • Peregrine falcon (<i>Falco peregrinus</i>), • Merlin (<i>Falco columbarius</i>) 	<ul style="list-style-type: none"> • Merlin (<i>Falco columbarius</i>)
004040	Wicklow Mountains SPA	4.1km south west	<ul style="list-style-type: none"> • Peregrine falcon (<i>Falco peregrinus</i>), • Merlin (<i>Falco columbarius</i>), • Ring Ouzel (<i>Turdus torquatus</i>), • Red Grouse (<i>Lagopus lagopus</i>). 	<p>NPWS (2016) Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</p> <p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Peregrine falcon (<i>Falco peregrinus</i>), • Merlin (<i>Falco columbarius</i>), • Ring Ouzel (<i>Turdus torquatus</i>), • Red Grouse (<i>Lagopus lagopus</i>).
000725	Knocksink Wood SAC	4.6km south	<ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (Cratoneurion) • (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) 	<p>NPWS (2016) Conservation objectives for Knocksink Wood SAC [000725]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</p> <p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (Cratoneurion) • (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)
004024	South Dublin Bay and River	6km north east	<ul style="list-style-type: none"> • Brent goose (<i>Branta bernicla hrota</i>), 	NPWS (2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
	Tolka Estuary SPA		<ul style="list-style-type: none"> • Sandwich Tern (<i>Sterna sandvicensis</i>), • Roseate Tern (<i>Sterna dougallii</i>), • Common Tern (<i>Sterna hirundo</i>), • Arctic Tern (<i>Sterna paradisaea</i>), • Oystercatcher (<i>Haematopus ostralegus</i>), • Ringed Plover (<i>Charadrius hiaticula</i>), • Knot (<i>Calidris canuta</i>), • Sanderling (<i>Calidris alba</i>), • Dunlin (<i>Calidris alpina</i>), • Bar-tailed Godwit (<i>Limosa lapponica</i>). 	<p>004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Dated 09/03/2015. Accessed 21/06/2017.</p> <p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Brent goose (<i>Branta bernicla hrota</i>), • Sandwich Tern (<i>Sterna sandvicensis</i>), • Roseate Tern (<i>Sterna dougallii</i>), • Common Tern (<i>Sterna hirundo</i>), • Arctic Tern (<i>Sterna paradisaea</i>), • Oystercatcher (<i>Haematopus ostralegus</i>), • Ringed Plover (<i>Charadrius hiaticula</i>), • Knot (<i>Calidris canuta</i>), • Sanderling (<i>Calidris alba</i>), • Dunlin (<i>Calidris alpina</i>), • Bar-tailed Godwit (<i>Limosa lapponica</i>). <p>To maintain the favourable conservation condition of wetland habitat in South Dublin and the River Tolka Estuary SPA as a resource for the regularly occurring migratory waterbirds that use it.</p>
000713	Ballyman Glen SAC	6.3km south east	<ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (Cratoneurion) • (7230) Alkaline fens 	<p>NPWS (2016) Conservation objectives for Ballyman Glen SAC [000713]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017</p> <p>To maintain or restore the favourable conservation condition of the Annex I habitat(s)</p>

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
				for which the SAC has been selected: <ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (Cratoneurion) • (7230) Alkaline fens
000210	South Dublin Bay SAC	6.7km north	<ul style="list-style-type: none"> • (1140) Mudflats and sandflats not covered by seawater at low tide 	<p>NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Dated 22/08/2013. Accessed 21/06/2017.</p> <p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> • (1140) Mudflats and sandflats not covered by seawater at low tide
003000	Rockabill to Dalkey Islands SAC	8.7km east	<ul style="list-style-type: none"> • (1351) Harbour porpoise (<i>Phocoena phocoena</i>) • (1170) Reefs 	<p>NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Dated 07/05/2013. Accessed 21/06/2017.</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> <ul style="list-style-type: none"> • (1351) Harbour porpoise (<i>Phocoena phocoena</i>) • (1170) Reefs
004172	Dalkey Islands SPA	9km north east	<ul style="list-style-type: none"> • Roseate Tern (<i>Sterna dougallii</i>) • Common Tern (<i>Sterna hirundo</i>) • Arctic Tern (<i>Sterna paradisaea</i>) 	<p>NPWS (2016) Conservation objectives for Dalkey Islands SPA [004172]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</p>

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
				<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Roseate Tern (<i>Sterna dougallii</i>) • Common Tern (<i>Sterna hirundo</i>) • Arctic Tern (<i>Sterna paradisaea</i>)
001209	Glenasmole Valley SAC	9km west	<ul style="list-style-type: none"> • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites) • (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) • (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>) 	<p>NPWS (2016) Conservation objectives for Glenasmole Valley SAC [001209]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</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> <ul style="list-style-type: none"> • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites) • (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) • (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>)
000714	Bray Head SAC	11.1km south east	<ul style="list-style-type: none"> • (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts • (4030) European dry heaths • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites) 	<p>NPWS (2017) Conservation Objectives: Bray Head SAC 000714. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 11/04/2017. Accessed 21/06/2017.</p> <p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p>

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
				<ul style="list-style-type: none"> • (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts • (4030) European dry heaths • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (*important orchid sites)
000206	North Dublin Bay SAC	11.3km north east	<ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • <i>Salicornia</i> and other annuals colonizing mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120] • *Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130] • Humid dune slacks [2190] • <i>Petalophyllum ralfsii</i> (Petalwort) [1395] 	<p>NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Dated 06/11/2013. Accessed 21/06/2017.</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> <ul style="list-style-type: none"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • <i>Salicornia</i> and other annuals colonizing mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120] • *Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130] • Humid dune slacks [2190]

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
				<ul style="list-style-type: none"> • <i>Petalophyllum ralfsii</i> (Petalwort) [1395]
004006	North Bull Island SPA	12.1km north	<ul style="list-style-type: none"> • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] [wintering] • Shelduck (<i>Tadorna tadorna</i>) [A048] [wintering] • Teal (<i>Anas crecca</i>) [A052] [wintering] • Pintail (<i>Anas acuta</i>) [A054] [wintering] • Shoveler (<i>Anas clypeata</i>) [A056] [wintering] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] [wintering] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] [wintering] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] [wintering] • Knot (<i>Calidris canutus</i>) [A143] [wintering] • Sanderling (<i>Calidris alba</i>) [A144] [wintering] • Dunlin (<i>Calidris alpina</i>) [A149] [wintering] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] [wintering] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] [wintering] • Curlew (<i>Numenius arquata</i>) [A160] [wintering] • Redshank (<i>Tringa totanus</i>) 	<p>NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Dated 09/03/2015. Accessed 21/06/2017.</p> <p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] [wintering] • Shelduck (<i>Tadorna tadorna</i>) [A048] [wintering] • Teal (<i>Anas crecca</i>) [A052] [wintering] • Pintail (<i>Anas acuta</i>) [A054] [wintering] • Shoveler (<i>Anas clypeata</i>) [A056] [wintering] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] [wintering] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] [wintering] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] [wintering] • Knot (<i>Calidris canutus</i>) [A143] [wintering] • Sanderling (<i>Calidris alba</i>) [A144] [wintering] • Dunlin (<i>Calidris alpina</i>) [A149] [wintering] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] [wintering] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] [wintering] • Curlew (<i>Numenius arquata</i>) [A160] [wintering] • Redshank (<i>Tringa totanus</i>) [A162] [wintering]

Site Code	Site Name and Designation	Approximate distance from Fernhill	Conservation Interest	Conservation Objectives
			<ul style="list-style-type: none"> [A162] [wintering] • Turnstone (<i>Arenaria interpres</i>) [A169] [wintering] • Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] [wintering] • Wetlands & Waterbirds [A999] 	<ul style="list-style-type: none"> • Turnstone (<i>Arenaria interpres</i>) [A169] [wintering] • Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] [wintering] • Wetlands & Waterbirds [A999]
000719	Glen of the Downs SAC	14.4km south east	<ul style="list-style-type: none"> • (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles 	<p>NPWS (2016) Conservation objectives for Glen of the Downs SAC [000719]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</p> <p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> • (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles
000716	Carriggower Bog SAC	15km south	<ul style="list-style-type: none"> • Transition mires and quaking bogs [7140] 	<p>NPWS (2016) Conservation objectives for Carriggower Bog SAC [000716]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Dated 15/08/2016. Accessed 21/06/2017.</p> <p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> • Transition mires and quaking bogs [7140]

Hydrological Links to Natura 2000 sites:

Surface water runoff

There are no Natura 2000 sites located either within or directly adjacent to the lands at Fernhill and there are no direct hydrological links between the site and any Natura 2000 site with the exception of the surface water pathway between the streams that traverse Fernhill which enter the Loughlinstown Stream. The Loughlinstown Stream enters Killiney Bay/the Irish Sea approximately 5km south of the boundary of the Rockabill to Dalkey Islands SAC so any runoff including silts or sediments entering local watercourses will ultimately end up in the Irish Sea and could therefore potentially impact on water quality in the bay with potential impacts on the qualifying interests of the SAC.

In combination Effects

There is potential for “in-combination” effects of proposed plans and projects within the draft Dún Laoghaire-Rathdown County Development Plan 2016-2022 which would influence conditions in Killiney Bay via rivers and other surface water features. However Killiney Bay is of ‘Unpolluted’ water quality status (EPA 2015) and the pollutant content of future surface water discharges to Killiney Bay are considered likely to be decreased in the long-term. This is because it is an objective of the Greater Dublin Strategic Drainage Study, and development plans within the catchments of Shanganagh WWTP to include Sustainable Urban Drainage Systems in new developments as is proposed at Fernhill.

4. ASSESSMENT OF SIGNIFICANCE

The potential impacts of the proposed development of the lands at Fernhill as a public park on Natura 2000 sites within a 15km radius of the lands are assessed using the following factors (European Commission (2001). Assessment of plans and projects significantly affecting Natura 2000 sites - methodological guidance on the provisions of Article 6(3) and 6 (4) of the Habitats Directive 92/43/EEC):

- size and scale
- land-take
- distance from the Natura 2000 site or key features of the site
- resource requirements (water abstraction etc.)
- emissions (disposal to land, water or air)
- excavation requirements
- transportation requirements
- duration of construction, operation, decommissioning, etc.
- reduction of habitat area
- disturbance to key species
- habitat or species fragmentation
- reduction in species density

- changes in key indicators of conservation value (water quality etc.)
- climate change
- key relationships that define the structure of the sites
- key relationships that define the function of the site

These impacts on the Natura 2000 sites are summarised below in **Table 4.1** and further elaborated on in **Table 4.2** and **4.3**.

Table 4.1. Likely direct, indirect or secondary impacts of the proposed development (either alone or in combination with other plans or projects) on Natura 2000 sites within a 15km radius of the site by virtue of:

Size and scale	<ul style="list-style-type: none"> • None within any Natura 2000 site
Land-take	<ul style="list-style-type: none"> • None within any Natura 2000 site
Distance from Natura 2000 site	<ul style="list-style-type: none"> • The closest Natura 2000 site is the Wicklow Mountains SAC which is within 3.3km to the SW of Fernhill. • The relevant Natura 2000 site downstream is the Rockabill to Dalkey Islands SAC which is located 8.7km east of Fernhill in Killiney Bay and is hydrologically linked by the local watercourses.
Resource requirements (water abstraction, etc.)	<ul style="list-style-type: none"> • The development will be served by the mains water supply.

Emissions (disposal to land, water or air)	<ul style="list-style-type: none"> The development is within the surface water catchment of the Loughlinstown Stream. The Loughlinstown Stream enters Killiney Bay/the Irish Sea approximately 5km south of the boundary of the Rockabill to Dalkey Islands SAC. Although no significant impacts from the development of Fernhill are anticipated given the nature of the proposed development and the distance between Fernhill and the European site is such that dilution and mixing in the freshwater and saline environments - the drainage has been designed in accordance with the GDSDS with attenuation in soft areas where possible. Surface water design has been undertaken using best practice and integrated Sustainable Urban Drainage Systems in order to replicate the natural characteristics of rainfall run-off from the proposed development. As well as attenuating the water on site, the quality of the surface water will be improved while also providing an amenity through good quality integrated SUDs design. The development will be served by the mains wastewater supply. The recent upgrade at Shanganagh WWTP has ensured that the 'Unpolluted' water quality status of coastal waters at Killiney Bay are maintained, despite potential pressures from future development in the catchment.
Excavation requirements	<ul style="list-style-type: none"> None within any Natura 2000 site
Transportation requirements	<ul style="list-style-type: none"> The local road network will be used.
Duration of construction, operation, decommissioning, etc.	<ul style="list-style-type: none"> Phased over five to ten years
Reduction of habitat area	<ul style="list-style-type: none"> None within any Natura 2000 site

Changes to the Natura 2000 site arising as a result of disturbance, fragmentation, etc. are summarised below in **Table 4.2**.

Table 4.2 Description of likely changes to the site arising as a result of:

Disturbance to key species	<ul style="list-style-type: none"> • There will be no direct impacts to any key species in any Natura 2000 site
Habitat or species fragmentation	<ul style="list-style-type: none"> • None
Reduction in species density	<ul style="list-style-type: none"> • There will be no reduction in species density within any Natura 2000 site as a result of the proposed development
Changes in key indicators of conservation value (water quality etc.)	<ul style="list-style-type: none"> • See surface runoff above • There is potential for “in-combination” effects of proposed plans and projects within the draft Dún Laoghaire-Rathdown County Development Plan 2016-2022 which would influence conditions in Killiney Bay via rivers and other surface water features. However Killiney Bay is of ‘Unpolluted’ water quality status (EPA 2015) and the pollutant content of future surface water discharges to Killiney Bay are considered likely to be decreased in the long-term. This is because it is an objective of the Greater Dublin Strategic Drainage Study, and development plans within the catchments of Shanganagh WWTP to include Sustainable Urban Drainage Systems in new developments as is proposed at Fernhill. • There is a risk that construction related contamination (e.g. through surface run off) could flow overland into the local drainage network. However, such overflows are deemed unlikely to result in significant effects upon water quality in Killiney Bay. This is due to the following circumstances: the small scale of the proposed development; any pollution events will only occur during a short period of time (i.e. construction is likely to be limited to months), and are likely to be infrequent (i.e. limited to storm flows) where standard good practice for construction sites have been adhered to; and, due to the distance of the proposed development from Killiney Bay which would mean that any escaped contaminants would be subject to dilution, adsorption and mixing in the local drainage network prior to reaching European Sites in

	<p>Killiney Bay. As such there will be no risk of significant adverse impacts upon European sites occurring.</p> <ul style="list-style-type: none"> • Best practice will be implemented during the construction works within the park to minimise the risk of siltation and other pollution risks to local watercourses (Barnacullia Streams), the Loughlinstown Stream downstream (a salmonid watercourse) and the Natura 2000 sites in Killiney Bay. • Once operational all surface waters from the park will be attenuated using best practice and integrated Sustainable Urban Drainage Systems
Climate change	<ul style="list-style-type: none"> • The park will promote sustainable development and energy use which will reduce fossil fuel use

Likely impacts on the Natura 2000 site as a whole in terms of structure and functions are described below in **Table 4.3**.

Table 4.3. Describe any likely impacts on the Natura 2000 site as a whole in terms of:

Key relationships that define the structure of the sites	<ul style="list-style-type: none"> • None
Key relationships that define the function of the site	<ul style="list-style-type: none"> • None

5. CONCLUSION

This report for screening for appropriate assessment has evaluated the proposed development of lands at Fernhill, Enniskerry Road, Stepside, Co. Dublin to determine whether or not significant negative impacts on Natura 2000 sites are likely to arise by virtue of its development and use.

Given the nature of the project, the drainage design measures in accordance with the GDSDS, and the distance from relevant Natura 2000 sites, it is concluded that there will be no negative impacts on the qualifying interests or species of any Natura 2000 site within a 15km radius of the proposed development.

This report finds that the proposed development of the lands at Fernhill, Enniskerry Road, Stepside, Co. Dublin as a public park and gardens, will not have a significant effect on any Natura 2000 site in view of the sites conservation objectives.

The Appropriate Assessment procedure for this proposed development is therefore concluded at this Screening Stage and it is considered that a detailed (Stage 2) Appropriate Assessment is not required.

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APPENDIX 1 MASTERPLAN FOR FERNHILL



EXISTING		PROPOSED	
	Site boundary/Extents		Primary Paths
	Estate Buildings		Secondary Paths
	Corporus (5m intervals)		Burning Circle (400m)
	Deciduous Trees & Woodlands		Woodland & Garden Cultivation
	Coniferous Trees & Woodlands		Shared Surface
	Hedge/rows/Diverse Vegetation		Paving Bays
	Rivers & Ponds		Best Areas with Seating
	Right of Way		Benches
	Existing Paths & Roads		Created Water Features
	Garden Trails		Attenuation Wetland
	Woodland Tracks		General Arterial Grassland
	Ornamental Gardens		Grass Meadow
	Species Rich Grassland		Wooded Sluicing
	Cables Underground		Shrub/Ornamental Planting

Item	Description
1	Vehicular entrance incorporating railings and gates
2	Shared surface avenue
3	Pedestrian access to Rosemont School
4	Coach parking bays
5	Shared surface plaza space
6	Access steps with sports building and children's slide.
7	Formal active recreation area
8	Viewing and seating space
9	Ornamental play space with sculptural mounding
10	Grass space retained for informal active recreation
11	Dogs-off-leash areas
12	Natural adventure play space
13	Attenuation wetland
14	Ornamental pond
15	Grass meadow with grass paths
16	Stone lined water channel to be restored
17	Fernhill House to be restored for community use - subject to future Part 8 planning application
18	Rock gardens to be restored
19	Woodland gardens to be restored and conserved
20	New board walk type path network put in place
21	Right of way to be upgraded
22	Pedestrian access at Belmeine with signalled junction
23	Species rich grassland meadow to be conserved
24	Natural wetland area
25	Existing site-ledge for caretaker residence
26	Existing entrance for pedestrian access and occasional vehicular access
27	Ornamental gardens to be restored and conserved
28	Existing coach house building to be restored and developed for park tearooms
29	New contemporary building to incorporate public toilets and other park facilities
30	Walled garden for community garden/education use
31	Area subject to lifetime tenancy
32	New Dwelling Unit in Barn
33	Flying fox playground unit