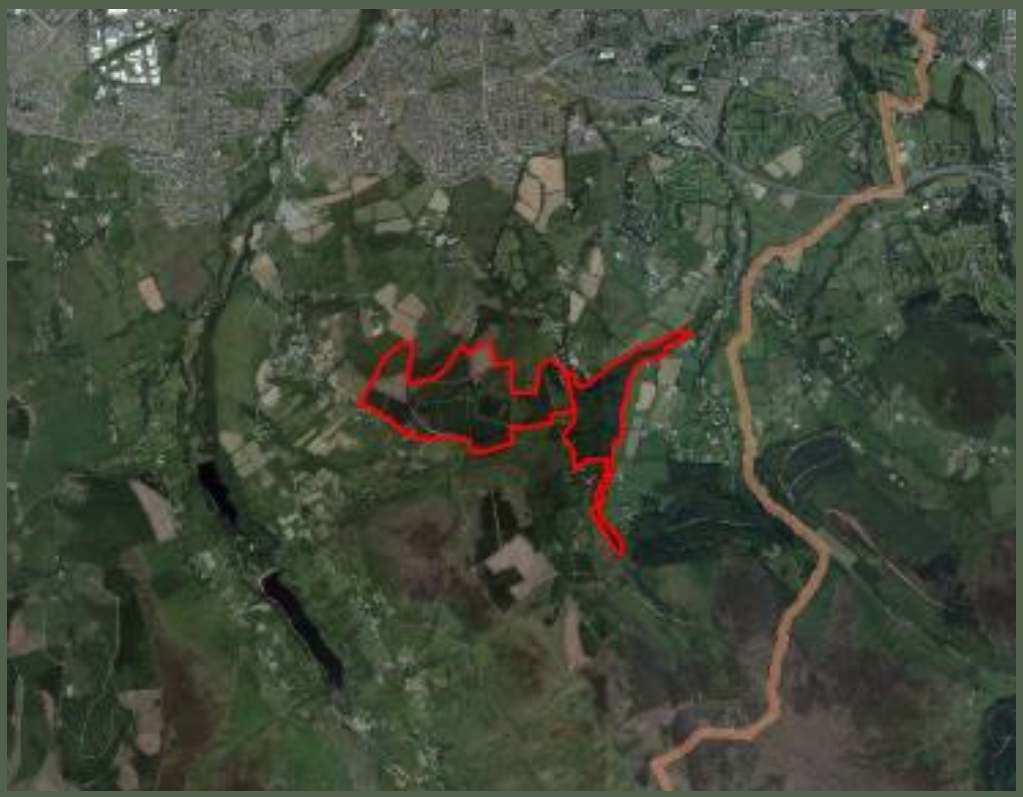
LAND PLANNING & DESIGN

06S.J0040

Further Information Response

In support of an Application by South Dublin County Council to An Bord Pleanála, under Section 175(3) of the Planning and Development Act 2000 (as Amended), for Approval of Development of the:

Proposed Dublin Mountains Visitor Centre



Comhairle Contae Átha Cliath Theas
South Dublin County Council

CUNNANE STRATTON REYNOLDS
LAND PLANNING & DESIGN

November 2017

Prepared by **Cunnane Stratton Reynolds** in Association with

Paul Keogh Architects
CATHAL CRIMMINS

VEON

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ROD
ROUGHAN & O'DONOVAN

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TABLE OF CONTENTS

1.0 INTRODUCTION

This report has been prepared in response to the letter from An Board Pleanála dated 9th October 2017 (ABP ref. 06S.JA0040) requesting further information in relation to the effects of the proposed development on the environment.

The Board's request for further information (RFI) includes five items, all of which relate to biodiversity:

1. Appropriate Assessment
2. Red Squirrels
3. Pine Martens
4. Bats
5. Other

In addition, under the first item of the RFI the Board invites a response to the submissions made by the public and statutory authorities.

1.1 FORMAT OF THE RESPONSE TO THE RFI

In Sections 2 to 6 of this report, the applicant's response to Items 1 to 5 of the RFI is provided.

In Sections 7 to 17 of this report, a response is made to the submissions received by the Board on the proposed development. The response does not address each submission individually. In our review of the submissions, a number of main/recurring themes have been identified. The response (which supplements the EIAR and other documents previously submitted) addresses these themes as opposed to the individual submissions, but we have sought to address the range of questions and concerns raised in the submissions.

A spreadsheet (titled *DMVC Summary of Submissions*) is also provided in Appendix A to this report. In this spreadsheet, key themes raised in each of the submissions are identified along with the most relevant sections of this RFI response report to each submission. Please note, this is not intended as a comprehensive summary of the submissions for the Board; it is provided to illustrate that each of the submissions was given the applicant's and the design and EIA teams' attention.

Additionally, since the RFI focussed particularly on biodiversity/ecological issues, a detailed response has been prepared by the project ecologist to *a selection* of the submissions. This is presented in a spreadsheet titled *DMVC Responses Biodiversity Theme* in Appendix B. Please note, the submissions selected for this detailed response are considered to constitute a representative sample covering the range of biodiversity/ecological issues raised. We trust that the detailed response in this spreadsheet, along with the response on the biodiversity theme in Section 7 of this report, and the response to RFI Items 1 to 5 in Sections 2 to 6 of this report, provide a comprehensive reply to the biodiversity/ecological issues raised in the RFI and the submissions.

1.2 CLARIFICATIONS AND AMENDMENTS OF PROPOSALS

The following amendments are made to the development proposals:

- The exhibition and education facilities contained in the visitor centre building will be operated on a non-commercial basis, i.e. open to all visitors for no fee. This is proposed as a means to enhance the experience of all users (should they choose to avail of the facilities in addition to walking the trails), but particularly to enhance the educational function of the Dublin Mountains Visitor Centre.

The exhibition, interpretation and educational facilities in conjunction with improved transportation/access options, improved trail network, improved management of the site's cultural and natural heritage assets, and provision of basic facilities such as toilets, will create a heritage-based education resource of national significance.

- For clarification, notwithstanding that the facility will operate in daylight hours (refer to Section 3 of the revised *Operational Management Plan* submitted under separate cover), it is proposed to provide discrete external lighting in the car park and along the main walking route between the car park and the visitor centre building, to allow for safe departure from the facility after dark when required. The lighting will be in the form of bollard-mounted, directional lights to minimise light spill and disturbance of nocturnal species. The lights will be turned off on closure of the facility and departure of the staff.

- The previously proposed LED lighting of the tree canopy pedestrian bridge is hereby omitted. This is in order to minimise visual impact and any potential impact on nocturnal species particularly bats.

- The Operational Management Plan submitted with the EIAR has been updated, with more detail provided on the management structure and the responsibilities/commitments of the project partners to the site's management. (The revised Operational Management Plan therefore replaces that submitted with the EIAR.) We submit that the updated management proposals and commitments are commensurate with the site's status as a key regional Green Infrastructure asset, a strategic access point from the city for recreation and heritage interpretation/education in the Dublin Mountains, and a tourism facility of national status/importance.

2.0 APPROPRIATE ASSESSMENT

Long-eared owl and Woodcock are potentially present in the Hellfire/ Massy's Wood area. These species are widespread in Ireland and are green listed and red listed respectively. The project will include the clearance of small areas of conifer plantation next to the Hellfire Club car park and on Montpelier Hill. These areas of woodland are unlikely to support nesting sites of these species because of the current levels of disturbance. Massy's Wood is an open broadleaved woodland and is currently subject to disturbance by walkers. Blocks of conifer plantations on Montpelier Hill will remain under management by Coillte and are largely inaccessible. Improvements to the trails will encourage existing and new users to remain within certain areas and prevent damage and disturbance off the trails. Habitat enhancements such as planting of broadleaved trees and creating new ponds will provide additional hunting opportunities for Long-eared Owl.

Peregrine and Merlin are Special Conservation Interests of the Wicklow Mountains SPA and therefore the only species relevant to the AA Screening. Both species are likely to hunt within the site. The site does not provide suitable nesting habitat for Peregrine (cliffs and tall buildings). The site of the visitor centre consists of recently felled woodland with occasional mature beech trees, scrub and conifer plantation. This area is currently subject to disturbance from people and dog-walkers. Massy's Wood is primarily non-native beech woodland and Montpellier Hill is conifer plantation of varying ages. Merlin may nest in conifer plantations, however given that there is vast areas of heath and blanket bog, the preferential nesting habitat of Merlin, close by, the conifer plantations are unlikely to provide an important nesting resource for this species. Considering there is currently human based disturbance along the trails on Montpellier Hill, the fact that the Merlin vary their nest sites from year to year and that the species has extensive nesting opportunities in the surrounding areas, both in conifer plantation and more traditional heather uplands, there are not considered to be potential impacts on the Conservation Objectives for this

species in the Wicklow Mountains SPA. In addition, a research report produced by the Forestry Commission in the UK entitled 'Recreational use of forests and disturbance of wildlife' (Mazano & Dandy, 2012) cites two scientific papers which investigated the potential impacts of recreational users on Merlin populations. Newton et al. (1981)[1] concluded that recreational walkers were unlikely to have caused a sharp decline in Merlin. Another study, Meek (1988)[2] suggests little negative impact on Merlin by recreation. Mazano & Dandy (2012) concludes that "On balance, the available evidence does not indicate significant negative impacts on UK forest birds following 'flight' responses to walking including no clear long-term or population-level impacts".

Section 6.6.2.1 of the EIAR outlines the mitigation that will be employed prior to construction to identify nesting birds including Peregrine and Merlin. In the unlikely event that an active Merlin nest is discovered, an appropriate buffer will be strictly implemented until the chicks have fledged.

The Dublin Mountains Visitor Centre links directly to a spur of the Dublin Mountain Way. The spur currently circles Montpelier Hill and follows the existing paths in Massy's Wood where it follows the Glendoo Brook upstream to the bend in the Cruagh Road where it joins the main trail of the Dublin Mountain Way. The path to the east crosses Cruagh Wood and then the Glendoo Road where it travels east along Tibradden Mountain. The Dublin Mountain Way does not enter either the Wicklow Mountains SAC or SPA. The Dublin Mountain Way does come close to these sites in the Cruagh Wood area, however it is on established and well used trails and within existing conifer plantations. Going west from the bend in the Cruagh Road the Dublin Mountain Way follows the old military road, forest paths and an unnamed road around Annmount Spink and into the Glenasmole Valley. The Dublin Mountain Way enters the Glenasmole Valley SAC at the top of the upper reservoir where it follows the maintenance road along the eastern side of the reservoir, 7.7km west of the bend in the Cruagh Road. It is anticipated that there will be an increase in people accessing the Dublin Mountain Way as a result of the Dublin Mountains Visitor Centre, however impact on the conservation objectives of the Natura 2000 sites are not anticipated to occur because the Dublin Mountain Way utilises established trails and public roads and does not enter either the Wicklow Mountains SAC or Wicklow Mountains SPA. The Glenasmole Valley SAC, which the Dublin Mountain Way does enter, is protected for rare grassland habitats and petrifying springs which occur on farmland and are not accessible to the public.

A survey of walker numbers was undertaken between the 3rd and 6th of November 2017. Four counters were placed at the following locations:

- The south end of Massy's Wood 100m north of the Cruagh Road. This is the trail that connects Massy's Wood to the Dublin Mountain Way and toward the Wicklow Mountains SPA and SAC.
- The Cruagh Wood Car Park- East of the Cruagh Road which links to the Wicklow Mountain SPA and SAC.
- Killakee Wood- West of Massy's Wood along the Dublin Mountain Way.
- Piperstown Local Road- West of Killakee Wood along the Dublin Mountain Way towards the Glenasmole Valley SAC.

The results showed, as would be expected, a pronounced increase in usage at the weekend. Cruagh Wood was the busiest point surveyed, with a maximum of 1,057 walkers recorded here in one day. The maximum number recorded in Massy's Wood along the Glendoo Brook trail (54) and Cruagh Wood

[1] Newton , J. E. Robinson & D. W. Yalden (1981) Decline of the Merlin in the Peak District, Bird Study, 28:3, 225-234

[2] E. R. Meek (1988) The breeding ecology and decline of the Merlin Falco columbarius in Orkney, Bird Study, 35:3, 209-218

indicate that at present the link between Massy's Wood and Cruagh Wood is not well used. It is likely that walkers currently park at the Cruagh Wood Car Park in order to access the Dublin Mountain Way. The maximum daily number of walkers recorded west of Massy's Wood on the Dublin Mountain Way were 44 at Killakee Wood (4%) and 10 at Piperstown (1%), indicating no significant link between Massy's Wood and the Glenasmole Valley SAC.

Previous car park surveys indicate no change in usage between summer and autumn. Based on the survey results if the number of visitors to the Hellfire Club was increased three-fold over ten years as described in the EIAR, this would lead to an increase of visitors linking to the Dublin Mountain Way from Massy's Wood by up to 162 per day. In the context of the current number of walkers recorded in Cruagh Wood (up to 1,057 per day), this increase is not significant, especially when considering that not all of the walkers recorded in Massy's Wood will access the Dublin Mountain Way in the vicinity of the Natura 2000 Sites. A summary of the survey results is provided below.

Table 2.1 Summary of walker numbers

Site No.	**Name**	**Daily Totals**					
		Friday	Saturday	Sunday	Monday	Total	
		03/11/2017	04/11/2017	05/11/2017	06/11/2017		
1	Massey	34	50	54	11	149	7%
2	Cruagh	178	540	1057	82	1857	88%
3	Killakee	11	21	44	13	89	4%
4	Piperstown	0	10	9	0	19	1%
	Total	223	621	1164	106	2114	100%
		11%	29%	55%	5%	100%	

3.0 RED SQUIRREL

The woodlands provide important habitat for Red Squirrel. The over-mature plantation at the car park will be subject to wind throw in the future and is not sustainable. The landscaping strategy proposes planting on the eastern side of Montpellier Hill, which is currently scrub and clearfell with native broadleaved and coniferous trees, whilst retaining a number of existing mature beech trees and beech tree lines. The area on the top of Montpellier Hill will be converted to mixed broadleaf woodland over time. There will be large area of coniferous woodland which will be left intact including the larch woodland on the southern side of the hill and spruce/ pine plantations elsewhere on the hill. The plantations on Montpellier Hill are of mixed age and will provide habitat for Red Squirrel into the future. There will be a medium term impact on Red Squirrel as a result of the felling of the woodland at the car park and in other areas as a result of vegetation clearance as well as disturbance from construction. In time the planted woodlands will mature and provide suitable habitat for Red Squirrels. While conifer woodland is more beneficial for Red Squirrels with regard to being less attractive to greys, broad leaved planting has been chosen for its overall higher biodiversity value.

A draft Red Squirrel Conservation Management Plan has been produced and submitted with this response and will be finalised with input from Coillte should the development be approved.

The landscape strategy requires the over-mature plantation by the existing carpark to be felled to allow for new car parking spaces and because of the future risk of wind throw. The decision was made to plant the eastern side of Montpelier Hill with broadleaved species to create a native woodland setting for the Visitor Centre.

4.0 PINE MARTEN

A visual recording of a Pine Marten was made during a bat survey. No dens or potential dens were recorded during the surveys. Pine Martens have large territories (O'Mahony, 2011[3]) and are mainly nocturnal and elusive, they are unlikely to be affected by the project as a result of existing disturbance by people and dogs, which may result in them being habituated to human disturbance or nesting away from the area of the development. The development will only be open during daylight hours. During the operational phase Pine Marten will continue to inhabit the area. The Red Squirrel Conservation Management Plan will address enhancements for Pine Marten as a form of Grey Squirrel control.

5.0 BATS

The bat roost suitability assessment of the site was carried out as part of the multidisciplinary surveys. The mixed broadleaf and conifer woodlands that make up Massy's Wood, along with the Glendoo Brook offer good quality habitat for bats including Myotis species and Brown long-eared bats which are likely to be present in the area. The site of the proposed building and associated car parking was surveyed on two nights. Conditions were ideal and bat activity was low on both nights, with three species recorded. The main impact of the project on bats was considered to be disturbance or destruction of trees with bat potential close to the site of the proposed building/car park. Following construction, broadleaved woodland and new ponds will have a positive impact on bats. Although Myotis species and Brown long-eared bats may be present in Massy's Wood and the wider area, night-time presence/ absence surveys in Massy's Wood were not undertaken because their presence, if confirmed, would be inconsequential as there would be no negative impacts on the foraging habitat within Massy's Wood. A preliminary roost inspection was undertaken throughout the site, and included the Hellfire Club building, the walled garden in Massey's Wood as well as the bridge structures. These structures were deemed to have no potential to support roosting bats. Prior to tree-felling and works on any structure, a preconstruction survey will be carried out to identify any changes on the condition and potential to support bat roosts.

The only exterior lighting proposed for the project during operation is in the car park and between the car park and visitor centre building. It will be in the form of low level bollard mounted lighting and will remain on at night long enough for staff to reach the car park safely. Section 6.6.2.2 of the EIAR states "The lighting design will incorporate measures to minimise light spillage and disturbance for Bats and other nocturnal species". The Visitor Centre will operate during daylight hours only, therefore light spill from the building will not impact wildlife.

6.0 OTHER

6.1 HEDGEROWS

There will be no impact on the existing boundary hedgerows on the site.

6.2 BIRDS

The potential impacts of the project on the Conservation Objectives of the Wicklow Mountains SPA are dealt with in the response to the submission relating to the Appropriate Assessment Screening (Section 2.0 of this report). There will be negligible loss of woodland habitat, and the existing woodlands of

[3] O'Mahony, Declan. (2011). Spatial ecology of pine marten in commercial forest plantations in Ireland

Massy's Wood and Montpellier Hill will remain intact. Users will be encouraged to stay on improved access paths and large areas of plantation will be left intact. It must be noted in this response that the area is already subject to disturbance by people and dogs.

Section 6.6.2.1 of the EIAR states that "vegetation clearance/removal for the proposed development will generally be restricted to outside this period [Nesting Bird Season]. However, if there is a need for vegetation removal to be undertaken during this period, a suitably qualified Ecologist will be present on site to physically check all areas prior to works to ensure that no nesting birds, Red Squirrel or Bats are present in the areas to be cleared, to supervise clearance and to ensure compliance with other provisions of the Wildlife Acts.

6.3 BADGERS

Two setts were identified during the walkover surveys. In November 2016, both of these setts were classified as inactive and outside the footprint of the proposed works. The applicant acknowledges that the status of a sett may change over time and that new setts may be excavated by badgers between the planning application and construction, which may require additional mitigation. Section 6.2.2.1 of the EIAR states that “prior to any works being carried out, a pre-construction Badger survey will be undertaken”. If a sett is identified that could be impacted by the project, a licence will be sought from NPWS prior to any licensable works being carried out.

6.4 FLORA AND HABITAT

The habitats recorded within the study area are described in section 6.4.1 and include conifer plantation, felled woodland and broadleaf woodland (dominated by non-native beech and invasive shrubs). The field layer under conifers and beech trees (both non-native) is restricted by light and chemical compounds in the fallen leaves respectively that prevent other plants growing. In other areas of Massy’s Wood invasive Cherry Laurel, Himalayan Honeysuckle and Snowberry dominate the understorey. Conifer Plantations, Scrub and Felled Woodland on Montpelier Hill do not provide diverse habitats and therefore it was considered that the habitat survey, even outside the optimum vegetation survey season, was sufficient in characterising the area. The error in the table in Section 6.3.4 of the EIAR is noted and the corrected tables are submitted below.

Table 6.6 NBDC records for the relevant hectads

Common Name	Scientific Name	Status
Mammals		
Daubenton’s Bat	*Myotis daubentonii*	Annex IV, WA
Common Pipistrelle	*Pipistrellus pipistrellus*	Annex IV, WA
Soprano Pipistrelle	*Pipistrellus pygmaeus*	Annex IV, WA
Birds		
Common Snipe	*Gallinago gallinago*	Annex II,III, WA; Amber
Red Grouse	*Lagopus lagopus*	Annex II,III, WA; Red List
Herring Gull	*Larus argentatus*	WA 1976/2012; Red List
Lesser Black-backed Gull	*Larus fuscus*	WA 1976/2012; Amber
Little Egret	*Egretta garzetta*	Annex I, WA
Great Black-backed Gull	*Larus marinus*	WA 1976/2012; Amber
Red Kite	*Milvus milvus*	WA 1976/2012; Amber
Eurasian Curlew	*Numenius arquata*	Annex II, WA; Red List
Grey Partridge	*Perdix perdix*	Annex II,III, WA; Red List
Kingfisher	*Alcedo atthis*	Annex I, WA, Amber

Common Name	Scientific Name	Status
Hen Harrier	*Circus cyaneus*	Annex I, WA, Amber
Corncrake	*Crex crex*	Annex I, WA, Red list
Whooper Swan	*Cygnus cygnus*	Annex I, WA, Amber
Merlin	*Falco columbarius*	Annex I, WA, Amber
Peregrine Falcon	*Falco peregrinus*	Annex I, WA
European Golden Plover	*Pluvialis apricaria*	Annex II,III, WA; Red List
Eurasian Woodcock	*Scolopax rusticola*	Annex II,III, WA; Red List
Little Grebe	*Tachybaptus ruficollis*	WA; Amber
Barn Owl	*Tyto alba*	WA; Red List
Northern Lapwing	*Vanellus vanellus*	Annex II, WA; Red List
Yellowhammer	*Emberiza citrinella*	WA, Red list
Sparrowhawk	*Accipiter nisus*	WA, Amber
Long-eared Owl	*Asio otus*	WA
Great-spotted Woodpecker	*Dendrocopos major*	WA, Amber
Plants		
Crisp Beardless-moss	*Weissia longifolia var. augustifol*	V-BRDL
Bristle-leaf	*Brachydontium trichodes*	WA, FPO 2015
Many-seasoned Thread-moss	*Bryum intermedium*	WA, FPO 2015
Cernuous Thread-moss	*Bryum uliginosum*	WA, FPO 2015
Bent-moss	*Campylostelium saxicola*	WA, FPO 2015

Table 6.7 IAPS listed on the Third Schedule of the Birds and Natural Habitats Regulations recorded within the relevant hectads

Common Name	Scientific Name
American Skunk- Cabbage	*Lysichiton americanus*
Eastern Grey Squirrel	*Sciurus carolinensis*
Japanese Knotweed	*Fallopia japonica*

6.5 GLENDOO BROOK

There will be no in-stream works undertaken as part of the proposed development. Protective and enhancement measures are proposed for the Glendoo Brook. The Glendoo Brook will be protected during construction and enhanced in the long term through the provision of improved trails (including realignment of a section of existing trail away from the bank of the stream) which will reduce erosion, and the removal of invasive species and establishment of a field layer to reduce bankside erosion and sedimentation. Surface water run-off from Montpelier Hill will be drained into a number of attenuation pounds and into a petro-chemical interceptor next to the Military Road. Water will be carried under military road in a culvert which will flow into an open drain in Massy's Wood.

Monitoring of the Glendoo Brook will be undertaken by an ecological clerk of works prior to construction and by an ecologist employed to undertake annual monitoring during the operational phase as described in section 6.6.2.2 of the EIAR. Monitoring will include macroinvertebrate sampling and turbidity testing.

6.6 DEER

Deer are present within the site and in the surrounding area in high numbers. Much of the site, including the felled woodland, beech woodland and conifers, provide very limited grazing opportunities, however the woodlands do provide safe cover. Coillte, the landowner, currently puts hunting licences on its lands out to tender. Erecting high seats and deer lawns for shooting deer on the site, which currently has

100,000 visitors per year, is considered a health and safety risk to members of the public who use the area and it is considered more appropriate to concentrate deer control in areas outside these publicly accessible lands.

6.7 VEGETATION CLEARANCE

Approximately 15% of the planting will consist of shrubs and small tress such as hawthorn, elder, blackthorn and holly, predominantly as a boundary treatment around the site. The areas containing naturally regenerating immature woodland, scrub and clearfell will be replanted with a broadleaf/conifer mix. The areas of scrub and immature woodland too close to the existing car park will be cleared to create open glades.

6.8 CONSTRUCTION MANAGEMENT PLAN

An invasive species survey will be undertaken as part of the pre-construction surveys. All areas containing invasive species will be demarcated and treated appropriately.

Two proposed locations for temporary site compounds are provided in the draft CMP provided with the EIAR under separate cover. The construction and operation will follow the construction phase mitigation guidelines set out in the EIAR with regard to surface water drainage, biodiversity and lighting.

7.0 ADDITIONAL RESPONSE TO BIODIVERSITY ISSUES, EIAR CHAPTER 6

This section provides a response to questions raised in the submissions regarding EIAR Chapter 6 Biodiversity, additional to the queries in Items 1 to 5 of the RFI. As a number of submissions raised common or similar issues, this response seeks to address all of these in a comprehensive, themed manner. Responses to specific ecology-related issues raised in selected individual submissions are provided in Appendix B of this report.

7.1 OVERVIEW

Chapter 6 Biodiversity of the EIAR includes details of the habitat surveys and surveys for rare and protected species that were carried out to inform the EIA in respect of the proposed development. Mapping is provided for the results of the habitat and mammal surveys. Having considered the habitats present, current levels of disturbance and the location, scale and nature of the proposed development, it was concluded that detailed bird surveys were not necessary. The multidisciplinary walkover survey was carried out over a two-day period by experienced, professional ecologists. This was sufficient time to walk the entire site and undertake the surveys. While records of transect routes were not kept, surveyors verified that all areas of the site were covered by the survey. Following on from this survey, dedicated surveys were carried out for Red Squirrel, Bats and Smooth Newt. All surveys were undertaken in a scientific manner and in accordance with best practice guidelines for ecological surveying. Habitats were classified and mapped in accordance with best practice guidelines. The aim of the habitat surveys was to collect data relating to the habitats present on the site in order to validate data gathered during the desk studies and consultations and to provide a reliable baseline against which the potential ecological impacts of the proposed development could be assessed.

7.1.1 Qualifications of Personnel

The Roughan & O'Donovan personnel responsible for input to the project including the FI response, ecological surveys, ecological input to the EIA, and Appropriate Assessment screening, were Patrick O'Shea MSc ACIEEM, Owen O'Keefe BSc (Hons) ACIEEM and Kate Moore BSc (Hons) Grad CIEEM.

Patrick O'Shea holds a bachelor's degree in Natural Sciences (Botany) from Trinity College Dublin and a master's degree in Ecological Management and Conservation Biology from Queen's University Belfast and is an Associate Member of the Chartered Institute of Ecology and Environmental Management. He has five years' experience in ecological consultancy in both Ireland and the United Kingdom, including habitat survey, assessment of Annex I habitats and protected species surveys. Patrick has carried out ecological surveys and assessments for major infrastructure projects including roads, bridges and buildings. Patrick has held a number of project-specific species licences, e.g. Badger, bat, Red Squirrel and Newt, and currently holds a National Parks & Wildlife Service licence for bat roost disturbance.

Owen O'Keefe holds a bachelor's degree in Ecology from University College Cork and is an Associate Member of the Chartered Institute of Ecology and Environmental Management. He has two years' experience in ecological consultancy, including habitat survey, assessment of Annex I habitats and protected species surveys, providing specialised knowledge of freshwater ecology.

Kate Moore holds a bachelor's degree in Environmental Biology from University College Dublin, has one and a half years' experience in ecological consultancy and is a Graduate Member of the Chartered Institute of Ecology and Environmental Management.

The following sections address specific issues raised in relation to the Biodiversity chapter of the EIAR in the submissions made on the planning application.

7.1.2 Results of the Desk Study

The desk study results are based on a spatial query of the site boundary and the Zone of Influence and is considered background information to assist in the design of the survey. Species listed in the desk study results were considered to potentially be present within the footprint of the proposed development.

7.1.3 Seasonality of the Surveys

While the habitats recorded within the footprint of the proposed development, i.e. conifer plantation, recently-felled woodland and Beech woodland, provide habitats for a range of protected species, they are not important, rare or protected habitats and it is considered that surveys of these habitats, while not within the preferred survey season, provided an accurate and adequate description thereof.

7.1.4 Detailed Botanical Surveys

Based on the outcome of the initial walkover survey, it was decided not to undertake detailed botanical surveys. The rationale behind this decision was: 1) that the dominant habitat types, i.e. scrub, conifer plantation and Beech-dominated broadleaved woodland, are unlikely to support rare species of flora; and, 2) that, outside of the footprint of the proposed visitor centre, car park and tree-top bridge, the works will be limited to trail improvements and other minor works. The improved trails will encourage users to remain on paths.

Given the locations, nature and scale of the works required for the proposed development, no impact on rare or protected bryophytes was anticipated. Therefore, dedicated bryological surveys were deemed unnecessary.

The fields containing Devil's-bit Scabious, the food plant of the larval stage of Marsh Fritillary are outside the boundary of the proposed development and users will not have access to this area. Therefore, there will be no impact on Devil's-bit Scabious or Marsh Fritillary larvae.

7.2 IMPACTS TO FAUNA

7.2.1 Bats

The suitability of the site and its surrounding areas to support roosting and foraging bats was assessed as part of the multidisciplinary surveys. The habitat quality, potential roost features and potential impacts of the proposed development determined the survey method. The mixed broadleaf/conifer woodland of Massy's Wood, along with the Glendoo Brook, offers good-quality habitat for bats, including (potentially) Myotis species and Brown Long-eared Bats. A bat roost suitability inspection was undertaken throughout the site, and included the Hellfire Club building, the walled garden in Massy's Wood and bridges. These structures were considered to have negligible potential to support bat roosts Given the bat-specific assessment that was undertaken, the tree report was not used in determining which trees had potential to support roosting bats.

Bat activity surveys following best practice guidance (Collins (eds.), 2016) were carried out on two separate nights at the site of the proposed building and associated car park. The emergence (dusk) survey was undertaken on 7th June 2017 and began 15 minutes before sunset. The re-entry (dawn) survey was undertaken on the 30th May 2017 and began 2 hours before dawn. Both surveys lasted 2 hours. Surveyors faced potential roost features using either an Anabat Walkabout or a Song Meter EM3+ bat detector, watching for bats exiting or entering and for swarming behaviour. Both bat detectors allow visual validation of echolocation recordings, i.e. species identification, in real time. Notes were taken on each survey on the weather conditions and bat activity. On both nights, weather conditions were ideal for bats and bat surveys, but bat activity was low. Neither of the two features surveyed supported a bat roost at the time of the surveys (this result does not necessarily confirm that bats do not use these features from time to time). Although quieter species such as Myotis species and Brown Long-eared Bat may be present in Massy's Wood and in the wider area, bat activity surveys were not undertaken in Massy's Wood because the presence of bats is inconsequential as there will not be any negative impact on bat habitats in Massy's Wood (since very limited physical interventions are proposed in Massy's Wood). It is acknowledged that static surveys throughout the site would provide a more detailed picture of use by bats. However, this would not alter the mitigation as, other than in the area around the proposed visitor centre, car park and tree-top bridge, there will be no vegetation removal.

Following the bat activity surveys, all bat recordings were processed using Kaleidoscope Pro analysis software to extract information including sound recordings, sonograms, time, date and automated species identification (with associated confidence values). The data was then manually checked. It should be noted that the number of recordings is not a suitable method of counting bats as a single bat may generate numerous recordings, particularly while making multiple passes during feeding. Therefore, the surveyors direct observation of low levels of activity on both surveys was used.

The main impact of the project on bats is considered to be disturbance or destruction of trees with potential to support bat roosts close to the site of the proposed building and car park. The current habitat in this area is dominated by recently-felled conifer woodland with occasional mature Beech trees. It is

considered, therefore, that the conversion of this habitat to mixed broadleaved woodland with ponds will result in a net positive impact on bats.

It is possible for new potential roost features to become available in the period between the original surveys and the commencement of the proposed development, e.g. where a tree branch is split during a storm. The reference to “high potential” refers to such features, which will be identified during the pre-construction surveys described in Section 6.6.2.1 of the EIAR. If a bat roost is discovered during the pre-construction surveys, a derogation licence must be applied for from the National Parks & Wildlife Service.

The only exterior lighting proposed during the operation of the development is in the car park and between the car park and the visitor centre building. It will be in the form of low-level, bollard-mounted lighting and will remain on for such a time as will be necessary for staff to reach the car park safely after the visitor centre closes each night. Section 6.6.2.2 states that "the lighting design will incorporate measures to minimise light spillage and disturbance for bats and other nocturnal species". No monitoring of light spill is proposed, other than as part of the ecological monitoring during the construction phase. The bat boxes proposed are an enhancement measure. The type and location of the bat boxes will be decided by the contractor’s ecologist. It is likely that crevice-type, woodcrete boxes, which are self-cleaning, will be used.

7.2.2 Badgers

An error in the text of Section 6.2.10 of the EIAR should be noted: the Badger surveys were undertaken as part of the multidisciplinary walkover survey in December 2016 and February 2017 (not in September 2015 and January 2016, as stated in the text).

Badger surveys were carried out in accordance with best practice guidelines and one active Badger sett was identified in Massy's Wood. While the works proposed in Massy's Wood are minimal, a pre-construction survey will be undertaken. If a sett is identified that could be impacted by the proposed development, a licence will be sought from National Parks & Wildlife Service prior to any licensable works being carried out .

A Badger sett along wall on the eastern side of Massy’s Wood was not recorded during the surveys. During the survey in February 2017, the sett on Montpelier Hill was classified as inactive because there were no signs of recent digging or entry by a Badger-sized mammal. Many of the entrances were covered with pine needles and fallen sticks. Rabbit scrapes and droppings were also recorded in the area close to the sett. It is recognised that the status of a sett may change over time. In that regard, Section 6.6.2.1 prescribes a pre-construction survey to assess any changes to existing Badger setts and to identify any new setts.

7.2.3 Red Squirrel

The mapping of feeding signs was considered superfluous in the context of the number and distribution of sightings of live Red Squirrels, which were mapped. Section 6.4.2.1 of the EIAR states that feeding signs were observed throughout the site and that, based on the habitats present, Red Squirrels are considered to be present throughout the site. One drey was recorded within the derogation limit of 30 m and one Red Squirrel was observed at this drey during the survey on 7th June 2017. A pair of 8 × 42 binoculars were used to assist in drey identification. While no dreys were recorded in Massy's Wood, Section 6.4.2.1 of the EIAR states that Red Squirrel is likely to be widespread here. Pre-construction surveys will be undertaken to identify any new dreys within the derogation limits of works and licences will be sought from the National Parks & Wildlife Service, as required. Red Squirrel are likely to habituate to increased recreational disturbance as observed by Gutxwiller & Riffel (2008).

The population of Red Squirrel in the area of connected woodlands in South Dublin is of county importance. However, the population within the site boundary forms only a small part of this and that is the rationale behind assigning a Local Importance (Higher Value) to Red Squirrel at the site.

While the over-mature conifer plantation at the car park does provide important habitat for Red Squirrel, these trees will be subject to windthrow in the future. Therefore, the habitat is not sustainable. There will be a medium-term impact on Red Squirrel as a result of the felling of these trees and in other areas as a result of vegetation clearance and disturbance from construction. Over time, the new broadleaved woodlands will mature and provide suitable habitat for Red Squirrels. While broadleaved woodlands confer a competitive advantage to Grey Squirrels over Red Squirrels that does not exist in coniferous woodlands, establishment of broadleaved woodlands has been chosen for its overall higher biodiversity value. In order to mitigate for the potential advantage to Grey Squirrels arising from the replacement of conifer plantation with broadleaved woodland, a Red Squirrel Conservation Management Plan has been produced and will be provided with this response.

The landscaping strategy proposes to replant the eastern side of Montpellier Hill, which is currently dominated by scrub and clearfell, with native broadleaved trees, whilst retaining a number of existing mature Beech trees and Beech treelines. The area on top of Montpellier Hill will be converted to mixed broadleaved woodland, in some areas by clearfelling the existing conifers and in others by phased felling and replanting over time. There will be large areas of coniferous woodland left intact on Montpelier Hill., which are of mixed age and will provide a food resource and habitat for Red Squirrel into the future.

The location of the artificial dreys will be determined by the contractor's ecologist prior to construction. In determining the location of the artificial dreys, the contractor's ecologist will have regard to the construction programme and the location of compounds/sources of disturbance in relation to suitable trees in which to install the artificial dreys. The number and locations of rope bridges to allow squirrels to cross the road safely will also be determined by the contractor's ecologist, having regard to the locations of sources of disturbance, trees or suitable locations to site a telegraph pole, and habitat connectivity.

7.2.4 Pine Marten

Pine Marten was not included as a Key Ecological Receptor for the following reasons: 1) the recording of Pine Marten made during one of the bat surveys was a visual recording and no den or potential den was identified; 2) individuals of this species have large territories, are mainly nocturnal and elusive and are likely to already nest away from the site as a result of existing disturbance by people and dogs; 3) this species is widespread in Ireland; and, 3) there is a large amount of suitable habitat in the surrounding area, which will continue to support Pine Marten during the operation of the proposed development. Therefore, it was determined that this species will not be significantly impacted by the proposed development. Furthermore, the Red Squirrel Conservation Management Plan prescribes enhancement measures to benefit Pine Marten. The Pine Marten sighting was not mapped as the species is highly mobile and is considered likely to be present throughout the study area.

7.2.5 Deer

Deer are present in high numbers both within the site and in the surrounding area. Much of the site, including recently-felled conifer plantation, Beech woodland and remaining conifer plantation, provides very limited grazing opportunities for deer. However, the woodlands provide safe cover. It should be noted that the deer species present at the site is Sika Deer, a non-native invasive species that damages native biodiversity through browsing on saplings (preventing woodland regeneration) and through hybridisation with the native Red Deer. Coillte, the landowner, and the National Parks & Wildlife Service

currently manage deer in the wider area. For this reason, Sika Deer were not considered in the EIAR. Coillte currently puts hunting licences on its lands out for tender. Erecting high seats and shooting deer on the site is considered a health and safety risk to members of the public who use the area. Therefore, it is considered more appropriate to concentrate deer control in areas outside of publicly accessible lands.

7.2.6 Birds

All wild birds are protected in Ireland. The species at the site of the proposed development are common and widespread in Ireland and the site does not support significant populations. Evidence of Great Spotted Woodpecker was noted during the field survey. However, this species is not afforded any extra protection under the Wildlife Acts. Peregrine and Merlin are listed on Annex I to the Birds Directive and are Special Conservation Interests of the Wicklow Mountains SPA. The site does not provide suitable nesting habitat for Peregrine. The Hellfire Club does not provide suitable nesting habitat for Peregrine because it is too low and subject to too much disturbance. The site of the proposed building consists of recently-felled conifer plantation with occasional mature Beech trees, scrub and remaining conifer plantation. This area is currently subject to disturbance from people and dog walkers. Massy's Wood is primarily non-native Beech woodland and Montpellier Hill is under conifer plantation of varying ages. Merlin may nest in conifer plantations. However, given that there are vast areas of heath and blanket bog, the preferential nesting habitat of Merlin, close by, the conifer plantations are unlikely to provide an important nesting resource for this species. A research report produced by the Forestry Commission in the UK titled 'Recreational use of forests and disturbance of wildlife' cites two scientific papers which investigated the potential impacts of recreational users on Merlin populations[4][5]. In one case, the authors concluded that recreational walkers were unlikely to have caused a sharp decline in Merlin. The second cited little negative impact by recreation.

Considering that there is currently recreational disturbance along the trails on Montpellier Hill, the fact the Merlin vary their nest sites from year to year and that the species has extensive nesting opportunities in the surrounding areas, both in conifer plantation and more traditional Heather uplands, there are not considered to be potential impacts on the Conservation Objectives for this species in the Wicklow Mountain SPA.

In summary, while species such as Barn Owl, Peregrine and Merlin are likely to be present in the wider area, the potential for the habitats within the site to support significant populations of birds of conservation concern is considered low and, therefore, no detailed avifaunal surveys were undertaken. The reasons for not undertaking dedicated bird surveys are detailed in full in Section 6.4.2.2 of the EIAR. Section 6.6.2.1 of the EIAR details the pre-construction mitigation measures that will be implemented to identify nesting birds. A research report produced by the Forestry Commission in the UK titled 'Recreational use of forests and disturbance of wildlife' cites two scientific papers which investigated the potential impacts of recreational users on birds. It concluded that there the available evidence does not indicate significant negative impacts on UK forest birds, including no clear long-term or population level impacts. In the event that an active nest is discovered, an appropriate buffer will be strictly implemented until the chicks have fledged.

[4] Newton , J. E. Robinson & D. W. Yalden (1981) Decline of the Merlin in the Peak District, Bird Study, 28:3, 225-234

[5] E. R. Meek (1988) The breeding ecology and decline of the Merlin Falco columbarius in Orkney, Bird Study, 35:3, 209-218

7.2.7 Common Lizard

The edges of the conifer plantations are predominantly Gorse scrub and rank grassland. These areas do not provide good-quality habitat for Common Lizard. Where heath develops along conifer plantation boundaries, it can provide good-quality habitat for this species. The reasons for not undertaking dedicated surveys for Common Lizard are detailed in Section 6.4.2.3 of the EIAR.

7.2.8 Smooth Newt

The Habitat Suitability Index (HSI) was developed to assist in the survey of Great Crested Newt, a European protected species found in Great Britain but not in Ireland. The HSI uses habitat features to determine the suitability of a pond and, thus, the likelihood of Great Crested Newt being present. Smooth Newt is less particular than Great Crested Newt and is found in a wider range of habitats. Therefore the Habitat Suitability Index as developed for Great Crested Newt is not suitable, but a number of its features can reflect the suitability of a pond for Smooth Newt. These include the presence of other ponds in proximity and the presence of fish and birds. While no score was generated, the types of habitat determined that further surveys were necessary and the follow up survey identified Smooth Newt in Pond 1. No pond west of Pond 1 was identified during the walkover surveys. Smooth Newt utilises a range of features for overwintering, including rock piles, vegetation and mud. No specific features that could provide winter refuges were identified. Therefore, no mitigation for winter refuges is proposed.

7.3 DISTINCTION BETWEEN HELLFIRE FOREST AND MASSY'S WOOD

Section 6.3.1 of the EIAR provides the General Description and Context of the whole site in terms of biodiversity and details the ecological differences between Hellfire Forest and Massy's Wood. The ecological impacts and mitigation measures for the two sites are also differentiated throughout Chapter 6 Biodiversity of the EIAR.

7.3.1 Beech Woodland

The ecological value of the Beech woodland was based on Beech being the dominant tree species throughout most of the woodland. Beech trees are non-native and allelopathic, i.e. chemicals in the fallen foliage prevent the development of a field layer.

7.3.2 Annex 1 Habitats

Dry heath is described in one submission as occurring alongside the tracks of the Hellfire Forest. The habitats between the tracks and the conifer plantations, scrub and immature woodland vary in width from 0.5 m to 5 m. When the site was mapped, the track verges were included in the adjacent habitat block, whether scrub, recently felled woodland or conifer plantation. It is not considered that these areas corresponded to Annex I European Dry Heath for the following reasons: 1) the high percentage of disturbed ground in the vicinity; 2) the high percentage of non-native species in the vicinity (non-native conifers); 3) the low percentage cover of dwarf shrubs (must be > 25%); and, 4) high percentage cover of grasses and rushes. The positive indicator species Calluna vulgaris and Erica cinerea were rare. Ulex gallii, a positive indicator species, was common and found alongside Ulex europaeus, which is not a positive indicator species. As per Fossitt (2000), Gorse should only be considered a component of heath where it is low-growing. Large areas of felled woodland on Montpelier Hill have been succeeded by Gorse scrub. In the areas where Gorse has not become dominant, the habitats are transitional and will become Gorse scrub if left undisturbed. The same submission noted the presence of calcareous springs containing tufa along the link path. The link path has been removed from the design.

7.4 INVASIVE ALIEN SPECIES

The distribution of invasive alien species within the footprint of the proposed development is described in Section 6.4.2.5 of the EIAR. An invasive species survey will be undertaken as part of the pre-construction surveys and the results of this survey will inform the Invasive Species Management Plan to be developed and implemented by the contractor. All areas containing invasive species will be demarcated and treated appropriately. Invasive alien species will be dealt with during construction phase, to prevent activities that could inadvertently spread these species within and outside the site, and during operation, when a more intensive management program will be implemented to enhance the biodiversity of the site and protect the Glendoo Brook.

8.0 HYDROLOGY

8.1 SURFACE WATER

Surface water run-off from the existing site is currently directed eastward, following the slope of the hill before flowing through the Massy Estate and into an open stream known as the Glendoo Brook. This is a tributary of the Owendoher River. The proposed drainage system only caters for the new hardstanding areas of the development. These account for less than 1% of the site area. Run-off generated from the new hardstanding areas is initially stored on site before being gradually released at the rate that water naturally flows from the site. Therefore, there is no significant change to the quantity or rate of water flowing into the Glendoo Brook. The development will not add to the erosion and flooding issues at the Owendoher River. Nor will it increase the rate of flow or put additional strain on the Owendoher River or the Dodder.

Surface water run-off currently flows from the existing site to the Glendoo brook. This includes surface water from the existing car park. There is no cleaning mechanism in place to remove pollutants gathered from the car park. Surface water from the new car park will be cleaned using a petrol interceptor and attenuation ponds, thus improving the quality of water entering the Glendoo Brook and subsequently, the Owendoher River and the Dodder.

8.2 DRAINAGE

There is no significant drainage construction works planned in Massy's Wood. A 15m long underground pipe is required to convey the surface water from the attenuation ponds in the HellFire Club to immediately inside the Massy's Wood boundary. This has been done to reduce the ponding of water on the R115. The shortest length of pipeline has been chosen. Once inside the Massy's Wood boundary the pipe opens up into a small natural stream that runs into the Glendoo Brook. Another short stretch of underground pipe (approximately 3m) is required in Massy's Wood to convey the surface water under a walking trail. The pipe under the R115 and the pipe under the walking trail are approximately 400m and 200m from the bank of the Glendoo Brook respectively. The minor construction works will not require heavy machinery. There will be no root damage to trees and the semi-wild nature of Massy's Wood will remain intact.

There are no plans to culvert a section of the Glendoo Brook, therefore, Salmonids will not encounter a loss of life or light as a result of the development.

Although the main construction works are significantly removed from the Gendoo Brook, strict mitigation measures will be placed on the Contractor during the construction phase of the project. These are outlined in EIAR Section 8.6 and will eliminate and impacts on the watercourse during construction.

8.3 WASTEWATER TREATMENT

As described in Section 5.2 of the Engineering Report, the proposed foul sewer is 150mm diameter pipe, this is the smallest sized pipe allowed underneath a trafficked area. This was deliberately chosen to prevent future development in the area. Irish Water Code of Practice for Wastewater Infrastructure Section 3.8 states that 150mm diameter sewers can only carry wastewater from 20 properties or less. Therefore, the construction of this sewer cannot facilitate future large scale development

9.0 ARCHAEOLOGY, ARCHITECTURAL HERITAGE & CONSERVATION

It is noted that the Department of Culture, Heritage and the Gaeltacht (DOCHG) approves of the proposed maintenance works and their recommendations are in line with the mitigation and monitoring proposals put forward in Chapters 11 and 12 of the EIAR. The following responses are to the emerging themes from all 84 submissions.

9.1 LOCATION OF BUILDING

The location of the proposed visitors centre is downhill and away from known/recorded monuments. The site for the building was carefully selected in order to minimise direct impact - either visually or physically - on known archaeological and architectural heritage features.

The alternative locations for the visitor centre put forward in various submissions (Orlagh, the former Stewart's house/Killakee House et cetera) are in separate private ownership and not part of the Coillte lands.

9.1.1 Field Inspection and Geophysical Survey

Field inspections of both Montpelier Hill and Massy's Wood were carried out during the preparation of the EIAR and photographs were taken from the ground. Owing to the present cover by coniferous forest on Montpelier Hill and the deciduous woods in Massy's Wood it was not possible to conduct a geophysical survey or to gain much information from an aerial survey since both Montpelier and Massy's Estate lands are largely covered with trees.

9.2 PROPOSED DEVELOPMENT

9.2.1 Proposed Works to the Hell Fire Club

The proposed works to the Hellfire Club do not include restoration but are confined to repair works in order to make the building safe and provide safe access. It is notable that DOCHG welcomes the proposed plan is to carry out minimal conservation and repair works to the fabric of the Hellfire Club (SMR # DU025-001003) and to preserve the building as a visitable ruin. They have recommended that a detailed conservation survey and analysis of the existing fabric be made prior to any works and that these survey drawings should be lodged, together with as built drawings, with the Irish Architectural Archive. Survey drawings have been carried out by Paul Keogh Architects. A more detailed conservation survey and analysis of the existing fabric shall be carried out prior to any works in order to:

- Fully address the conservation issues identified in the EIAR.
- Determine the most appropriate location for routing services.
- Determine the location of and record orthostats and Neolithic art within the building, if any.

It is the standard practice of Cathal Crimmins Architects to lodge copies of conservation reports, EIAR reports, photographs, survey and proposal drawings with the Irish Architectural Archive. Owing to the archaeological significance of the site, copies shall be lodged with the Archive Unit of the National Monuments Service also.

9.2.2 Proposed Stair Within the Hell Fire Club Site

Clarification: It is not proposed to replace the stairs in the Hellfire Club building as stated in the Design report.

There is an existing concrete stair with an iron railing within the stair atrium of the Hellfire Club building which was installed by Coillte in the mid 20th century to provide access to the upper floor and the return. It does not contain any elements of, nor bear any resemblance to, the original stone stair which had disappeared by the late 19th century. The present concrete stair is narrow and has an iron handrail that has deteriorated and has sharp exposed edges, presenting a hazard.

The replacement of the existing mid 20th century concrete stair was initially considered as it would reverse the previous unsympathetic intervention, improve access and site safety. It was ultimately decided to replace the handrail only to minimise the intervention and risk of damage to the building. Both the design and materials of the proposed stair rail and the methodology for the carrying out the proposed works shall be agreed with the DOCHG.

9.2.3 Proposed Lighting at the Hell Fire Club

During the design process exterior lighting of the Hellfire club building was considered. This was ultimately omitted to avoid impact on the local ecology and bat species in particular.

Regarding the proposal to install internal lighting, it is intended that it will be discrete and will be installed to highlight potential hazards such as level changes or low level lintels and/or specific features of interest in the building. Regarding the routing of lighting services, any details of lighting installation shall be agreed with the DOCHG, as per their recommendation.

Chasing of the masonry shall not be permitted so as to avoid impact on the masonry. Routing services under any new masonry flooring (see EIAR Section 3.6.1, 7th bullet, p.30 - subject to agreement with the DOCHG) within the building is one possible solution.

With reference to bringing an electrical supply up to the top of Montpelier Hill, if possible a solution that does not involve excavation shall be pursued (e.g. battery or an alternative power source) and the advice of the DOCHG shall be sought on this matter.

Should excavation prove unavoidable, service trenches will be routed away from known or possible archaeological features in as far as is possible in order to minimise impacts. The 2014 geophysical survey of the top of Montpelier Hill which was undertaken as part of the first phase of the Hellfire Archaeological Research Project along with subsequent archaeological excavation reports produced by Neil Jackman in 2015 and 2016 provide the best indication to date of where archaeological features are located or are likely to be located and will be consulted when determining the best route for services.

9.2.4 The Proposed Paths Around the Two Passage Tombs and the Hell Fire Club

The findings of three reports by Jackman in 2014, 2015 and 2016 were taken in to account when the proposed circular path around the two passage tombs and the Hellfire Club (SMR # DU025-001001 # DU025-001002 & DU025-001003) was being designed and was accordingly located beyond the area where Jackman detected archaeological features.

In reference to the impact of the proposed paths leading up to the Hellfire Club and the installation of steps on underlying archaeological features many of the proposed paths are on existing routes which will minimise impact not only on these routes. The path that leads directly up, past the Standing Stone was noted in particular. There is an existing very well worn path in this location, formed by walkers and therefore there has already been considerable wear and tear on this route. The proposed path will serve to prevent further damage and as mentioned above, any excavation works for the laying of steps will be monitored by a licenced archaeologist. It should be noted that by focusing trails on the proposed and existing routes, wear and tear from walkers will be reduced elsewhere.

As per the DOCHG's recommendations, the surface finishes for the paths leading up to and around the Hellfire Club and the two tombs shall be agreed with the DOCHG.

9.2.5 The Proposed Road Widening of the R117

The road is to be widened on the eastern side of the R117, away from Montpelier Hill. As with the above sites, the proposed works will be monitored by an archaeologist. The architectural heritage impact has also been addressed in the EIAR.

9.2.6 The Designed or Demesne Landscape of Massy's Wood

The proposals contained within the EIAR recognise the importance of the 19th Century designed landscape at Massy's Wood, particularly the Walled Garden. With this in mind the proposals do not include any works to the demesne's architectural features (other than carrying out repair works to prevent further deterioration, particularly in reference to the walled garden and the ice house, and to make them safe).

Proposed alterations to the trail network in Massy's are minimal, with a limited length of new sections only intended to provide loops/links where people might otherwise have gone off-trail into the woodlands, and also a re-routed section away from the bank of the Glendoo Brook, for protection of the stream habitat.

The overall approach to Massy's is not to reinstate the historic designed demesne landscape, but rather to maintain the existing woodland character of the site while taking measures to protect the built features within it. The proposed meadow treatment within the walled garden is the exception to this approach, where an open character is deemed suitable for better appreciation of the structure as well as its protection from damage by vegetation.

9.3 IMPACT ON THE 6 REGISTERED NATIONAL MONUMENT SITES AND POTENTIAL SITES

Each of the 6 registered Sites and Monuments Record (SMR) sites was assessed for potential impacts.

The wedge tomb (SMR # DU025-022)

With reference to the wedge tomb (SMR # DU025-022) no works are proposed other than the possibility of interpretive signage (subject to an interpretation plan in the event of development consent) and this will be located so that it does not disturb any underlying features, nor adversely affect the setting.

The standing stone (SMR # DU025-021001)

No works are proposed to the standing stone (SMR # DU025-021001) other than the removal of graffiti and the erection of signage in the vicinity. The reinstatement of the standing stone was considered but it was ultimately decided to leave it in situ to avoid further disturbance.

Regarding works to the remaining sites, the Department of Culture, Heritage and the Gaeltacht (DOCHG) has recommended a number of conditions:

1. The Archaeological Mitigation Measures detailed in Section 11.6 of the Environmental Impact Assessment Report shall be implemented in full;

2. All accessible areas of proposed construction works (either temporary or permanent) shall be subject to walkover survey to inform any subsequent archaeological test excavations and/or archaeological monitoring;

3. Having completed the archaeological test excavations, the archaeologist shall submit a written report to the Local Authority and to DOCHG. The report shall comment on the degree to which the extent, location and levels of all proposed foundations, services trenches and other sub-surface works associated with the development will affect the archaeological remains. This should be illustrated with appropriate plans, sections, etc.;

4. All archaeological excavation works, both archaeological testing and monitoring, shall be undertaken subject to Section 26 of the National Monuments Act 1930;

5. Details of the proposed monitoring of potential visitor impact upon the Recorded Monuments as referenced in Section 11.6 of the Environmental Impact Assessment Report should be submitted to the DOCHG.

9.4 MONITORING OF THE SITE

The archaeological monitoring measures were proposed in the EIAR (section 11.6) in recognition of the significance of the two passage tombs (SMR # DU025-001001 # DU025-001002), the Hellfire Club (SMR # DU025-001003) and the enclosure (SMR # DU025-021 002) as well as potential archaeological features in the vicinity and in acknowledgement of the potential impact of the proposed visitor centre, car park, road widening the laying of lighting services, paths, and works to the Hellfire Club on known and unknown archaeological features.

Accordingly, a licensed archaeologist shall be appointed to carry out the recommended walkover survey, archaeological monitoring, and subsequent archaeological excavations in fulfilment of the DOCHGs

recommendations and subject to ministerial consent under Section 26 of the National Monuments Act 1930 and Section 14 (2) (a) of the National Monuments Act 2004.

9.4.1 Long Term Monitoring and Maintenance

As part of the long term maintenance and monitoring of the site, each of the sites (including the 6 recorded monuments and the architectural heritage in Massy's Wood) will be checked at regular intervals for wear and tear, the impacts will be measured and recorded and addressed accordingly.

9.5 THE PREPARATION OF THE EIAR

The archaeological heritage chapter of the EIAR was prepared by Julia Crimmins. Ms Crimmins completed a degree in archaeology in UCD in 2000 which was supplemented by a higher diploma in archaeology from UCC in 2003. She worked as a full time field archaeologist on both commercial and academic excavations between 1998 and 2006. She has subsequently undertaken archaeological assessments in connection with conservation works to 19 Stephen Street Upper, Dublin 2, the grounds of the Kings Inns Library, Dublin 7 and the Kylemore Abbey estate in Galway and produced reports on the same. She is a member of the Institute of Archaeologist Ireland.

9.5.1 Statutory Consultees

The South Dublin County Council Heritage Officer, Dr Rosaleen O'Dwyer, was consulted at all stages of the design process. The DOCHG was also consulted, particularly in reference to Montpelier Hill and their guidelines and resources were availed of throughout.

10.0 LANDSCAPE AND VISUAL

10.1 LANDSCAPE THEME

An observation from Declan McKeever noted:

> *Drawing number ROD DRC0030 shows the landscape intersected with new pathways, trails, tarmac roads, grasscrete car parking, surface and foul water drains, manholes and storage ponds- how does this reflect A) appropriate scale of development and B) protect and enhance the outstanding natural character of the Dublin Mountain area (as indicated in the Planning statement.*

The infrastructure elements described above reflect functional improvements to the site and many existing site elements:

- Roadways – access to parking and new visitor centre;
- Car-parking – note whilst access roads will be in tarmac the parking areas themselves will be surfaced in a reinforced grass or grasscrete material to maintain a green and permeable surface;
- Drains – sub-surface;
- Surface water drainage - organised in a series of ponds, streams and ditches (SUDS measures) reflecting existing rural and forest solutions to water management, and enriching the habitat;
- Trails and paths – these broadly reflect the existing walks and routes around the site, extended in places, and improved. Closer to the new centre a pathway system will provide a more structured access from the car-park to the centre in compliance with building regulations.

All of the above will be integrated within and beneath new woodland cover with no visual impact beyond the site as it matures, and sensitively designed within the site to reflect the local/site character.

An observation from David Stanley noted:

> *Item 3.3.4 of EIAR indicates there will be no perimeter fencing. This must be rectified or people will inadvertently trespass. It places pressure on adjoining farms. A more robust fence (NOT a palisade fence) would be welcomed. Something that allows safe passage of wildlife.*

Landscape Drawing No 16408/2/101 shows 1.8m high Paladin fencing to be erected along boundaries with adjacent private residences in the environs of Hell Fire car-park and the new visitor centre. Elsewhere existing boundaries will be retained and repaired as appropriate and required. These generally abut adjacent farmland/open field areas and are typically stone walls, stock proof fencing or combinations of these. As well as management of the boundaries in conjunction with adjacent landowners, the combined sites of Hell Fire and Massy's Wood will be more proactively managed in terms of visitors, with directional routes and maps more clearly explained, educational programmes and day to day monitoring and supervision to ensure better visitor behaviour and reduced conflicts.

10.2 VISUAL IMPACT THEME

An observation lodged by Elizabeth Davidson notes the following:

> *EIAR refers to significant permanent changes to entrance at Hellfire Wood, trees to be removed by clear-felling- this is contrary to stated policy of Coillte (who at Ticknock favoured selective removal of trees to mitigate visual effect).*

We assume this observation refers to View 1 Entrance / Approaching New Car-Park in the Photomontages and the clearance of trees to the west of the existing car-park to accommodate an expanded parking area. The trees in this area constitute part of a mature conifer forestry plantation containing occasional intermittent broadleafed trees (oak & beech) which have bolted due to competition for light. Areas of this plantation to the south and further west (uphill) have been clear felled in the past and now have young established new plantations or, where most recently cleared (above the forest road), lie open and clear other than retained mature specimen Beech trees.

These trees provide an attractive backdrop to the car-park and have been retained to date for this reason, even though surrounding forest areas have been harvested. Nonetheless the majority of the trees have reached their critical height and are beginning to blow down and snap as illustrated in Forestry Report EIAR Section 13.0. The prevailing wind blows from the South West and with adjacent plots removed in recent years this plot has become more exposed to such impacts. Irrespective of the scheme proposals it would be necessary for substantial intervention in this area resulting in change to some degree as the current plantation is not sustainable or safe in the long term and should not be regarded as a major constraint on change in this area.

Whilst removal of trees and construction will have a short term adverse effect on visual and landscape amenity, landscape proposals seek to re-establish broadleaved woodland and shrubs to screen and integrate the proposed parking terraces in a new wooded landscape. Specimen trees of note and trees that are unaffected by the proposals and/or safe to retain will not be clear felled i.e. clear felling will be localised and as necessary.

An Observation lodged by Dermot Deering and others notes the following:

> *The proposed visitors centre is visible from photomontages from views Zone A close views and Some B mid range views due to its sheer length and prominence in the landscape.*

In Zone A the visitor centre is only visible in View A4 (approaches on the forest road) and View A5 (looking down from above on the forest road). The other views in Zone A relate to other elements of the scheme – car-park and proposed pedestrian bridge. In general the visitor centre building will be difficult to see within the site as the new woodland planting matures and the materials of the building blend and nestle it into its context. The landscape is designed to allow the visitor to, relatively suddenly, come across the building whilst exploring Montpelier Hill, so the viewer has to be quite near and find their view unobscured by the dense woodland vegetation proposed.

In some Zone B and Zone C views the proposed visitor centre is visible. These middle distance views have, as result of topography, direct views towards the site and the visitor centre building, which is designed to occupy a location where it enjoys reciprocal views outwards over Zone B and C and the wider city and bay. Visibility and prominence does not imply an effect that is adverse, and the visitor centre must be seen as part of an integrated architectural and landscape composition involving the reimagining of the slopes of Montpelier Hill as a permanent broadleaved woodland with a new building sensitively nestling within the trees acting as an invitation to visit.

In terms of scale and prominence whilst the building is elevated relative to most other development visible in the landscape, there are other structures of scale and prominence in the receiving environment including agricultural and commercial buildings. The key issue for such structures in terms of landscape and visual impact, as well as a level of screening and softening of their prominence, is their appropriateness and sense of belonging and thus agricultural buildings, large country houses and workshops based on the local timber are not only appropriate but expected in a dynamic working rural landscape. Equally a building / facility which marks the upland amenities of Dublin City is an appropriate structure to be visible and legible in the landscape.

In an Observation lodged by Declan McKeever, the following was noted:

> *What does the tree bridge look like in the winter without the leaf canopy? Will it have a protective steel cage fitted over it similar to other bridges in the area? Use of this bridge is unrealistic. It seems a pure tourist attraction for commercial purposes which disregards all other concerns.*

The tree top bridge is only visible along a short stretch of the R115 due to bends in the road, extensive tree cover and topography. Due to the density of tree cover, even in the winter, screening will still be significant. Nonetheless, as the visitor centre itself, the structure is designed to both integrate with its setting and present a structure of beauty and interest – its corten steel materiality blending particularly well with the rusts and browns of autumn and winter.

No protective steel cage is proposed.

Whilst the bridge is part of the enhanced visitor facility and gateway language of the overall development, and a unique experience in its own right, it is also a practical solution to reducing pedestrian traffic from the parking area on Montpelier Hill along the R115 to Massey's Wood.

10.3 OTHER LANDSCAPE/VISUAL RELATED THEMES

10.3.1 Archaeology/Cultural Heritage

In the submission of Elizabeth Davidson (and others) it is noted:

> *Feature stairway to summit comprised of Corten steel and paving slaps are to be installed where archaeological remains are yet undiscovered.*

There is currently a heavily eroded steep trail leading directly from the existing site car-park straight up Montpelier Hill. This route currently passes the fallen former standing stone and passes along the northern boundary of the site to the grassy open areas around the Hell Fire Club. Rather than eliminate this route which is clearly a well-trodden desire line, it is proposed to intervene to actively manage the route, reinforcing the surface and constructing a stepped route where gradients demand it. In places corten steel risers are proposed – particularly in the lower areas in association with the adjacent architecture and structures, elsewhere stone and timber risers will be more appropriate. (The design approach is for the trails to be finished with materials appropriate – in appearance and durability - to the woodland and mountain setting, e.g. timber, stone, corten steel etc. The trails will be designed in further detail at detail design stage.) Known archaeological features can be protected and interpreted by localised variations to this route. Subsurface features will be protected through arresting ongoing erosion through over use of an unsuitable surface trail. The project will also facilitate localised testing for archaeological remains.

This approach to trail development on steep eroded trails can be seen in many trails nationwide including at The Spink in Glendalough, Wicklow Mountains National Park and Diamond Hill in Connemara National Park.

The Irish Georgian Society's observation addresses the historic designed landscape of Massy's Wood:

- *The application does not include a comprehensive analysis of the historic landscape (including the designed landscape of Massy's). It is critical that any development of these lands be informed by a comprehensive assessment of the sensitivities and significance of the historic landscape, otherwise failure of doing this would be at odds with the objective of the proposed development…*

The reference to Historic Landscape relates primarily to the historic layout of the gardens of Killakee House. These are primarily experienced today as Massy's Wood and its walled gardens and features. No substantial works are proposed in Massy's Wood other than conservation works to the walled gardens and other features, enhanced landscape management to support biodiversity and habitat development, and improvements and extensions to trails and walks including the new tree canopy walk. Given that the current wooded condition of Massy's Wood is relatively modern predated by the gardens and parkland of Killakee House the feasibility study recommended further analysis by an experience landscape archaeologist to inform any further interventions in the gardens and parklands. Current proposals do not preclude such further study nor prejudice appropriate further intervention if desirable.

With regard to Montpelier Hill the landscape design proposal specifically proposes to recreate the historic beech woods (also a part of the Killakee demesne), remnants of which are found on the hill, and stone walls and field boundaries currently found as linear mounds of stone and partly crumbled walls. These proposals are supported by historic maps overlaying current site survey information to identify features. However Montpelier hill would have been open fields historically, until planted by Coillte. Once removed the conifer plantations on the east of the hill will be replaced by permanent broadleaved woodland.

Archaeological features still present or which may be found will be surveyed and appropriately incorporated into the new landscape and interpreted.

Other known cultural assets throughout the site will be sensitively and appropriately presented and conserved in accordance with best practice.

10.3.2 Equestrian Trails

In their submission Friends of Massy's Wood raised questions about the equestrian trails proposals.

In response, equestrian access to Coillte forests is by licence only. Permits are issued by Coillte and in the case of Massy's and Hell Fire only two such permits exist with local riding stables. Currently horses and pedestrians use the same trail network which can cause conflicts when paths are busy. The proposals set out predominantly perimeter routes for use by horses (although walkers can use them also). Other routes would be solely allocated to pedestrians.

Equestrian trails are proposed in accordance with guidelines issued by the National Trails Office i.e. surfaces are predominantly natural compacted surfaces with sections of sand, clay or gravel. As with walking trails, should usage suggest the need to enhance or reinforce trail surfaces and materials this would be dealt with as a management issue as it arises. Where falls may arise to the sides of trails these stretches will be either fenced to prevent straying off trail and slippage or where risks present themselves at detailed design localised adjustments to proposals can avoid unnecessary risks being created.

The trail system will monitored and managed to ensure user safety and protection of environmental sensitivities.

10.3.4 Antisocial Behaviour

A number of submissions noted the problems with vandalism and other anti-social behaviour at the site.

It is well established that the best solution to reduce anti-social activity is increased presence of visitors and users to the grounds ensuring passive surveillance coupled with active site management and supervision. Although night-time access to the site cannot be precluded by design (security fencing, etc.) in such a location, it is expected that the improved presentation and maintenance of the site of the site will discourage anti-social activity which is attracted to neglected sites. Overall the two forest properties will be kept better and will feel safer for visitors and users.

11.0 ROADS, TRANSPORTATION AND TRAFFIC IMPACTS

The RFI did not raise any issues about transport and access to the site.

However the applicant is also permitted to respond to the submissions made by third parties with regard to the application. There were 84 submissions received, of which c. 60 made reference to traffic and transport issues. These submissions are quite general in nature, stating that the roads in the vicinity are narrow and unsuitable for large flows of traffic. They also complained about existing overspill parking problems. No specific technical arguments or queries were made in these submissions.

One application from Mountaineering Ireland (quoted below) welcomed the proposals as a positive development to address the shortfall in parking:

2.1 Parking

Mountaineering Ireland members recognise the need to address the issues to do with roadside parking at Hell Fire and Massy's Wood, it is clear that much of this relates to the limited capacity of the current car-park and to how the car-park is managed.

The manner in which Hell Fire Wood, Tibradden car park and other nearby facilities have been operated has caused frustration for many Mountaineering Ireland members, with car parks remaining closed all day, or closing early, and with high release fees being charged when cars get locked in. Based on these experiences some Mountaineering Ireland members have little confidence that the Hell Fire and Massy's Wood development, if approved, would be operated as envisaged.

Those reservations aside, the proposals for expanded, and actively managed, parking are welcome. Mountaineering Ireland also welcomes the commitment that there will never be a charge for parking, or for use of the proposed pedestrian bridge, the Ramblers' Lounge or the public toilets.

As technical advisers to the applicant for transport issues, Roughan and O'Donovan Consulting Engineers are satisfied that the proposed development will be sustainable for transport access and has been planned properly to minimise additional traffic and best manage access for all modes of transport as summarised below:

Conclusions for Transport Impacts

a) Significantly improved accessibility will be provided to the proposed Visitor Centre on the Hell Fire forest property, by public transport, walking and cycling, which will support a significant mode shift from the current reliance on private car access;

b) A significant target market for the growth of visitor numbers to the Dublin Mountains at the Hell Fire Wood is international and domestic tourists. These visitors are much more likely to use public transport to reach the site than the local amenity visitors;

c) Peak spreading across the week will reduce the current peaks in demand at the site, and will balance the daily demands to less than a proportional increase in line with the overall annual increase in visitor numbers;

d) More than sufficient increase in car parking capacity will be provided at the site to cater for the projected demand and to avoid risk of overspill parking on the public road;

e) The access roads to the site are suitable in layout and will not be impacted significantly by the proposed development;

f) A fully sustainable transport access strategy will serve the site.

The proposed site at Hell Fire Wood was carefully selected as the most suitable location for a visitor centre in the Dublin Mountains mainly because of the relatively close proximity to the edge of the urban area so as to minimise the extent to which additional traffic will be drawn onto the fairly narrow and steep roads in the mountains, while enabling a true sense of altitude to provide spectacular views across Dublin City and the northern end of the Dublin and Wicklow Mountains massif.

12.0 PRINCIPLE OF THE DEVELOPMENT AND POLICY SUPPORT

With the proposed development South Dublin County Council (SDCC), the local authority, its partner Coillte, the semi-state forestry management company, and the Dublin Mountains Partnership (DMP), are attempting to deliver on a range of national government, regional and local policy.

The proposed development is entirely policy driven. In concept, siting and in its detail the proposals are informed and supported by tourism policy and planning policy (in the areas of recreation facilities and open space provision, Green Infrastructure development, provision of access to natural and cultural heritage, improved management of natural and cultural heritage, etc.).

Section 5 of the Planning Statement identifies the full range of national, regional and local planning policies that have informed the development proposals. In box 12.1 below a short selection of the relevant policies is quoted.

If recreational and tourism use of the Dublin Mountains by the provision of managed access to its landscape, views, natural and cultural heritage is to be facilitated and encouraged – as required by national, regional and local policy – then there is no better location than the Hellfire and Massy's Wood site to achieve this. The reasons for this are numerous:

- The site is the nearest – and therefore the most accessible - substantial site of forested mountain landscape character to the Dublin urban area;

- Due to its relative proximity the site has the greatest potential (among publicly owned sites in the Dublin Mountains) for significant improvements to be made for vehicular, bicycle and pedestrian access;

- The site has a unique combination of assets including diversity of landscape and habitat type; exceptional views; rich archaeology and iconic architectural and cultural heritage features that are visible, explorable and compelling;

- The site is an existing recreation resource, but access provision, site facilities (e.g. parking, toilets, shelter), site management, and provision of interpretation and information are inadequate for the full range of potential users;

- As a result of existing use there are problems with the site including traffic congestion and parking problems; erosion of trails; vandalism of architectural heritage and deterioration of heritage through lack of active management; and anti-social behaviour – all of which can be successfully addressed by improved site management, which will be directly facilitated by the development;

- The site is publicly owned;

- Although the site does support a range of habitats and species of conservation interest, no part of the site is designated as a Natura 2000 site or NHA and the proposed development would not adversely impact on any Natura 2000 site or its qualifying interests;

- The site can accommodate the proposed development without significant adverse impacts on the environment as outlined in the EIAR.

Furthermore, there are no better (and no alternative) parties than SDCC, Coillte and the DMP, in partnership, to achieve the realisation of the relevant planning and tourism policy through the development.

Box 12.1 Selected National, Regional and Local Planning Policy Supporting the Proposed Development

National Planning Policy

The National Spatial Strategy identifies the following among six Strategic Tourism Opportunities for Ireland (NSS, p.100):

- *"**Heritage and Natural Landscapes** – Opportunities to realise the potential contained in the landscape, habitats and culture of some of the least developed tourism areas through facilitating better access and developing appropriate interest activities;*
- ***Urban Generated Rural Recreation** – Opportunities related to the presence of attractive landscapes close to urban areas such as Dublin where weekend leisure activity could become a significant driver of year round tourism activity."*

The Draft National Planning Framework (published since the application to the Board) states:

> *"**Green Infrastructure** - Our environment is an asset that if planned for in the same way we plan for other forms of infrastructure, can provide long term benefits. Nature and green infrastructure provide a range of uses, goods and services and make the best use of land, help manage competing demands and can complement other sectors. For example, an attractive environment is important for tourism and a vibrant, well planned urban area with good amenities will contribute to attracting the skilled employees and investment to underpin long-term development. Our natural assets are also important for carbon capture - important in meeting climate mitigation and adaptation goals and national biodiversity targets…* (own emphasis)
>
> *"**Natural Heritage** - Conserve and enhance the rich qualities of natural and cultural heritage of Ireland in a manner appropriate to their significance…*
>
> *"Ireland has an abundance of iconic natural heritage areas such as internationally recognised world heritage sites, turloughs and peatlands. There are many other nationally distinct areas, that are not only a key part of our cultural heritage but also important to our tourism industry and their contribution to 'liveability' and attractiveness of places for economic investment. Our national parks and nature reserves are also key natural assets that offer potential to further optimise the visitor experience of state owned lands through delivery of quality outdoor activity infrastructure and essential ancillary facilities.* (own emphasis)

Regional Planning Policy

The Regional Planning Guidelines for the Greater Dublin Area 2010-2022 (RPG) identifies the Dublin Mountains as a 'Key Regional Asset':

> *"In examining G.I. development at a regional level, it is important to acknowledge a number of unique assets, which contribute to the diverse richness of the Greater Dublin Area. Notably, the Dublin/Wicklow Mountains, Bru Na Boinne, Liffey Valley and Dublin Bay exemplify this uniqueness…*

"These areas:

- *support nationally and regionally unique habitats, biodiversity, and fragile ecosystems;*
- *have important recreational, tourism and cultural roles;*
- *provide or support forestry, crop production, agriculture and energy development;*
- *provide green buffers/green wedges between built up areas;*
- *Improve air quality"*. (own emphasis)

Regarding Access Management the RPGs state:

> *"Access to green corridors and natural heritage is complex, involving issues such as private ownership of lands or physical difficulties in accessing some of those sites which are within public ownership. It is recommended that local authorities identify strategic access points within public ownership lands and enhance and improve linkages between publicly owned sites. Furthermore, the local authorities should utilise mechanisms within the planning system where the opportunity exists, to enlarge public ownership of lands within corridors…. It is important for a number of environmentally sensitive locations that access does not result in unlimited access, but rather 'managed access' where appropriate. This should also be supported by transport modes such as secure and direct pedestrian and cycle routes and public transport provision."*

RPG Strategic Recommendation SIR11 states:

> *"The importance of managing and enhancing recreational facilities, including publicly owned lands associated with regionally important assets (such as the Dublin Mountains) is recognised and should be supported by the relevant bodies in line with environmental compatibilities in association with plans and/or measures to protect important habitats within or proximate to these locations."*

Strategic Recommendation RR5 states:

> *"Needs of leisure and rural tourism to be addressed in a multi-disciplinary manner in high pressure locations, taking into account natural, economic, social and cultural policy objectives and plans. Balance is required between the need to preserve the natural environment; the needs of modern farming and also making the countryside and natural areas accessible to those who wish to avail of it. Feasibility studies and best scientific evidence can be utilised to ensure that this balance is achieved."*

Local Planning Policy

Economic and Tourism (ET) Policy 5 of the South Dublin County Development Plan 2016-2022 (the SDCDP) states:

> *"It is the policy of the Council to support the development of a sustainable tourism industry that maximises the recreational and tourism potential of the County, through the implementation of the South Dublin Tourism Strategy 2015."*

It is thus the stated policy of South Dublin County Council to implement the South Dublin Tourism Strategy 2015 (SDTS). The principal recommendation of the SDTS is the development of a 'Dublin Mountains Park Flagship Project' (SDTS Section 3.1). This recommendation builds on the 2007 study *Dublin Mountains – Strategic Development Plan for Outdoor Recreation*, the plan which led to (a) the creation of the Dublin Mountains Way, and (b) the establishment of the Dublin Mountains Partnership.

The SDTS also recommends the development of a 'Dublin Mountains Orientation and Interpretation Centre', describing this as a 'centre to present the Dublin Mountains Story'. It is described as follows (SDTS Section 3.1.1):

> *"It will be targeted at visitors seeking to learn about the geology, history, archaeology, nature and future of the Mountains, what to do in the Mountains, and how best to enjoy the Mountains while maintaining the quality of the environment. It could also provide facilities such as parking, food and beverage, toilets etc. and offer visitor information on guided walks, maps/orientation to other attractions in the mountains - Dublin Mountains Way, Zip It, Tibradden etc., - as well as on other tourist attractions and activities in South Dublin…*
>
> *"The ideal location should be selected with excellent panoramic views over Dublin Bay, through elevated viewing locations. Potential sites could include locations at Killakee Mountain or Montpelier Hill or another suitable location.*
>
> *"The support of Coillte will be required to support this project. South Dublin County Council will work in partnership with Coillte to develop the facility".*

In accordance with these recommendations of the SDTS, and the wider Economic and Tourism Policy 5 of the SDCDP, Policy ET5 Objective 3 of the SDCDP states:

> *"To support the development of a visitor facility in or adjacent to the High Amenity – Dublin Mountains zone (HA-DM), subject to an appropriate scale of development having regard to the pertaining environmental conditions and sensitivities, scenic amenity and availability of services."*

In Section 8.0 of the SDCDP, regarding Green Infrastructure, it is stated:

> *"The environmental and heritage resources of the County can be described as the County's 'Green Infrastructure', a vital resource for our future. The term Green Infrastructure is used to describe an interconnected network of waterways, wetlands, woodlands, wildlife habitats, greenways, parks and conservation lands, forests and other open spaces that adjoin and are threaded through urban areas…*
>
> *"The Green Infrastructure network supports native plant and animal species and provides corridors for their movement, maintains natural ecological processes and biodiversity, sustains air and water quality and provides vital amenity and recreational spaces for communities, thereby contributing to the health and quality of life of residents and visitors to the County…*
>
> *"The advantages of a sustainable and integrated approach to Green Infrastructure management in both urban and rural areas are wide reaching and are proven to include:*
>
> - *Improved habitats for wildlife;*
> - *Cleaner air and water;*
> - *Improved surface water management;*
> - *'Greener' and more attractive cities;*
> - *Tourism and recreational opportunities and improved human health and wellbeing."*

Green Infrastructure Policy 1 of the SDCDP states:

"It is the policy of the Council to protect, enhance and further develop a multifunctional Green Infrastructure network by building an interconnected network of parks, open spaces, hedgerows, grasslands, protected areas, and rivers and streams that provide a shared space for amenity and recreation, biodiversity protection, flood management and adaptation to climate change."

The proposed development is thus integral to a coherent, well-justified and long-standing strategy for the development and management of recreation and tourism facilities in the Dublin Mountains area of South Dublin, as part of a Green Infrastructure network. This strategy is in line with national and regional policy, and is specifically supported by the SDCDP.

12.1 COMPLIANCE WITH PLANNING POLICY AND ZONING OBJECTIVES

A number of submissions contend that the proposed development is contrary to the land use zoning objectives of the SDCDP. In particular they argue that since the proposed visitor centre building includes a café/restaurant, and since the café/restaurant occupies a significant proportion of the building's floorspace, it is contrary to the objective for the HA – DM zone.

This reflects a misunderstanding of both the proposed development and the SDCDP. The SDCDP states (11.1.1):

> *"Land Use Zoning Tables are incorporated into this written statement to provide guidance in relation to the general appropriateness of particular development types or land uses in each land use zone. These tables are for guidance only. Development proposals will also be assessed against the policies, objectives, standards and criteria set out in the Plan, in addition to wider legislation and guidance."* (own emphasis)

It is established above (and in Section 5 of the Planning Statement) that the proposed development is compliant with and supported by a wide range of SDCDP policy. Additionally, Policy ET5 Objective 3 of the SDCDP specifically supports the development of a visitor facility in the HA – DM area.

In accordance with the SDTS (and therefore with Policy ET5 of the SDCDP), the fundamental purpose of the development is to provide a facility in the Dublin Mountains for orientation and interpretation. These functions - which align with the SDCDP land use classes 'Recreational Facility', 'Cultural' and 'Education' – would be provided by the trails and outdoor heritage interpretation facilities, and by the visitor centre building's Ramblers' Lounge (an information hub), toilets, interpretation room and education room. The restaurant/café, while important to the overall attractiveness of the facility as both a recreation and tourism resource, is ancillary to these uses.

It is considered that the key issue in assessing development proposals with respect to zoning is whether a given proposal is consistent with the overall zoning objective. Zoning matrices provide an additional support to this but cannot be considered as the sole assessment criterion. The zoning objective that applies to the visitor centre is 'HA-DM' which has the objective "*To protect and enhance the outstanding natural character of the Dublin Mountains Area*".

The site selection and design processes have ensured that the most suitable location and form of development have been selected for this proposal taking into account the support for it expressed in the SDCDP and the site sensitivity (which is variable across the site area). It is notable that the landscape and visual impact assessment in the Environmental Impact Statement states:

> *"The construction of new buildings and parking facilities could be regarded as intrusive in such a location. However the values associated with the receiving environment, the sensitive design of the new centre and its infrastructure, and the context of Enhanced Amenities and the long term landscape development proposed suggest the Quality of Landscape Change is Beneficial – "Improves landscape quality and character, fits with the scale, landform and pattern and enables the restoration of valued characteristic features or repairs / removes damage caused by existing land uses." "*

This conclusion of the LVIA recognises that the area most affected by the physical elements of the development proposals is the lower to mid slope of Montpelier Hill, well below the 350m contour (thus avoiding significant development interventions in the more sensitive upper slope of Montpelier Hill and the Hell Fire Club, and Massy's Wood). This directly affected area is an area of productive coniferous forest also heavily used for recreation access. Therefore the development poses no direct threat to an area of 'outstanding natural character', and in fact would result in enhancement of the landscape character and quality of the site.

Thirty viewpoints were assessed to examine impacts on views and visual amenity. In this regard, the EIAR states:

> *"All but two of these viewpoints will experience change that will be neutral or beneficial in qualitative terms, although the significance ranges from Very Significant to Slight or Not Significant. The two viewpoints that experience adverse impacts are located within the site and this effect relates to the short term impacts of the improvements and extensions to the car-park. Over time the effects here mitigate to neutral and beneficial as the new landscape establishes itself.*"

Thus it is considered that the proposed development both ensures the protection of the natural character of the Dublin Mountains Area and its enhancement as per the HA - DM zoning objective and is in accordance with the zoning objective.

The *Feasibility Study and Masterplan for a Flagship Tourism Facility for the Dublin Mountains* carried out in 2015 included an analysis of equivalent tourism/visitor facilities elsewhere in Dublin and Ireland. The study analysed these facilities' constituent parts (e.g. the quantum of parking provision, café/restaurant and retail floorspace, etc.) to inform the concept and scale of a facility for the Dublin Mountains. The proposed café/restaurant is comparable in scale to those of the Irish National Heritage Park, Ferrycarrig, Co. Wexford (café sits 95), the Skellig Experience Visitor Centre, Co. Kerry (café sits 70), Ceide Fields, Co. Mayo (café sits 75), Lough Boora Discovery Park, Co Offaly (café sits 70), Glenveagh National Park, Co. Donegal (restaurant sits 100), and Round Tower Visitor Centre, Clondalkin (a SDCC development) (café sits 50).

The project architect and tourism consultant have carried out substantial research into visitor centres throughout the feasibility study and design process to inform the proposals. A restaurant/café, of the scale proposed, is a typical component of a visitor centre building. It complements the basic visitor facilities (toilets, shelter, information provision) and interpretation facilities, to provide a complete offering/package to recreational users and tourists who wish to avail of them (others may choose to bypass them and remain outdoors).

The proposed development is therefore both in keeping with Policy ET5 Objective 3 of the SDCDP, and not contrary to the zoning objective for the HA – DM area, as the majority of the building's constituent uses (Recreational Facility, Cultural, Education) are open for consideration in the area. The fact that the

Restaurant/Café use occupies more floorspace in the building than other individual uses does not signify greater importance of that use; a restaurant/café simply requires more space than the other uses.

13.0 THE OBJECTIVES OF THE DEVELOPMENT

It is the aim of the proposed development to create an improved resource for outdoor recreation and landscape, natural and cultural heritage appreciation - for local residents, residents of South Dublin and the wider city, domestic and international tourists. The development is intended to create an attraction in the Dublin Mountains, one which presents and allows visitors to experience and appreciate the unique qualities of the mountains and the particular location, including the views over the city and Dublin Bay, and the concentration of cultural and natural heritage. As well as providing improved facilities for access to and interpretation of these assets, the development aims to improve their protection and management. Additionally, the development aims to respond to existing problems such as inadequate parking provision, related traffic congestion, erosion of trails, damage to protected structures, lack of basic visitor facilities and heritage interpretation) and the growth in use of the site and the wider mountains which will happen with or without the development.

The submission by the Concerned Residents of Killakee questions the fact that the development has multiple objectives, stating that the objectives are therefore unclear and ambiguous. We submit that the multiple objectives of the project are complementary, and that this is a strength of the project, not a flaw. The proposals are intended to benefit the widest range of existing and potential users, and benefit the site's heritage resources.

The Concerned Residents of Killakee submission also questions the fact that the project seeks to enhance visitors' experience and broaden the appeal of the site.

The project partners recognise that the site is highly valued in its current condition by existing users and local residents. We submit that the current users would not be adversely affected by the proposals. Access by car, bicycle and public transport would be improved, and parking capacity would be improved. Once on site, users would have the option of choosing to avail of the new visitor facilities or not. If not of interest/use, the visitor centre building could be bypassed and the wider Hell Fire and Massy's Wood landscape explored with minimal visible change to the landscape other than trail improvements, sensitively located and designed heritage interpretation signage, the incremental change from conifer plantation to mixed woodland in areas, and a higher volume of users. The higher volume of use is an objective of policy from national to local level.

We reiterate that access to the site (except use of the proposed shuttle bus service), including parking and use of all trails would be free. Access to the exhibition and education rooms, the Rambler's Lounge (an information hub and room for rest/shelter) and toilets would also be free.

One submission from a resident near the site expresses concern over the expansion of the city into previously agricultural land between the city and Killakee that he has observed over the last number of decades. The city has expanded, and for a long period that expansion was at unsustainably low density. The city must continue to increase its population capacity, and accordingly the more recent and future urban development will have greater density. This is precisely why better access to the extra-urban landscape must now be developed, to offer this growing urban population access to the open space, landscape amenity, cultural and natural heritage.

14.0 OPERATIONAL MANAGEMENT

It is proposed to establish a bespoke management structure for the development, combining the expertise and resources of SDCC, Coillte, the DMP and a private facility operator – with the formal input of other stakeholders including local land owners.

The management proposals are outlined in an updated Operational Management Plan (OMP) which is submitted with this RFI response.

We submit that the updated management proposals and commitments are commensurate with the site's status as a key regional Green Infrastructure asset, a strategic access point from the city for recreation and heritage interpretation/education in the Dublin Mountains, and a tourism facility of national status/importance.

15.0 DEVELOPMENT CONCEPT AND DESIGN

15.1 SITE SELECTION AND ALTERNATIVES

The 2015 feasibility study explored a range of alternative sites for the proposed development. Chapter 4.1 of the EIAR describes the comparison of the alternative sites, taking account of a range of factors including the potential environmental effects, the development objectives of the project partners, tourism and economic development policy, planning policy, and existing patterns of access to and use of the Dublin Mountains for recreation.

Among the development objectives was the idea that the visitor centre should have a 'wow factor'. This is a legitimate objective for a development seeking to create a tourist attraction. The view that the site provides over the city and Dublin Bay is considered to be one of the site's – and indeed the city's - greatest assets. The combination of capital city, bay and mountains closely clustered is particular to Dublin but it is not yet fully recognised and appreciated. The proximity of the mountains affords an opportunity for people get out of the urban area with relative ease to an elevated position where nearly the entire city can be seen in its geographic context, allowing its current form and the story of its historic development to be told and appreciated. The view from the site is exceptional, and it is considered that the development of a visitor centre that celebrates this view, while also (a) providing a range of heritage interpretation and visitor facilities, and (b) resulting in no significant adverse environmental impacts, is an opportunity worthy of pursuit by the project partners.

Killakee House (The Steward's House) and Orlagh – both suggested in various submissions as more appropriate sites for the development – were given due consideration in the feasibility/site selection process. While both were recognised as having tourism development potential, they were deemed not to present the same opportunity as afforded by the Hell Fire and Massy's Wood site. The reasons are set out in Section 4.1.4 of the EIAR (for Steward's House) and 4.1.9 of the EIAR (Orlagh House).

The site presents the greatest potential for the achievement of the development objectives, alignment with planning and tourism/economic development policy, and enhanced environmental stewardship of (and no significant adverse environmental impact on) publicly owned lands in the Dublin Mountains.

It is important to bear in mind the 'Do nothing' scenario. Coillte has recorded a 16% rise in the number of people accessing its forest properties for recreation from 2016 to 2017. The Hellfire and Massy's Wood properties will continue to experience growth in visitor numbers, with or without the proposed development. The facilities at present are not adequate to cater for this growth, nor are the natural and

cultural heritage assets of the site adequately managed to ensure their protection from un-managed growth in visitor access. It would be negligent of the project partners not to seek to address this.

15.2 VISITOR CENTRE CONCEPT AND SCALE

The project architect and tourism consultants carried out research into visitor centres in Ireland and the UK throughout the feasibility study and design process to inform the proposals.

Visitor facilities examined include the Connemara National Park Visitor Centre; Kylemore Abbey; Malahide Castle & Gardens; Grizedale Forest Visitor Centre, UK; Giant's Causeway Visitor Centre, Northern Ireland; Airfield Estate, Dundrum; Stonehenge Visitor Centre, UK; Brockhole Lake District Visitor Centre, UK; Fota House Arboretum and Gardens; Lough Key Forest Park Visitor Centre; Slieve Gullion Forest Park Visitor Centre; and Pearse's Cottage Visitor Centre, Galway.

While there is no single or standard definition of a 'visitor centre/facility', the concept is widely accepted and developments in comparable settings typically include space/facilities for provision of information, heritage interpretation and education; basic visitor facilities including toilets and shelter; food and beverage in the form of a café or restaurant; retail space offering guides, souvenirs, crafts or other merchandise; and site management facilities.

Accordingly, the proposed visitor centre has been designed to provide these facilities in a format that caters for a wide range of users, with the facilities scaled and designed to maximise the attraction and value to potential users while limiting the footprint and related environmental effects of the building/s.

The visitor centre will complement the trails and interpretation facilities that give access to the landscape, natural and cultural heritage assets of the site thereby enhancing visitors' understanding and appreciation of those resources and the wider Dublin Mountains environment.

15.2.1 Scale of the Building

The scale and design of the visitor centre have been informed by the selection of uses/facilities to be contained in the building/s, analysis of comparable visitor centres elsewhere, and consideration of potential environmental impacts. Chapter 4.2 of the EIAR discusses design alternatives that were considered in the design process. This highlights a considerable reduction in the building's floor area from the original concept (the outcome of the Feasibility Study) due to the omission or reduction of certain elements, while retaining a facility of sufficient scale and quality to meet the development objectives.

15.2.1.1 Exhibition & Interpretation

The exhibition and interpretive space is conceived of as a flexible open plan space (101m2) that can be adapted as necessary for different types of exhibitions and events. The associated classroom (54 m2) is similarly seen as a flexible space that could be used by various school groups, youth groups or interest groups.

15.2.1.2 Ramblers Lounge

The ramblers lounge (43 m2) located on the lower level of the visitor centre will also serve as a space for walkers, either individuals or groups, to relax, take shelter and meet with tour guides, learn about heritage, trails and activities in the area.

15.2.1.3 Dublin Mountains Partnership Offices

The location of the DMP space (18 m2) adjacent to the shop/walkers lounge will facilitate skilled and knowledgeable local volunteers from the DMP to be present on site and act as 'meet and greet' or tour guides. Such volunteers can provide advice on the things to see and do in the locality and offer recommendations for walks and trails. Such 'information officers' are a feature of other Visitor and Interpretative Centres e.g. Brecon Beacons Visitor centre, Wales; Glass House Mountains Visitor and Interpretative Centre, New Zealand.

15.2.1.4 Café

The 75-seat café/restaurant (175 m2) is designed to provide for all the needs of visitors. With a fully-glazed east elevation and panoramic views over the city and Dublin Bay, it is envisaged as both a place for walkers to relax after their exertions in the mountains, and for day-trippers to have lunch or tea in a unique setting. The restaurant is serviced by a kitchen with the capacity to adapt a wide variety of menu choices. A bar facility will not be provided. (Note: The Business plan makes reference to revenue from a bar, but this should properly be understood as the potential for visitors to make a purchase of an alcoholic beverage, e.g. a small 25cl bottle of wine or a bottle of beer (subject to appropriate licensing) to complement their dining).

15.2.2 Floor Areas

All floor areas given on drawings and in the EIAR are gross internal floor area, measured to the inner face of the external building envelope.

15.3 SITING AND DESIGN OF THE BUILDING

Following site selection, further site analysis was undertaken at feasibility stage to determine the most suitable location for positioning/siting of the visitor centre building on Montpelier Hill. This process determined the optimal location to be on the eastern side of the hill at an altitude of between 300-320m. The selected site for the building was considered suitable for the following reasons:

- It is easily accessible from the public road and potential expanded (existing) car park, and adjacent to an existing, well used trail;
- It has high quality views over Massy's Wood, the city and Dublin Bay;
- It is well below the 350m contour, identified in the SDCDP as the line above which the 'open natural character' of the mountains must be protected (Objective 2 of Heritage, Conservation and Landscapes Policy 9 Dublin Mountains);
- It is well below the summit of Montpelier Hill; the building would therefore not break (or come close to breaking) the skyline in views from the surroundings;
- While the building would be visible on the lower to mid slope of Montpelier Hill, it would be seen against the backdrop of the forested hill. With the use of natural materials and partial screening by trees in front of the building, its potential visual impact on views from the surroundings including the protected views/prospects identified in the SDCDP (Table 9.2 p.160) can be minimised;

- It is well removed from the Hellfire Club building and other architectural and known archaeological features of the site, and would therefore have no significant impact on their settings;

- It is located in an area of productive coniferous forest with limited habitat sensitivity.

15.3.1 Design of the Building

The design and appearance of the visitors centre building is purposefully restrained. The building is conceived as two simple volumes, long and narrow in plan and aligned to the site contours. This means they have the smallest possible footprint for a building of the floor area required while also deriving maximum benefit from the view.

The lower storey of the building forms a 'base' which accommodates the 'meet and greet' area of the Ramblers' Lounge along with basic facilities such as toilets, coffee kiosk and retail shop along with DMP office, site management offices and plant rooms. The lower level of the building is recessed beneath the upper level so that it will visually retreat into the hillside.

The building floor levels have been set to accommodate generous floor to ceiling heights, a requirement of public buildings, which will maximise natural lighting and ventilation.

Nonetheless, it is submitted that the building height is not excessive and that the linear and narrow form of the building form will minimise the impact of the structure on its hillside setting. Sequences of steps and terraces are used in and around the building to minimise the use of retaining walls and to provide places for people to sit and enjoy the views.

Finished in natural and indigenous materials – granite and timber cladding with green roofs – the design is intended to merge into the landscape setting. The granite cladding will relate aesthetically to the walls of Massy's Wood; the timber cladding will blend with the woodland setting, and the 'green' roofs will ensure that the view from higher up Montpelier Hill is not unduly disrupted. Over time, the growth of woodland vegetation around the building/s, as well lichens and mosses on the surfaces, will further lessen the building's impact on its setting.

15.4 SUSTAINABILITY

The visitor centre development has been planned to be environmentally sustainable; with the maximum amount of indigenous and recyclable materials, green roofs and SUDS rainwater disposal systems and renewable energy systems designed to meet the Nearly Zero-Energy Buildings (NZEB) standards required for new buildings owned and occupied by public authorities after 31st December 2018.

The Dublin Mountains Visitor Centre building will be custom-designed to be an exemplar of environmental responsibility, with low energy mechanical and electrical services tailored specifically to the building's function, size, geometry and location.

Energy efficiency and reliability will be the primary objective in the design of the services, all controlled by a building energy management system (BEMS) to provide a comfortable, healthy and functional environment.

The primary fuel to serve the development will be electricity; based on the site's close proximity to existing electricity infrastructure and the opportunities it presents to benefit from on-site electricity

generation. A new substation is required and this will be located discretely to the rear of the education / interpretation pavilion.

The main energy loads will be for heating and lighting. Heating will be provided by air source heat pumps located at the rear of the education / interpretation pavilion. Low-grade energy from the outside air will be upgraded to the temperatures required for underfloor heating and domestic hot water.

The exposed nature of the site and the east - facing orientation of the café / restaurant and education / interpretation pavilions will enable all public areas to benefit from natural lighting during normal opening hours. Artificial lighting will be provided by light emitting diode (LED) fittings, which use a fraction of the energy of fluorescent and halogen lamps and have a longer lamp life. Lighting will be controlled by presence and absence detectors, in conjunction with daylight sensors, so that lighting is operating only in areas where it is required.

Ventilation will be provided by mixed-mode systems that combine natural and mechanical ventilation. Natural ventilation will be provided through motorised operable windows. Mechanical fans will pull this air through the occupied spaces to provide sufficient ventilation.

15.5 LIGHTING

15.5.1 External Lighting

It is proposed that discreet lighting will be provided to the car park area and along the forest road route to the visitor centre building. This will be in the form of low level lighting (bollard-type and directional) to minimise light spill and disturbance to nocturnal animals including bats. The lights will remain on for such time as will be necessary for staff to reach the car park safely after the visitor centre closes each night. In accordance with guidelines issued by the Heritage Council, the design of lighting will take account of best options for attracting night flying insects that provide food for bats.

15.5.2 Lighting to Hell Fire Club

Subdued lighting within the Hell Fire Club interior is envisaged at specific points, notably at step thresholds to provide safety where required. Lighting shall be focused downwards to minimise light pollution.

15.5.3 Lighting to Tree Top Bridge

Clarification: It is not proposed to provide lighting to the tree top bridge. (LED lighting to the bridge was indicated in the Dublin Mountains Visitor Centre Design Report submitted with the EIAR. This lighting is now to be omitted.)

15.6 CARPARK DESIGN AND LOCATION

15.6.1 General

The proposed enlarged parking area is critical to the project's success and is urgently required to alleviate current issues arising from cars parking illegally on the roadside directly outside the Hell Fire forest property, Killakee House, the entrance to Massy's Wood and in the entrance-ways of private houses accessed off the R115.

The potential car parking demand was estimated (see Section 5.4 of the Traffic Impact Assessment) and the proposed parking provision is intended to cater for the estimated maximum demand, for up to 300,000 annual visitors within 10 years after opening. In addition to the 275 spaces (14 of which will be accessible spaces), five coach spaces are proposed. It is also proposed to include two electric car recharging stations.

15.6.2 Carpark Design

The proposed car park is designed to make the most efficient possible use of space, with the three tiers of parking aligned with the contours thereby minimising encroachment up the hill (refer to drawing no. 1639 / PA / 905 / A which shows how the parking area is confined to the lower slope of Montpelier Hill). Further measures to limit visual impact include the planting of belts of vegetation between the tiers of parking and the construction of the retaining walls with gabions (refer to drawing no. 1639 / SD / 009 / A). In combination with the new broadleaf woodland encircling the parking area and extending up Montpelier Hill, these design measures will ensure that the parking area - despite its significant enlargement - is absorbed into the woodland landscape in views from the surroundings as well as within the site. Grasscrete (or similar reinforced) grass surfacing will additionally contribute to the distinct woodland character of the parking area.

The closest the car park or entrance road comes to an adjacent property boundary is approximately 10m and this space will be densely planted with a screening mix of vegetation with shrub and tree layers for maximum density.

15.7 TREE CANOPY BRIDGE

15.7.1 Bridge Concept

From feasibility stage, the concept of the tree canopy pedestrian bridge was developed as integral to the project through its provision of a safe, pleasant and sensory means of connecting the Hell Fire and Massy's Wood properties. By bridging the R115 road the physical separation of the two properties is overcome, enabling people of all ages and abilities to safely move across the road causing no disturbance to traffic, and to experience the feeling of moving through the tree canopy.

15.7.2 Bridge House

The starting point for the bridge on the Hell Fire property is the bridge house structure. The bridge house will provide an orientation and information/meeting point, as well as a place of shelter, external and additional to the visitor centre building.

15.7.3 Bridge Design

The walkway as proposed is 330 metres in length and follows a meandering route designed to curve around existing trees and minimise removal or disruption of the existing woodlands, particularly on the Massy's Estate side. The bridge support columns have a diameter of 250mm and are of Corten steel. They are spaced in clusters of two or three columns at approximately 10m centres, and variously angled (vertical and inclined) to look like groups of small tree trunks. The columns would be set in small concrete foundations below ground amongst the retained trees. The foundations will be located in consultation with an arborist so as to minimise damage to tree roots during construction.

15.7.3.1 Regulations

The bridge has also been designed to a 1:20 gradient in accordance with TGD Part M of the Building Regulations which will allow users of all abilities to use this facility.

15.7.4 Materials

The proposed bridge and bridge house materials comprise: Hardwood handrail, corten steel balusters and columns, corten steel canopy roof. The bridge walking surface will be textured corten steel sections or a composite wood material, resistant to mould and algae growth and of suitable slip resistance.

15.7.4.1 Corten Steel

Corten or 'weathering' steel is a steel alloy characterised by its outer layer of rust (hydrated iron-oxide), formed by exposure to moisture and oxygen, which forms a protective barrier preventing further corrosion of the material. Corten steel is particularly suitable for the bridge design due to its attractive rust colour and texture which, in combination with the lightweight design and appearance of the bridge will ensure that due to natural oxidation processes, the bridge will blend unobtrusively with its woodland setting over time. Apart from its warm character, Corten steel has a number of other advantages: it is environmentally friendly as well as sticker and graffiti-resistant; It is also suitably robust and low maintenance, ensuring that the bridge will withstand long term exposure to the elements and helping to reduce costs associated with upkeep – e.g. no requirement for painting.

15.7.5 Bridge Enclosure

It is not envisaged to enclose the bridge in any way or at any point, including where it crosses the R115 road.

15.7.6 Bridge References

Similar bridge structures have been successfully developed in equivalent forest / woodland settings for example at Lough Key Forest Park, Co. Roscommon; Kew Royal Botanic Gardens, England; Westonbirt Arboretum, England, Singapore, Central Catchment Nature Reserve.

16.0 ECONOMIC AND TOURISM DEVELOPMENT

16.1 TOURISM

Some observers expressed misgivings in relation to the focus on tourism development within the Business Plan. However the development of tourism in the South Dublin County area was always a central feature in the origination and development of this project.

It is important to recall the very particular public policy context within which the DMVC project evolved. The project has in fact been developed in a very careful and deliberate manner in an attempt to respond to a new direction for tourism development introduced at national government level. This project evolution can be summarised in the six (most recent) steps outlined in the Table below:

Step	Date	Narrative
1.	Jan 2013	Following the Global Economic Downturn from 2008, Fáilte Ireland (The National Tourism Development Authority), establishes the "Grow Dublin Task Force" to revitalize the tourism industry in Dublin.
2.	Jan 2014	Grow Dublin Task Force report is endorsed and launched by the Minister for Transport, Tourism and Sport, and is established as national tourism policy. Core insight is to grow tourism beyond a pre-existing exclusive focus on the downtown city centre area – specifically, the recommendation of the Task Force is to focus on two of Dublin's under-utilized natural heritage assets – Dublin Bay and the Dublin Mountains. These are considered to be features that could potentially attract more overseas visitors to Dublin under a new brand and marketing campaign – *Dublin – A Breath of fresh Air*.
3.	May 2015	SDCC launches its Tourism Strategy for South Dublin County 2015-2020. In this strategy, SDCC attempts to respond directly to the Grow Dublin Task Force recommendation in relation to the Dublin Mountains. Reference is made to the development of an Interpretation Centre and an Outdoor Pursuits Center in the Dublin Mountains.
4.	June 2016	South Dublin County Development Plan published – ET5 Obj 3, and ET5 Obj 4, restate the intention to develop an Interpretation Centre and an Outdoor Pursuits Centre in the Dublin Mountains. This represents local government implementation of national policy.
5.	July 2017	Preparation of EAIR for DMVC
6.	Autumn 2017	SDCC is approved by Fáilte Ireland at a Stage 1 decision for grant support in relation to funding for the development of DMVC – this indicates support from the national tourism board for the proposed development.

These developments in tourism policy have themselves been built on pre-existing recreation development strategy, for example the 2007 study *Dublin Mountains – Strategic Development Plan for Outdoor Recreation*, the plan which led to (a) the creation of the Dublin Mountains Way, and (b) the establishment of the Dublin Mountains Partnership (DMP).

The DMVC was identified in the South Dublin Tourism Strategy (2015) as a significant project to develop tourism in the area, and its implementation would represent the delivery of a key component of that strategy.

At a broader strategic level, the DMVC was identified as an initiative that aligned well with an emerging focus within Fáilte Ireland of promoting the wider Dublin area (as opposed to the city centre only) to international visitors. Over the past year (2016), this intention has been supported by a new marketing campaign – "Dublin – A breath of Fresh Air". The development of the DMVC is therefore entirely logical and consistent with this new direction in tourism policy.

Whilst the value of a Visitor Centre (as a point of orientation and interpretation) might not be evident to those already well familiar with the Dublin Mountains, given the intention to promote the Dublin Mountains as a natural and cultural heritage attraction to domestic and international visitors, the provision of such a facility gains a heightened sense of purpose.

Some observers expressed concern about a focus (as they saw it) on "one-off visitors" and "transient visitors", while others suggested that the project should have a "stronger social purpose". While the Business Plan necessarily focusses on the tourism and business aspects, and recognises (see above)

the tourism policy motivation for the project, the development is equally supported by planning policy including policy focused on social/community and heritage gains. CHL's brief pertained to the tourism and business aspects of the proposed development only.

16.2 COMMERCE

A number of respondents expressed concerns over what they perceived to be an undue level of "commercialisation" of the location, and that this might somehow compromise access to the woodland as a "public good". There is no evidence that the proposed development will in any way undermine the existing public good characteristics of the area.

There was some commentary that the Business Plan was internally contradictory in observing that the DMVC would not be operated for commercial gain, whilst also presenting an argument for it to be actively promoted and marketed. These statements are not contradictory, and to believe they are may arise from some misperceptions around the idea of "commercialisation". If the DMVC is built, it will generate a cost base associated with the operation and maintenance of the facility – irrespective of whether the facility is operated directly by SDCC or whether it is outsourced to an externally contracted operator. SDCC has indicated that it wishes the facility to operate on a cost neutral basis (that is, in so far as possible without continuing subsidy from SDCC). Therefore to plan the facility so that it can operate on a full cost recovery basis, does not amount to an undue "commercialisation" of the location. Equally, promoting and marketing the Dublin Mountains as a visitor attraction is not inconsistent with this position, nor does it contradict it.

In relation to marketing, one observer noted a reference to the market segmentation research used by Fáilte Ireland, and identified one market segment group as the "Social Energisers". These were then described by the observer as "stags and hens". This is not an accurate interpretation of the consumer segmentation research findings.

CHL understands that SDCC has been successful in its first round application to Fáilte Ireland for financial grant support in relation to the development of the DMVC. This decision would suggest that Fáilte Ireland believes in the DMVC proposition, and has confidence that the facility can be successfully developed and operated. It is also a vote of confidence in the Dublin Mountains as a visitor attraction, and the potential of the area to attract more international visitors.

CHL does not consider this to represent an undue "commercialisation" of the area.

16.3 VISITOR NUMBERS

Some observers challenged the likelihood of securing 300,000 visitors. CHL considers that it conducted its analysis on a prudent and cautious basis, and estimated that the project could reach 225,000 visitors by the end of the first five years of operation. CHL went on to observe that this figure could be increased to 300,000 over the subsequent five year period.

Given an existing base of 100,000 visitors to the area, this growth path to 300,000 seems reasonable. However, based on its experience of tourism visitor attractions, CHL also emphasised that the area would need to be actively promoted and marketed (most particularly on digital and social media) in order to reach these visitor numbers. It is also likely that such promotion and marketing would be a condition of any grant award by Fáilte Ireland.

16.4 FOCUS

Some concern was expressed that within the EAIR, there was an undue focus on the visitor centre itself (and on the restaurant in particular), which it was considered detracted from the proper and core focus at the site – the amenity of the natural heritage, archaeology, and stories on site, and their links into the wider Dublin Mountains. CHL believes it has taken care in the preparation of the Business Plan, to emphasise the latter.

17.0 CONSULTATION

A comprenhensive series of consultative engagements was undertaken by the key project partners including South Dublin County Council, Coillte, Dublin Mountains Partnership and the project design team for a period of more than 20 months between November 2015 and July 2017 leading to thte submission of the EIAR to An Bord Pleanala. The engagements were carried out by SDCC and Coillte in advance of any formal or regulatory consultation period under the planning process to inform all stakeholders and interested parties of the proposals and to allow the opportunity for input to shape the final design.

The process involved engagement with:

- Neighbouring landowners
- Representatives of local community, residents and business groups
- Local elected representatives (both Councillors and TDs)
- Sectoral participants on Strategic Policy Committees
- The general public

This engagement involved formal and informal meetings and discussions with local residents, information briefings, public open days including display of draft design plans, development of dedicated project information webpages including all relevant project information, correspondence and telephone contact. The full timeline of the engagement is outlined further below for reference but it is important to note that the process yielded the following outcomes:

- Allowing the opportunity for all interested parties to engage with the design team and project partners prior to the drafting of the final proposals and the completion of the EIAR to be submitted to An Bord Pleanala;
- Providing the project partners with an in-depth understanding of the concerns of the local community in relation to the current use and management of the area;
- Providing the wider community with accurate and informative details about the proposals;
- Constructive feedback regarding the size, scale and component features of the visitor centre that was incorporated into the final design

Details of consultative engagment with stakeholders and public representatives:

11th November 2015	Report on Feasibility of Dublin Mountains Project presented to Joint Arts, Culture, Gaeilge, Heritage & Libraries and Economic, Enterprise & Tourism Development SPC Meeting
14th March 2016	Presentation on Feasibility Study to Elected Members at Council Meeting
February 2017	Development of project information webpage http://www.sdcc.ie/services/parks-and-recreation/dublin-mountains-project
February/March 2017	Informal conversations with adjacent landowners conducted by Coillte
14th February 2017	Presentation on design proposals to Elected Memebers of the Council
20th February 2017	Presentation on design proposals for Local Oireachtas Members
27th Februrary 2017	Landowners Information Meeting, Whitechurch Library, Rathfarnham.

22nd March 2017	Landowners Information Meeting, Tallaght Stadium
6th/7th April 2017	Public Open Days, Tallaght Stadium
8th May 2017	Presentation to Elected Members at Council Meeting
10th May 2017	Update to Members of Economic, Enterprise and Tourism SPC
12th June 2017	Presentation to Elected Members at Council Meeting
18th July 2017	Project progress briefing with Elected Members of the Council
July – Sept 2017	An Bord Pleanna application documents displayed online and in County Hall, Tallaght and Ballyroan Library, Rathfarnham accompanied by 3D model.
October 2017	All Submissions to An Bord Pleanála availble to view in County Hall, Tallaght and on the dedicated projetc webpages

End

APPENDIX A – DMVC SUMMARY OF SUBMISSIONS

Ref. No	Name	Theme	Notes
1	**An Taisce**		
1		Visitor Centre Alternatives	See Section 15.6
1		Ecology/Biodiversity	See Sections 15.9.1-15.9.3 for Bridge
1		Traffic/Roads	See Section 11.0
1		Access	See Sections 12.0-13.0
1		Site Management	See Revised Operational Management Plan
2	**IFA**		
2		Site Overdevelopment	See Section 15.2.2
2		Oral Hearing	Requested
2		Inadequate Consultation Process	See Section 17.0
2		Local Community Impacts Not Considered	See Section 17.0 and updated Operational Management Plan
2		Ecology/Biodiversity	See Sections 3.0, 6.2 and 6.3 of FI Response
2		Site Management	See Revised Operational Management Plan
2		Traffic/Roads	See Section 11.0
2		Drainage	See Section 8.1
2		Flood Risk	See Section 8.0
2		Zoning Considerations	See Section 12.1 and 16.0
2		Dog Walking	See Sections 2.0, 4.0, 6.2, 7.2.4, 7.2.6
2		Boundary Treatment/Fencing	See Section 10.1 and Landscape Drawing 16408/2/101
3	**Mary C. Booth**		
3		Zoning Considerations	See Section 12.1
3		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
3		Ecology/Biodiversity	See Sections 6.0 and 7.3
3		Archaeology/Architecture/Cultural Heritage	See Section 9.2
3		Sustainability	See Sections 15.0, 15.4,16.0
3		Site Management	See Revised Operational Management Plan
3		Tourism	See Section 16.0

3		Site Overdevelopment	See Section 15.2.2
3		Traffic/Roads	See Section 11.0
3		Education	See Sections 12.1, 15.2
4	**Richard Boyd Barrett**		
4		Ecology/Biodiversity	See Sections 2.0, 5.0, 6.0, 6.2, 6.3, 7.1.3-7.1.4, 7.2.6, 7.4, 12.4
4		Visitor Centre Alternatives	See Section 15.6
4		Archaeology/Architecture/Cultural Heritage	See Section 9.0
4		Business Plan	See Section 16.0, 16.2 and 16.4
4		Site Overdevelopment	See Section 15.2.2
4		Education	See Sections 12.1, 15.2
5	**Cyril Boyd**		
5		Zoning Considerations	See Section 12.1
5		Visitor Centre Alternatives	See Section 15.1, 15.3, 15.6
5		Ecology/Biodiversity	See Sections 6.0 and 7.3
5		Archaeology/Architecture/Cultural Heritage	See Section 9.2
5		Sustainability	See Sections 15.0, 15.4,16.0
5		Site Management	See Revised Operational Management Plan
5		Tourism	See Section 16.0
5		Traffic/Roads	See Section 11.0
5		Access	See Sections 12.0-13.0
5		Site Overdevelopment	See Section 15.2.2
5		Education	See Sections 12.1, 15.2
5		Flood Risk	See Section 8.0
6	**Fiona Boyd**		
6		Ecology/Biodiversity	See Sections 2.0, 5.0, 6.0, 6.2, 6.3, 7.1.3-7.1.4, 7.2.6, 7.4, 12.4
6		Visitor Centre Alternatives	See Section 15.2.2
6		Drainage	See section 8.1
6		Human Health	See Section 12.1
6		Archaeology/Architecture/Cultural Heritage	See Section 9.0
6		Business Plan	See Section 16.2

7	**Michael Boyle**		
7		Zoning Considerations	See Section 12.1
7		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
7		Ecology/Biodiversity	See sections 6.0 and 7.3
7		Archaeology/Architecture/Cultural Heritage	See section 9.2
7		Sustainability	See Sections 15.0, 15.4,16.0
7		Site Management	See Revised Operational Management Plan
7		Tourism	See Section 16.0
7		Traffic/Roads	See Section 11.0
7		Education	See Sections 12.1, 15.2
7		Site Overdevelopment	See Section 15.2.2
7		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
8	**Ruth Brady**		
8		Zoning Considerations	See Section 12.1
8		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
8		Ecology/Biodiversity	See sections 6.0 and 7.3
8		Archaeology/Architecture/Cultural Heritage	See section 9.2
8		Sustainability	See Sections 15.0, 15.4,16.0
8		Site Management	See Revised Operational Management Plan
8		Tourism	See Section 16.0
8		Traffic/Roads	See Section 11.0
8		Education	See Sections 12.1, 15.2
8		Site Overdevelopment	Personal Comments
9	**Eithne and Aoife Bell Brew**		
9		Ecology/Biodiversity	See Sections 2.0, 5.0, 6.0, 6.2, 6.3, 7.1.3-7.1.4, 7.2.6, 7.4, 12.4
9		Business Plan	See Section 16.0, 16.2 and 16.4
9		Education	See Sections 12.1, 15.2
9		Archaeology/Architecture/Cultural Heritage	See Section 9.0
9		Oral Hearing	Requested

9		Site Overdevelopment	See Section 15.2.2
10	**Colm Brophy, TD**		
10		Oral Hearing	Requested
10		Traffic/Roads	See Section 11.0
10		Site Overdevelopment	See Section 15.3
10		Visitor Centre Alternatives	See Section 15.2.2
11	**Patricia and Michael Campbell**		
11		Zoning Considerations	See Section 12.1
11		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
11		Ecology/Biodiversity	See sections 6.0 and 7.3
11		Archaeology/Architecture/Cultural Heritage	See section 9.2
11		Sustainability	See Sections 15.0, 15.4,16.0
11		Site Management	See Revised Operational Management Plan
11		Tourism	See Section 16.0
11		Site Overdevelopment	See Section 15.3
11		Traffic/Roads	See Section 11.0
11		Education	See Sections 12.1, 15.2
11		Amenity Value	See Sections 10.2, 11.0, 12.0, 12.1, 13.0
12	**Eithne Clarke**		
12		Zoning Considerations	See Section 12.1
12		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
12		Ecology/Biodiversity	See sections 6.0 and 7.3
12		Archaeology/Architecture/Cultural Heritage	See section 9.2
12		Sustainability	See Sections 15.0, 15.4,16.0
12		Site Management	See Revised Operational Management Plan
12		Tourism	See Section 16.0
12		Site Overdevelopment	See Section 15.3
12		Traffic/Roads	See Section 11.0
12		Education	See Sections 12.1, 15.2

12		Amenity Value	See Sections 10.2, 11.0, 12.0, 12.1, 13.0
13	**Peter Clarke**		
13		Zoning Considerations	See Section 12.1
13		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
13		Ecology/Biodiversity	See sections 6.0 and 7.3
13		Archaeology/Architecture/Cultural Heritage	See section 9.2
13		Sustainability	See Sections 15.0, 15.4,16.0
13		Site Management	See Revised Operational Management Plan
13		Tourism	See Section 16.0
13		Site Overdevelopment	See Section 15.3
13		Traffic/Roads	See Section 11.0
13		Education	See Sections 12.1, 15.2
14	**Paul Cleary**		
14		Amenity Value	See Sections 9.2, 10.2, 11.0, 12.0, 12.1, 13.0
14		Ecology/Biodiversity	See Section 7.3
14		Traffic/Roads	See Section 11.0
14		Access	See Sections 12.0-13.0, 15.7
14		Site Overdevelopment	See Section 15.3
14		Visitor Centre Alternatives	See Section 15.2.2
15	**Amanda Codd**		
15		Inadequate Consultation Process	See section 17.0
15		Oral Hearing	Requested
15		Ecology/Biodiversity	See Section 10.0-10.3 and revised Operational Management Plan
15		Amenity Value	See Sections 10.2, 11.0, 12.0, 12.1, 13.0
15		Business Plan	See Section 16.0-16.4
15		Site Management	See Revised Operational Management Plan
16	**Imelda Colgan**		
16			First page only, no content- likely follows Mary C Booth chain letter

17	**Anna and Dermot Collins**		
17		Zoning Considerations	See Section 12.1
17		Amenity Value	See Sections 10.2, 11.0, 12.0, 12.1, 13.0
17		Traffic/Roads	See Section 11.0
17		Archaeology/Architecture/Cultural Heritage	See Section 9.2.2
17		Ecology/Biodiversity	See Sections 5.0, 6.2, 7.1.3-7.1.4, 7.2, 7.2.7-7.2.8
17		Site Overdevelopment	See sections 4.0, 15.3
17		Site Management	See Revised Operational Management Plan
17		Visitor Centre Alternatives	See Section 15.2.2
17		Recommendations	See sections 7.3, 9.0-9.4,15.6, 12.0-13.0,
17		Oral Hearing	Requested
18	**Concerned Residents of Killakee**		
18		Traffic/Roads	See Section 11.0
18		Visual Impact	See Section 10.2 and 15.9
18		Inadequate Consultation Process	See section 17.0
18		Amenity Value	See Sections 10.2, 11.0, 12.0, 12.1, 13.0
18		Zoning Considerations	See Section 12.1
18		Site Management	See Revised Operational Management Plan
18		Visitor Centre Alternatives	See Section 15.2.2
18		Ecology/Biodiversity	See Section 10.0-10.3 and revised Operational Management Plan
18		Carrying Capacity	See sections 10.0, 12.4
18		Drainage	See Section 8.2
19	**Alison Couper**		
19		Zoning Considerations	See Section 12.1
19		Ecology/Biodiversity	See Section 6.5, 8
19		Site Management	See Revised Operational Management Plan
19		Lighting	See Section 15.8
19		Visual Impact	See Section 10.2, 15.8

19		Archaeology/Architecture/Cultural Heritage	See Section 9.2.4
20	**Deirdre Cronin**		
20		Archaeology/Architecture/Cultural Heritage	See Section 9.3
20		Ecology/Biodiversity	See Sections 7.1.3-7.1.4, 7.2
20		Visitor Centre Alternatives	See Section 15.2.2
20		Business Plan	See Section 16.0-16.4
20		Oral Hearing	Requested
21	**Lucy Cullen**		
21		Archaeology/Architecture/Cultural Heritage	See Section 9.0
21		Site Management	See Revised Operational Management Plan
21		Traffic/Roads	See Section 11.0
21		Oral Hearing	Requested
22	**Luke Daly**		
22		Intensification of Use	See sections 11.0-16.4
22		Traffic/Roads	See Section 11.0
22		Ecology/Biodiversity	See Sections 2.0-7.4
22		Site Management	See Revised Operational Management Plan
22		Oral Hearing	Requested
23	**Leslie Davey**		**Chain Letter A**
23		Zoning Considerations	See Section 12.1
23		Ecology/Biodiversity	See Sections 2.0-7.4
23		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
23		Archaeology/Architecture/Cultural Heritage	See section 9.2
23		Sustainability	See Sections 15.0, 15.4,16.0
23		Site Management	See Revised Operational Management Plan
23		Tourism	See Section 16.0
23		Intensification of Use	See sections 11.0-16.4
23		Traffic/Roads	See Section 11.0
23		Education	See Sections 12.1, 15.2

24	**Andrew Davidson**		
24		Inadequate Consultation Process	See section 17.0
24		Sewage	See Section 8.3
24		Zoning Considerations	See Section 12.1
24		Amenity Value	See Sections 9.2, 10.2, 11.0, 12.0, 12.1, 13.0
24		Archaeology/Architecture/Cultural Heritage	See Section 9.0
25	**Elizabeth Davidson**		
25		Inadequate Consultation Process	See section 17.0
25		Visitor Centre Alternatives	See Section 15.2.2
25		Site Overdevelopment	See Section 15.3
25		Zoning Considerations	See Section 12.1 and 15.6
25		Business Plan	See Section 16.0-16.4
25		Amenity Value	See Sections 9.2, 10.2, 11.0, 12.0, 12.1, 13.0, 15.6
25		Visual Impact	see sections 6.7, 10.2
25		Archaeology/Architecture/Cultural Heritage	See Section 9.0
26	**Dermot Deering and others**		
26		Zoning Considerations	See Section 12.1
26		Visual Impact	See Section 10.2
26		Sewage	See Section 8.3
26		Site Overdevelopment	See Section 15.2 and 15.3
27	**Department of Culture Heritage and Gaeltacht**		
27		Archaeology/Architecture/Cultural Heritage	See Section 9.0, 9.3
27		Lighting	See Section 15.8
27		Recommendations	See Sections 9.0-15.5
27		Ecology/Biodiversity	See Sections 2.0-7.4
27		Cumulative Impact	not addressed
28	**Dodder Anglers Association Dublin**		
28		Site Overdevelopment	See Section 15.4

28		Sewage	See Section 8.3
28		Drainage	See section 8.1
28		Waterway Damage	See sections 6.5 and 8.0
28		Ecology/Biodiversity	See Section 7.1.4
29	**Frank Doyle**		
29		Site Overdevelopment	See Section 15.2 and 15.3
29		Zoning Considerations	See Section 12.1
29		Site Management	See Revised Operational Management Plan
29		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
29		Ecology/Biodiversity	See Sections 1.0-8.0
29		Sustainability	See Section 15.4 and revised Operational Management Plan
29		Amenity Value	See Sections 10.2, 11.0, 12.0, 12.1, 13.0
29		Traffic/Roads	See Section 11.0
29		Business Plan	See Section 16.0-16.4
29		Ecology/Biodiversity	See Sections 2.0-7.4
29		Drainage	See section 8.1
29		Inadequate Consultation Process	See section 17.0
30	**Cllr Francis Noel Duffy**		
30		Visitor Centre Alternatives	See Section 15.2.2
30		Archaeology/Architecture/Cultural Heritage	no response needed
30		Access	See Sections 12.0-13.0
30		Inadequate Consultation Process	See section 17.0
30		Sustainability	See Section 15.4
31	**Failté Ireland**		
31		Amenity Value	no response needed
32	**Sylvia Ferguson**		**Chain Letter A**
32		Zoning Considerations	See Section 12.1
32		Intensification of Use	Personal Comments
32		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
32		Ecology/Biodiversity	See sections 6.0 and 7.3

32		Archaeology/Architecture/Cultural Heritage	See section 9.2
32		Sustainability	See Sections 15.0, 15.4,16.0
32		Site Management	See Revised Operational Management Plan
32		Tourism	See Section 16.0
32		Traffic/Roads	See Section 11.0
32		Education	See Sections 12.1, 15.2
33	**Michael Fewer**		**Chain Letter A**
33		Zoning Considerations	See Section 12.1
33		Intensification of Use	See Sections 11.0-16.4
33		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
33		Ecology/Biodiversity	See sections 6.0 and 7.3
33		Archaeology/Architecture/Cultural Heritage	See section 9.2
33		Sustainability	See Sections 15.0, 15.4,16.0
33		Site Management	See Revised Operational Management Plan
33		Tourism	See Section 16.0
33		Traffic/Roads	See Section 11.0
33		Education	See Sections 12.1, 15.2
34	**Madline Fiebick, Fearghal McVeigh**		**Chain Letter A**
34		Zoning Considerations	See Section 12.1
34		Intensification of Use	See sections 15.1, 15.3, 15.6
34		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
34		Ecology/Biodiversity	See sections 6.0 and 7.3
34		Archaeology/Architecture/Cultural Heritage	See section 9.2
34		Sustainability	See Sections 15.0, 15.4,16.0
34		Site Management	See Revised Operational Management Plan
34		Tourism	See Section 16.0
34		Traffic/Roads	See Section 11.0
34		Education	See Sections 12.1, 15.2
34		Amenity Value	See sections 10.0-16.4

35	**Friends of Massy's Wood**		
35		Inadequate Consultation Process	See section 17.0
35		Zoning Considerations	See Section 7.3
35		Equestrian Activities	See Section 10.3.2
35		Business Plan	See Section 10.3.2
35		Traffic/Roads	See Section 11.0
35		Access	See Sections 12.0-13.0, 10.3.2
35		Access	See Section 10.3.2
35		Ecology/Biodiversity	See Sections 2.0-7.4
35		Visual Impact	See Section 15.9
35		Drainage	See section 8.1
35		Archaeology/Architecture/Cultural Heritage	See Section 9.2.5
35		Maintenance	See Revised Operational Management Plan
35		Intensification of Use	See Revised Operational Management Plan
36	**Niamh Gleeson**		
36		Oral Hearing	Requested
36		Ecology/Biodiversity	See sections 3.0 and 7.2.3
36		Amenity Value	See sections 10.0-16.4
37	**Karen Gleeson**		
37		Amenity Value	Personal Comments
37		Ecology/Biodiversity	See sections 5.0, 7.2, 7.2.1
37		Traffic/Roads	See Section 11.0
37		Oral Hearing	Requested
38	**Germaine Grey**		**Chain Letter A**
38		Zoning Considerations	See Section 12.1
38		Intensification of Use	See Revised Operational Management Plan
38		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
38		Ecology/Biodiversity	See sections 6.0 and 7.3
38		Archaeology/Architecture/Cultural Heritage	See section 9.2

38		Sustainability	See Sections 15.0, 15.4,16.0
38		Site Management	See Revised Operational Management Plan
38		Tourism	See Section 16.0
38		Traffic/Roads	See Section 11.0
38		Education	See Sections 12.1, 15.2
38		Amenity Value	See sections 10.0-16.4
39	**Selina Guiness**		
39		Oral Hearing	Requested
39		Site Overdevelopment	See Section 15.0-15.3
39		Archaeology/Architecture/Cultural Heritage	See Section 9.2.6
39		Visual Impact	See Section 10.2
39		Traffic/Roads	See Section 11.0
39		access	See Sections 12.0-13.0
39		Intensification of Use	See Section 12.0
39		Cumulative Impact	See Sections 11.0, 15.0-15.7,
39		Ecology/Biodiversity	See Sections 2.0-7.4
39		Design	See Section 15.2
39		Zoning Considerations	See Section 12.1
39		Dog Walking	See Sections 2.0, 4.0, 6.2, 7.2.4, 7.2.6
39		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
39		Lighting	See Section 15.8
40	**Killian Halpin**		**Chain Letter A**
40		Zoning Considerations	See Section 12.1
40		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
40		Ecology/Biodiversity	See sections 6.0 and 7.3
40		Archaeology/Architecture/Cultural Heritage	See section 9.2
40		Sustainability	See Sections 15.0, 15.4,16.0
40		Site Management	See Revised Operational Management Plan
40		Tourism	See Section 16.0
40		Intensification of Use	See sections 11.0-16.4

40		Traffic/Roads	See Section 11.0
40		Education	See Sections 12.1, 15.2
41	**Clare and Niall Hamilton**		
41		Zoning Considerations	See Section 12.1
41		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
41		Ecology/Biodiversity	See sections 6.0 and 7.3
41		Archaeology/Architecture/Cultural Heritage	See section 9.2
41		Sustainability	See Sections 15.0, 15.4,16.0
41		Site Management	See Revised Operational Management Plan
41		Tourism	See Section 16.0
41		Intensification of Use	See sections 11.0-16.4
41		Traffic/Roads	See Section 11.0
41		Education	See Sections 12.1, 15.2
42	**Hellfire Massy's Residents Association**		
42		Zoning Considerations	See Section 12.1
42		landscape	See Section 10.2
42		Business Plan	See Section 16.0-16.4
42		Traffic/Roads	See Section 11.0
42		Ecology/Biodiversity	See Sections 1.0-8.3
43	**Dara Hogan**		**Chain Letter A**
43		Zoning Considerations	See Section 12.1
43		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
43		Ecology/Biodiversity	See sections 6.0 and 7.3
43		Archaeology/Architecture/Cultural Heritage	See section 9.2
43		Sustainability	See Sections 15.0, 15.4,16.0
43		Site Management	See Revised Operational Management Plan
43		Tourism	See Section 16.0
43		Intensification of Use	See sections 11.0-16.4
43		Traffic/Roads	See Section 11.0

43		Education	See Sections 12.1, 15.2
44	**Niamh Hogan**		
44		Amenity Value	Personal Comments
44		Visitor Centre Alternatives	See Section 15.2.2
45	**Aisling, Pat and Jasmine Howard**		
45		Amenity Value	Personal Comments
45		Ecology/Biodiversity	See sections 2-6, 7.2
45		Visual Impact	See Section 10.2
45		Flood Risk	See sectios 6.7 and 8.0
45		Site Overdevelopment	See Section 15.0-15.3
45		Intensification of Use	See Section 16.3
45		Traffic/Roads	See Section 11.0
45		Archaeology/Architecture/Cultural Heritage	See Section 9.0
45		Business Plan	See Section 16.0-16.4
45		Oral Hearing	Requested
46	**Inland Fisheries Ireland**		
46		Ecology/Biodiversity	See sections 6.5, 6.8, 8.0-8.3
46		Waterway Damage	See sections 6.5 and 8.0
46		Sewage	See Section 8.3
46		Building Materials	See Section 15.5
46		Drainage	See section 8.0
46		Recommendations	See Section 6.0
47	**Irish Georgian Society 1**		
47		Archaeology/Architecture/Cultural Heritage	See Section 9.0
47		Technical Documentation Issues	not addressed
48	**Irish Georgian Society 2**		
48		Traffic/Roads	See Section 11.0 and 15.6

48		Archaeology/Architecture/Cultural Heritage	See Section 9.2.6
48		Ecology/Biodiversity	no response needed
48		Technical Documentation Issues	See Sections 7.3, 9.0-9.5.1, 10.0-10.3.4, 13.0, 15.0-15.5.3
48		landscape	See Section 9.0-10.2
49	**Keep Ireland Open Ltd.**		
49		Amenity Value	See sections 10.0-16.4
49		Traffic/Roads	See Section 11.0
49		Access	See Sections 12.0-13.0
49		Oral Hearing	Requested
49		Ecology/Biodiversity	See sections 3.0, 6.2-6.3, 7.3
49		landscape	See Section 10.0
49		Business Plan	See Section 16.0-16.4
49		Visitor Centre Alternatives	See Section 15.2.2
49		Local Community Impacts Not Considered	See Section 17.0 and updated Operational Management Plan
49		Traffic/Roads	See Section 11.0 and 15.6
49		Access	See Sections 12.0-13.0, 15.6
49		Business Plan	See Section 16.0-16.4, 15.6
49		Visual Impact	See Section 10.2
50	**John Kelly**		**Chain Letter A**
50		Amenity Value	Personal Comments
50		Zoning Considerations	See Section 12.1
50		Ecology/Biodiversity	See Sections 2.0-7.4
50		Intensification of Use	See Sections 15.0-15-7
50		Archaeology/Architecture/Cultural Heritage	See Section 9.2.2
50		Business Plan	See Sections 12.0-16.4
50		Sustainability	See Sections 15.0, 15.4,16.0
51	**Roisin Kelly**		**Chain Letter A**
51		Amenity Value	Personal Comments
51		Zoning Considerations	See Section 12.1
51		Ecology/Biodiversity	See Sections 2.0-7.4

51		Site Overdevelopment	See Section 15.2.2
51		Archaeology/Architecture/Cultural Heritage	See Section 9.2.2
51		Business Plan	See Sections 12.0-16.4
51		Sustainability	See Sections 15.0, 15.4,16.0
52	**Gerard Kennedy**		**Chain Letter A**
52		Zoning Considerations	See Section 12.1
52		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
52		Ecology/Biodiversity	See sections 6.0 and 7.3
52		Archaeology/Architecture/Cultural Heritage	See section 9.2
52		Sustainability	See Sections 15.0, 15.4,16.0
52		Site Management	See Revised Operational Management Plan
52		Tourism	See Section 16.0
52		Intensification of Use	See sections 11.0-16.4
52		Traffic/Roads	See Section 11.0
52		Education	See Sections 12.1, 15.2
52		Amenity Value	See Section 9.0
53	**Padraig Lanbert**		
53		Amenity Value	Personal Comments
53		Traffic/Roads	See Section 11.0 and 15.6
53		Zoning Considerations	See Section 12.1
53		Technical Documentation Issues	See sections 6.5, 6.8, 8.0-8.3
53		Waterway Damage	See section 8.1
53		Lighting	See Section 15.8
53		Littering	See Section 10.3.4, Section 15.6 and revised Operational Management Plan
53		Antisocial behaviour	See Section 10.3.4, Section 15.6 and revised Operational Management Plan
53		Visual Impact	See Sections 10.2 and 15.8
53		Site Overdevelopment	See Section 15.2.2
53		Sewage	See Section 8.3
53		Landscape	See Section 15.4.3

53		Business Plan	See section 16.3
53		Inadequate Consultation Process	See section 17.0
53		Local Community Impacts Not Considered	See Section 17.0 and updated Operational Management Plan
53		Oral Hearing	Requested
54	**John Lawlor**		
54		Ecology/Biodiversity	See sections 2.0-7.4
54		Business Plan	See Sections 12.0-16.4
54		Inadequate Consultation Process	See section 17.0
54		Amenity Value	See sections 10.0-16.4
54		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
54		Petitions	See Section 17.0
54		Oral Hearing	Requested
55	**Anne McCluskey**		**Chain Letter A**
55		Zoning Considerations	See Section 12.1
55		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
55		Ecology/Biodiversity	See sections 6.0 and 7.3
55		Archaeology/Architecture/Cultural Heritage	See section 9.2
55		Sustainability	See Sections 15.0, 15.4,16.0
55		Site Management	See Revised Operational Management Plan
55		Tourism	See Section 16.0
55		Site Overdevelopment	See Section 15.2.2
55		Intensification of Use	See sections 11.0-16.4
55		Traffic/Roads	See Section 11.0
55		access	See Sections 12.0-13.0, 15.6
55		Education	See Sections 12.1, 15.2
55		Amenity Value	Personal Comments
55		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
56	**Jeanette McCallion**		**Chain Letter A**
56		Zoning Considerations	See Section 12.1
56		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6

56		Ecology/Biodiversity	See sections 6.0 and 7.3
56		Archaeology/Architecture/Cultural Heritage	See section 9.2
56		Sustainability	See Sections 15.0, 15.4,16.0
56		Site Management	See Revised Operational Management Plan
56		Tourism	See Section 16.0
56		Intensification of Use	See sections 11.0-16.4
56		Traffic/Roads	See Section 11.0
56		Education	See Sections 12.1, 15.2
57	**Michael McCarthy**		**Chain Letter A**
57		Zoning Considerations	See Section 12.1
57		Visitor Centre Alternatives	See sections 15.1, 15.3, 15.6
57		Ecology/Biodiversity	See sections 6.0 and 7.3
57		Archaeology/Architecture/Cultural Heritage	See section 9.2
57		Sustainability	See Sections 15.0, 15.4,16.0
57		Site Management	See Revised Operational Management Plan
57		Tourism	See Section 16.0
57		Intensification of Use	See sections 11.0-16.4
57		Traffic/Roads	See Section 11.0
57		Education	See Sections 12.1, 15.2
58	**Declan McKeever**		
58		Amenity Value	Personal Comments
58		Site Overdevelopment	See Section 15.0-15.3
58		Intensification of Use	See Sections 15.0-15-7
58		Inadequate Consultation Process	See section 17.0
58		Visitor Centre Alternatives	See Section 15.2.2
58		Visual Impact	See Section 15.9
58		Landscape	See Section 10.2
58		Zoning Considerations	See Section 12.1
58		Traffic/Roads	See Section 11.0
58		Lighting	See Section 15.8

58		Archaeology/Architecture/Cultural Heritage	See Section 9.0
58		Ecology/Biodiversity	See sections 3.0, 6.2, 6.6, 7.1.3-7.1.4; 7.2.3, 7.3,
58		Site Management	See Revised Operational Management Plan
58		Business Plan	See Sections 12.0-16.4
58		Inadequate Consultation Process	See section 17.0
59	**David McMunn**		
59		Zoning Considerations	See Section 12.0
59		Visitor Centre Alternatives	See Section 15.2.2
59		Inadequate Consultation Process	See section 17.0
59		Site Overdevelopment	See Section 15.7
59		Business Plan	See Sections 12.0-16.4
59		Ecology/Biodiversity	See Sections 3.0, 6.3, 7.2.2-7.2.3
59		Archaeology/Architecture/Cultural Heritage	See Section 9.2.2
59		Traffic/Roads	See Section 11.0
59		Ecology/Biodiversity	See Sections 6.2, 7.2 and 7.3
59		Ecology/Biodiversity	See Sections 7.1.3-7.1.4
60	**Liam McNevin**		**Chain Letter A**
60		Zoning Considerations	See Section 12.1
60		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
60		Ecology/Biodiversity	See Sections 6.0 and 7.3
60		Archaeology/Architecture/Cultural Heritage	See Section 9.2
60		Sustainability	See Sections 15.0, 15.4,16.0
60		Site Management	See Revised Operational Management Plan
60		Tourism	See Section 16.0
60		Intensification of Use	See Sections 11.0-16.4
60		Traffic/Roads	See Section 11.0
60		Cumulative Impact	See Section 11.0-14.0
60		Education	See Sections 12.1, 15.2
60		Petitions	See Section 17.0
60		Amenity Value	Personal Comments

61	**Valerie Mercer**		**Chain Letter A**
61		Zoning Considerations	See Section 12.1
61		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
61		Ecology/Biodiversity	See Sections 6.0 and 7.3
61		Archaeology/Architecture/Cultural Heritage	See Section 9.2
61		Sustainability	See Sections 15.0, 15.4,16.0
61		Site Management	See Revised Operational Management Plan
61		Tourism	See Section 16.0
61		Intensification of Use	See Sections 11.0-16.4
61		Traffic/Roads	See Section 11.0
61		Education	See Sections 12.1, 15.2
61		Amenity Value	Personal Comments
62	**Margaret Merrigan-Feenan**		
62		Amenity Value	Personal Comments
62		Zoning Considerations	See Section 12.1
62		Site Overdevelopment	See Section 15.0-15.3
62		Intensification of Use	See Sections 11.0-16.4
62		Traffic/Roads	See Section 11.0
62		Ecology/Biodiversity	See Section 6.7
62		Visual Impact	See Ssection 15.9
62		Archaeology/Architecture/Cultural Heritage	See Section 9.2.2
62		Visitor Centre Alternatives	See Section 15.2.2
62		Ecology/Biodiversity	See Sections 6.2, 7.2 and 7.3
63	**Phyllis Mitten**		**Chain Letter A**
63		Zoning Considerations	See Section 12.1
63		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
63		Ecology/Biodiversity	See Sections 6.0 and 7.3
63		Archaeology/Architecture/Cultural Heritage	See Section 9.2
63		Sustainability	See Sections 15.0, 15.4,16.0

63		Site Management	See Revised Operational Management Plan
63		Tourism	See Section 16.0
63		Intensification of Use	See Sections 11.0-16.4
63		Traffic/Roads	See Section 11.0
63		Education	See Sections 12.1, 15.2
84	**Patrick Malloy +3**		
		Traffic/Roads	See Sections 11.0 and 15.6
		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
		Drainage	See Section 8.1
		Local Community Impacts Not Considered	See Section 17.0 and updated Operational Management Plan
		Inadequate Consultation Process	See Section 17.0
64	**Christopher Moriarty**		**Chain Letter A**
64		Zoning Considerations	See Section 12.1
64		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
64		Ecology/Biodiversity	See Sections 6.0 and 7.3
64		Archaeology/Architecture/Cultural Heritage	See Section 9.2
64		Sustainability	See Sections 15.0, 15.4,16.0
64		Site Management	See Revised Operational Management Plan
64		Tourism	See Section 16.0
64		Intensification of Use	See Sections 11.0-16.4
64		Traffic/Roads	See Section 11.0
64		Education	See Sections 12.1, 15.2
65	**Sean Keir Moriarty**		
65		Traffic/Roads	See Section 11.0
65		Archaeology/Architecture/Cultural Heritage	See Section 9.0-9.5.1
65		Technical Documentation Issues	not addressed
65		Site Overdevelopment	See Section 9.0-9.5.1
66	**Ivan Morrin**		**Chain Letter A**
66		Zoning Considerations	See Section 12.1
66		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6

66		Ecology/Biodiversity	See Sections 6.0 and 7.3
66		Archaeology/Architecture/Cultural Heritage	See Section 9.2
66		Sustainability	See Sections 15.0, 15.4,16.0
66		Site Management	See Revised Operational Management Plan
66		Tourism	See Section 16.0
66		Intensification of Use	See Sections 11.0-16.4
66		Traffic/Roads	See Section 11.0
66		Education	See Sections 12.1, 15.2
67	**Mountaineering Ireland**		
67		Amenity Value	See Sections 10.0-16.4 - Bridge is 15.7
67		Traffic/Roads	See Sections 11.0 and 15.6
67		Sustainability	See Sections 12.0-16.4
67		Site Management	See Revised Operational Management Plan, Section 16 of the FI Report
67		Maintenance	See Sections 9.2.4, 10.1, 10.3.1, 10.3.2, 12.0-14.0
67		Education	See Sections 12.1, 15.2
67		Business Plan	See Sections 12.0-16.4, emphasis on Section 15.2.1
67		Site Management	See Revised Operational Management Plan
67		Site Overdevelopment	See Sections 15.0-15.3
67		Intensification of Use	See Sections 11.0-16.4
67		Tourism	See Section 16.0 and Revised Operational Management Plan
67		Visual Impact	See Section 10.2 and 15.9
67		Visitor Centre Alternatives	See Section 15.2.2
67		Littering	See Section 10.3.4 and revised Operational Management Plan
67		Traffic/Roads	See Section 11.0
67		Access	See Sections 12.0-13.0, 16.0
67		Ecology/Biodiversity	see sections 6.7, 7.3
67		Archaeology/Architecture/Cultural Heritage	See Sections 9.0-9.4.1
68	**Seamus Murphy**		
68		Amenity Value	no response needed

68		Archaeology/Architecture/Cultural Heritage	See Sections 9.1,12.0-13.0
68		Visitor Centre Alternatives	See Section 15.2.2
69	**Rachel Murphy**		**Chain Letter A**
69		Zoning Considerations	See Section 12.1
69		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
69		Ecology/Biodiversity	See Sections 6.0 and 7.3
69		Archaeology/Architecture/Cultural Heritage	See Section 9.2
69		Sustainability	See Sections 15.0, 15.4,16.0
69		Site Management	See Revised Operational Management Plan
69		Tourism	See Section 16.0
69		Intensification of Use	See Sections 11.0-16.4
69		Traffic/Roads	See Section 11.0
69		Education	See Sections 12.1, 15.2
69		Amenity Value	Personal Comments
70	**Peter O'Clery**		
70		Tourism	See Section 16.0
70		Visitor Centre Alternatives	See Section 15.2.2
70		Business Plan	See Sections 12.0-16.4
70		Ecology/Biodiversity	Personal Comments
70		Visual Impact	See Section 10.2
70		Amenity Value	Personal Comments
70		Sustainability	See Sections 12.0-16.4
71	**Angela O 'Donoghue +16**		**Chain Letter A**
71		Zoning Considerations	See Section 12.1
71		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
71		Ecology/Biodiversity	See Sections 6.0 and 7.3
71		Archaeology/Architecture/Cultural Heritage	See Section 9.2
71		Sustainability	See Sections 15.0, 15.4,16.0
71		Site Management	See Revised Operational Management Plan

71		Tourism	See Section 16.0
71		Intensification of Use	See Sections 11.0-16.4
71		Traffic/Roads	See Section 11.0
71		Education	See Sections 12.1, 15.2
72	**Vincent O'Hagan**		
72		Sustainability	See Sections 15.0, 15.4,16.0
72		Amenity Value	See Sections 7.3, 12.0,13.0
72		Traffic/Roads	See Section 11.0
72		Business Plan	See Sections 12.0-16.4
72		Oral Hearing	Requested
73	**Breda O'Meara-Diamond**		
73		Amenity Value	Personal Comments
73		Sustainability	See Sections 12.0-16.4
73		Technical Documentation Issues	not addressed
73		Site Management	See Revised Operational Management Plan
73		Ecology/Biodiversity	See Sections 3.0, 6.2, 7.2.3, 7.3
73		Archaeology/Architecture/Cultural Heritage	See Section 9.0
73		Traffic/Roads	See Sections 11.0 and 15.6
73		Oral Hearing	Requested
74	**Niamh O'Reilly**		**Chain Letter A**
74		Zoning Considerations	See Section 12.1
74		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
74		Ecology/Biodiversity	See Sections 6.0 and 7.3
74		Archaeology/Architecture/Cultural Heritage	See Section 9.2
74		Sustainability	See Sections 15.0, 15.4,16.0
74		Site Management	See Revised Operational Management Plan
74		Tourism	See Section 16.0
74		Intensification of Use	See Section 11.0-16.4
74		Traffic/Roads	See Section 11.0

74		Education	See Sections 12.1, 15.2
74		Amenity Value	Personal Comments
75	**Geraldine Quinn**		**Chain Letter A**
75		Zoning Considerations	See Section 12.1
75		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
75		Ecology/Biodiversity	See Sections 6.0 and 7.3
75		Archaeology/Architecture/Cultural Heritage	See Section 9.2
75		Sustainability	See Sections 15.0, 15.4,16.0
75		Site Management	See Revised Operational Management Plan
75		Tourism	See Section 16.0
75		Intensification of Use	See sections 11.0-16.4
75		Traffic/Roads	See Section 11.0
75		Education	See Sections 12.1, 15.2
75		Amenity Value	See Sections 10.0-16.4
76	**Margaret and Brian Richardson**		**Chain Letter A**
76		Zoning Considerations	See Section 12.1
76		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
76		Ecology/Biodiversity	See Section 6.0 and 7.3
76		Archaeology/Architecture/Cultural Heritage	See section 9.2
76		Sustainability	See Sections 15.0, 15.4,16.0
76		Site Management	See Revised Operational Management Plan
76		Tourism	See Section 16.0
76		Intensification of Use	See Sections 11.0-16.4
76		Traffic/Roads	See Section 11.0
76		Education	See Sections 12.1, 15.2
76		Inadequate Consultation Process	See Section 17.0
76		Amenity Value	Personal Comments
77	**Richard and Elizabeth Ryan and others**		
77		Site Management	See Section 10.3.4 and revised Operational Management Plan

77		Inadequate Consultation Process	See Section 17.0
77		Oral Hearing	Requested
78	**Killian Schurmann**		**Chain Letter A**
78		Zoning Considerations	See Section 12.1
78		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
78		Ecology/Biodiversity	See Sections 6.0 and 7.3
78		Archaeology/Architecture/Cultural Heritage	See Section 9.2
78		Sustainability	See Sections 15.0, 15.4,16.0
78		Site Management	See Revised Operational Management Plan
78		Tourism	See Section 16.0
78		Intensification of Use	See Sections 11.0-16.4
78		Traffic/Roads	See Section 11.0
78		Education	See Sections 12.1, 15.2
78		Human Health	See Section 12.1
79	**Hester Scott**		
79		Ecology/Biodiversity	See Sections 2.0-7.4
79		Drainage	See Section 8.1
79		Site Overdevelopment	See Section 15.0-15.3
79		Intensification of Use	See Section 11.0-16.4
79		Building Materials	See Section 15.5
79		Business Plan	See Sections 12.0-16.4
79		Traffic/Roads	See Section 11.0
79		lighting	See Section 15.8
79		Inadequate Consultation Process	See Section 17.0
80	**Rodney W Senior**		
80		Zoning Considerations	See Section 12.1
80		Visitor Centre Alternatives	See Sections 15.1, 15.3, 15.6
80		Ecology/Biodiversity	See Sections 6.0 and 7.3
80		Archaeology/Architecture/Cultural Heritage	See Section 9.2
80		Sustainability	See Sections 15.0, 15.4,16.0

80		Site Management	See Revised Operational Management Plan
80		Tourism	See Section 16.0
80		Intensification of Use	See Sections 11.0-16.4
80		Traffic/Roads	See Section 11.0
80		Education	See Sections 12.1, 15.2
80		Local Community Impacts Not Considered	See Section 17.0
80		Business Plan	See Sections 12.0-16.4
80		Oral Hearing	Requested
81	**Terry Sommerville**		
81		Landscape	See Section 10.0
81		Business Plan	See Section 16.3
81		Site Overdevelopment	See Sections 15.0-15.3
81		Traffic/Roads	See Section 11.0
81		Access	See Sections 12.0-13.0, 15.7
81		Technical Documentation Issues	See Sections 1.0-7.0
81		Ecology/Biodiversity	See Sections 3.0, 6.2, 6.3, 7.2.3, 15.9
81		Archaeology/Architecture/Cultural Heritage	See Section 9.0, 9.2.4
81		Visitor Centre Alternatives	See Section 15.2.2
81		Sewage	See Section 8.3
81		Oral Hearing	Requested
82	**South Dublin Conservation Society**		
82		Zoning Considerations	See Section 12.1
82		Visitor Centre Alternatives	See Section 15.2.2
82		Local Community Impacts Not Considered	See Section 17.0 and updated Operational Management Plan
82		Sewage	See Section 8.3
82		Ecology/Biodiversity	See Section 4.0, 7.2.1
82		Site Overdevelopment	not addressed
82		Archaeology/Architecture/Cultural Heritage	See Section 9.0
82		Oral Hearing	Requested

83	**David Stanley**		
83		Amenity Value	Personal Comments
83		Site Management	See Section 9.4.1, 10.3.4, 15.6, 15.7 and see revised Operational Management Plan
83		Maintenance	See Revised Operational Management Plan
83		Ecology/Biodiversity	See Sections 1.0-7.0, 10.0
83		Access	See Sections 15.0-16.4
83		Technical Documentation Issues	See Sections 12.0-16.4
83		Sewage	See Section 8.3
83		Traffic/Roads	See Section 11.0
83		lighting	See Section 15.8
83		Littering	See Section 10.3.4 and revised Operational Management Plan
83		Antisocial behaviour	See Section 10.3.4 and revised Operational Management Plan
83		Business Plan	See Sections 12.0-16.4
83		Boundary Treatment/Fencing	See Section 10.1 and Landscape Drawing 16408/2/101
83		Inadequate Consultation Process	See Section 17.0

APPENDIX B – DMVC RESPONSES BIODIVERSITY THEME

Name	Theme	Submission Summary	Response
Anna & Dermot Collins	Ecology/ Biodiversity	no meaningful survey of flora/fauna- survey could be called incompetent or deliberately misleading	The reasons for omitting certain species/ groups from detailed surveys is explained in section 6.4.2 of the EIAR.
	Ecology/ Biodiversity	Contradictory reptile statement.	The edges of the conifer plantations are predominantly gorse scrub and rank grassland. These do not provide quality lizard habitat. Grassy verges along the forest tracks will not be impacted by the proposed development.
	Ecology/ Biodiversity	two setts at east perimeter were missed by the experts.	Two setts were recorded during the walkover surveys and are detailed in the EIAR.
	Ecology/ Biodiversity	Bat survey incomplete. SDCC provided with copy of private bat survey (SDCC 23/9/2010) which recorded 4 species of bats. (Soprano Pipistrelle, Leistler's, Myotis, Plecotus Auritus) Bat survey copy is included.	The bat roost suitability assessment of the site was carried out as part of the multidisciplinary surveys. The mixed broadleaf and conifer woodlands that make up Massy's Wood, along with the Glendoo Brook offer good quality habitat for bats including Myotis species and Brown long-eared bats which are likely to be present in area. The site of the proposed building and associated car parking was surveyed on two nights. Conditions were ideal and bat activity was low on both nights. The main impact of the project on bats was considered to be disturbance or destruction of trees with bat potential close to the site of the proposed building/car park. The habitat in this area is felled conifer woodland with occasional mature beech trees and is not considered to be high quality bat habitat. Following construction, broadleaved woodland and new ponds will have a positive impact on bats. Although Myotis and brown long-eared bats may be present in Massy's Wood and the wider area, night-time presence/ absence surveys in Massy's Wood were not undertaken because their presence, if confirmed, would be inconsequential, because there would be no negative impacts on the foraging habitat as works within Massy’s wood are minor. A preliminary roost inspection was undertaken throughout the site, and included the Hellfire Club building, the walled garden in Massey's Wood as well as the bridge structures. These structures were deemed to have no potential to support roosting bats. Prior to tree-felling and works on any structure, a preconstruction survey will be carried out to identify any changes on the condition and potential to support bat roosts. The only exterior lighting proposed for the project during operation is between the proposed car park and visitor centre. It will likely be in the form of low level bollard mounted lighting and will remain on at night long enough for staff to reach the car park safely. Section 6.6.2.2 states "The lighting design will incorporate measures to minimise light spillage

			and disturbance for Bats and other nocturnal species". The visitor centre will operated during daylight hours only, therefore light spill from the building will not impact wildlife.
	Ecology/ Biodiversity	EIAR states "There WILL result in habitat loss, disturbance and displacement to the fauna that reside within and adjacent to the proposed development". This is unacceptable.	The EIAR identified Red Squirrel as impacted in the medium term as a result of habitat loss and fragmentation. Following mitigation, it was concluded that there would be no residual impacts on the other KERs. The proposed development includes the planting of native trees and shrubs and proposals to continue the management of invasive species in Massy's Wood.
	Ecology/ Biodiversity	Some species are ignored, others grossly underestimated in terms of numbers.	It was decided based on the initial walkover survey to not undertake detailed botanical surveys. This was based on the initial assessment of the habitats (scrub, conifer plantation, beech dominated broadleaved woodland) as unlikely to support certain species. The reasons for not undertaking lizard and bird surveys are detailed in sections 6.4.2.2 and 6.4.2.3. Outside of the footprint of the proposed visitor centre, car park and tree-top bridge, the works will be limited to trail improvements and other minor works. The improved trails will encourage users to remain on paths.
	Ecology/ Biodiversity	Applying to destroy Badger setts and Squirrel dreys is an offence under the wildlife act.	The Wildlife Acts provide for derogation licences for the purposes of development.
	Ecology/ Biodiversity	Focus was on mammals and reptiles, birds were ignored.	The reasons for not undertaking lizard and bird surveys are detailed in sections 6.4.2.2 and 6.4.2.3.
Concerned Residents of Killakee	Ecology/ Biodiversity	Strongly advocates the adoption of a woodland management option, explaining this is standard practice. No such management option was in the EIAR	There is no Woodland Management Plan proposed in the EIAR, however the management, mitigation and enhancement proposals build on 2002 report ' Management Plan for Biodiversity Areas' for the Massy Estate. The landscaping plan and commitments to plant native tree species, continue conservation measures in Massy's Wood and eradicate invasive species will all contribute to the sustainable management of the woodlands. Coillte will continue to manage the conifer plantations on Montpelier Hill.

Dept Culture, Heritage & Gaeltacht	Screening for AA	The site is close to the Wicklow Mountains National Park for which Peregrine Falcon and Merlin are Special Conservation Interests. The submission notes that bird surveys were not undertaken and therefore the presence of these species on the site was not undertaken and therefore potential for impacts on the SPA have not been fully explored.	Peregrine and Merlin are Special Conservation Interests of the Wicklow Mountains SPA and therefore the only species relevant to the AA Screening. Both species are likely to hunt within the site. The site does not provide suitable nesting habitat for Peregrine (cliffs and tall buildings). The site of the visitor centre consists of recently felled woodland with occasional mature beech trees, scrub and conifer plantation. This area is currently subject to disturbance from people and dogwalkers. Massy's wood is primarily non-native beech woodland and Montpellier Hill conifer plantation of varying ages. Merlin may nest in conifer plantations, however given that there is vast areas of heath and blanket bog, the preferential nesting habitat of Merlin, close by, the conifer plantations are unlikely to provide an important nesting resource for this species. Considering there is currently human based disturbance along the trails on Montpellier Hill, the fact the Merlin vary their nest sites from year to year and that the species has extensive nesting opportunities in the surrounding areas, both in conifer plantation and more traditional heather uplands, there are not considered to be potential impacts on the Conservation Objectives for this species in the Wicklow Mountain SPA . In addition, a research report produced by the Forestry Commission in the UK entitled 'Recreational use of forests and disturbance of wildlife' (Mazano & Dandy, 2012) cites two scientific papers which investigated the potential impacts of recreational users on Merlin populations. Newton et al. (1981) concluded that recreational walkers were unlikely to have caused a sharp decline in Merlin. Another study, Meek (1988) suggest little negative impact on Merlin by recreation. Section 6.6.2.1 of the EIAR highlights the mitigation that will be employed prior to construction to identify nesting birds including peregrine and Merlin. In the unlikely event that an active Merlin nest is discovered, an appropriate buffer will be strictly implemented until the chicks have fledged.
	Screening for AA	The submission raises concerns about the cumulative impacts of increased footfall on the Dublin Mountain Way as a result of the DMVC and the impacts this may have on the conservation objectives of the Wicklow Mountains SPA, the Wicklow Mountains SAC and the Glenasmole	The Dublin Mountains Visitor Centre links directly to a spur of the Dublin Mountain Way. The spur currently circles Montpelier Hill and follows the existing paths in Massy's Wood where it follows the Glendoo Brook upstream to the bend in the Cruagh Road where is joins the main trail of the Dublin Mountain Way. The path to the east crosses Cruagh Wood and then the Glendoo Road where it travels east along Tibradden Mountain. The Dublin Mountain Way does not enter either the Wicklow Mountains SAC or SPA. The Dublin Mountain Way does come close to these sites in the Cruagh Wood area, however it is on established and well used trails and within conifer plantation. Going west from the bend in the Cruagh Road the Dublin Mountain Way follows the old military road, forest paths and an unnamed road around Annamount Spink and into the Glenasmole Valley. The Dublin Mountain Way enters the Glenasmole Valley SAC at the top of the upper reservoir where it follows the maintenance road along the eastern side of the reservoir 7.7km west of the bend in the Cruagh Road. It is

		Valley SAC.	anticipated that there will be an increase in people accessing the Dublin Mountain Way as a result of the Dublin Mountains Visitor Centre, however impact on the conservation objectives of the Natura 2000 sites are not anticipated to occur because the Dublin Mountain Way utilises established trails and public roads and does not enter either the Wicklow Mountains SAC or Wicklow Mountains SPA. The Glenasmole Valley SAC, which the Dublin Mountain Way does enter, is protected for rare grassland habitats which are farmland and not accessible to the public.
	Red Squirrels	The submission notes that the confier plantations at the Hellfire Club and at the car park provide important habtiat for red squirrels.	The woodlands provide important habitat for red squirrel. The over-mature plantation at the car park will be subject to wind throw in the future and is not sustainable. The landscaping strategy proposes planting on the eastern side of Montpellier Hill, which is currently scrub and clearfell with native broadleaved trees, whilst retaining a number of existing mature beech trees and beech tree lines. The area on the top of Montpellier Hill will be converted to mixed broadleaf woodland over time. There will be large area of coniferous woodland which will be left intact including the larch woodland on the southern side of the hill and spruce/ pine plantations elsewhere on the hill. The plantations on Montpellier Hill are of mixed age and will provide habitat for red squirrel into the future. There will be a medium term impact on red squirrel as a result of the felling of the woodland at the car park and in other areas as a result of vegetation clearance and disturbance from construction. In time the planted woodlands will mature and provide suitable habitat for red squirrels. While conifer woodland is more beneficial for red squirrels with regard to being less attractive to greys, broad leaved planting has been chosen for it's overall higher biodiversity value.
	Red Squirrels	The submission recommends a red squirrel conservation management plan be produced for the project to protect the red squirrel population.	A draft Red Squirrel Conservation Management Plan has been produced and submitted with this response and will be finalised with input from Coillte should planning be approved.

	Red Squirrels	The submission states that planting should include the retention of the over-mature plantation at the existing car park and new planting of Scot's Pine and that planting of native broadleaved woodland, as stipulated in the landscape strategy should be modified.	The retention of the mature conifers adjecent to the exisitng car park will not be feasible into the future due to the potential of the conifers to become over tall and prone to wind throw.The decision to plant the eastern side of Montpelier Hill with broadleaved species is to create a native woodland setting for the Visitor Centre.
	Pine Marten	The submissions queries why Pine Marten was not included as a KER.	A visual recording of a Pine Marten was made during a bat survey. No dens or potential dens were recorded during the surveys. Pine Martens have large territories (O'Mahony, 2011) and are mainly nocturnal and elusive, they are unlikely to be affected by the project as a result of existing disturbance by people and dogs, which may result in them being habituated to human disturbance or nesting away from the area of the development. During operation Pine Marten will continue to inhabit the area. The Red Squirrel Conservation Management Plan will address enhancements for Pine Marten as a form of grey squirrel control.
	Bats	The submission suggests that two nights of surveying bats was not sufficient.	The bat roost suitability assessment of the site was carried out as part of the multidisciplinary surveys. The mixed broadleaf and conifer woodlands that make up Massy's Wood, along with the Glendoo Brook offer good quality habitat for bats including Myotis species and Brown long-eared bats which are likely to be present in area. The site of the proposed building and associated car parking was surveyed on two nights. Conditions were ideal and bat activity was low on both nights. The main impact of the project on bats was considered to be disturbance or destruction of trees with bat potential close to the site of the proposed building/car park. The habitat in this area is felled conifer woodland with occasional mature beech trees and is not considered to be high quality bat habitat. Following construction, broadleaved woodland and new ponds will have a positive impact on bats. Although Myotis and brown long-eared bats may be present in Massy's Wood and the wider area, night-time presence/ absence surveys in Massy's Wood were not undertaken because their presence, if confirmed, would be inconsequential, because there would be no negative impacts on the foraging habitat as works within Massy's wood are minor. A preliminary roost inspection was undertaken throughout the site, and included the Hellfire Club building, the walled garden in Massey's Wood as well as the bridge structures. These structures were deemed to have no potential to support roosting bats. Prior to tree-

			felling and works on any structure, a preconstruction survey will be carried out to identify any changes on the condition and potential to support bat roosts.
	Bats	The submssion notes that lighting can have negative impacts on bats.	The only exterior lighting proposed for the project during operation is between the proposed car park and visitor centre. It will likely be in the form of low level bollard mounted lighting and will remain on at night long enough for staff to reach the car park safely. Section 6.6.2.2 states "The lighting design will incorporate measures to minimise light spillage and disturbance for Bats and other nocturnal species". The visitor centre will operated during daylight hours only, therefore light spill from the building will not impact wildlife.
	Hedgerows	The submission seeks clarification whether (i) the construciton of footpaths on exisitng roads to the Hellfire Club will damage the hedgerows or not and (ii) if the proposed footpaths are to be lit. The submission notes that any hedgrows removed should be replaced with native species.	There will be no impact on the existing boundary hedgerows on the site. The only exterior lighting proposed for the project during operation is between the proposed car park and visitor centre. It will likely be in the form of low level bollard mounted lighting and will remain on at night long enough for staff to reach the car park safely, then be switched off.
	Birds	The submission notes that the confier plantations at the Hellfire Club support long-eared owl, peregrine, woodcock and probably nesting merlin. It notes that peregine and merlin are Special Conservation Interests of the Wicklow Mountains SPA.	The potential impacts of the project on the Conservation Objectives Wicklow Mountains SPA are dealt with in the response to the submission relating to the Appropriate Assessment Screening. There will be very little loss of woodland habitat, and the existing woodlands of Massy's Wood and Montpellier Hill will remain intact. Users will be encouraged to stay on improved access paths and large areas of plantation will be left intact. It must be noted in this response that the areas is already subject to disturbance by people and dogs.

	Birds	The submssions states that a condition of planning be that no tree felling is undertaken during the nesting season and that and landscape management plan for the development includes a tree planting and maintenance plan.	Section 6.6.2.1 of the EIAR states that "vegetation clearance/removal for the proposed development will generally be restricted to out with this period. However, if there is a need for vegetation removal to be undertaken during this period, a suitably qualified Ecologist will be present on site to physically check all areas, prior to works to ensure that no nesting birds, Red Squirrel or Bats are present in the areas to be cleared, to supervise clearance and to ensure compliance with other provisions of the Wildlife Acts".
	Badgers	The submission notes that that the status/ activity level of the badger setts may change over time and a licence may be required to disturb or the destory the sett.	Two setts were identified during the walkover surveys. In Novemebr 2016, both of these setts were classified as inactive and outside the footprint of the proposed works. The applicant acknowledges that the status of a sett may change over time and that new setts may be excavated by badgers between the planning application and construction, which may require additional mitigation. Section 6.2.2.1 of the EIAR states that "prior to any works being carried out, a pre-construction Badger survey will be undertaken". If a sett is identified that could be impacted by the project, a licence will be sought from NPWS prior to any licensable works being carried out.
	Flora and Habitats	The submission notes that the habitat/ Invasive species surveys were undertakan at an innapropriate time of year.	The habitats recorded within the study area are described in section 6.4.1 and include conifer plantation, felled woodland and broadleaf woodland (dominated by non-native beech and invasive shrubs). The field layer under conifers and beech trees (both non-native) is restricted by light and chemical compounds in the fallen leaves respectively that prevent other plants growing. In other areas of Massy's Wood invasive Cherry Laurel, Himalayan Honeysuckle and Snowberry dominate the field layer. Conifer Plantations, Scrub and Felled Woodland on Montpelier Hill do not provide diverse habitats and therefore it was considered that the habitat survey, even outside the optimum vegetation survey sufficient in characterising the area.
	Flora and Habitats	The baseline data tables are mixed up.	The error in the Table in Section 6.3.4 is noted and corrected tables will be submitted with the response.

	Glendoo Brook	The submission notes that the water quality of the Glendoo Brook should be monitored pre-conruction, during construction and post construction to ensure it is protected.	There will be no in-stream works undertaken as part of the proposed development. Protective and enhancement measures are proposed for the Glendoo Brook. The Glendoo Brook will be protected during construction and enhanced in the long term through the provision of improved trails to reduce bankside erosion the removal of invasive species and establishment of a field layer to reduce bankside erosion and sedimentation. Surface water run-off from Montpelier Hill will be drained into a number of attenuation pounds and into a petro-chemical interceptor next to the military road. Surface-water will be carried under military road in a culvert which will flow into an open drain in Massy's Wood. Monitoring of the Glendoo Brook will be undertaken by an ecological clerk of works prior to construction and by an ecologist employed to undertake annual monitoring during the operational phase as described in section 6.6.2.2 of the EIAR. This will include macroinvertebrate sampling and turbidity testing.
	Deer	The submission notes that deer have not been mentioned in the EIAR. The submission requests that a deer management plan be produced to control deer number and that deer lawns and high seats be installed.	Deer are present within the site and in the surrounding area in high numbers. Much of the site, including the felled woodland, beech woodland and conifers, provide very limited grazing opportunities, however the conifer plantations do provide safe cover. Coillte, the landowner, currently puts hunting licences on it's lands out to tender. Erecting high seats and deer lawns for shooting deer on the site, which currently has 100,000 visitors per year, is considered a health and safety risk to members of the public who use the area and it is considered more appropriate to concentrate deer control in areas outside publicly these accessible lands.
	Vegetation Clearance	The submission requests that consideration be given to the breeding bird season and that no vegetation clearance during this period (1st March-31st August) should be included as a condition of planning.	Approximately 15% of the planting will consist of shrubs and small tress such as hawthorn, elder, blackthorn and holly, predominantly as a boundary treatment around the site of the visitor centre and car park. The areas containing naturally regenerating immature woodland, scrub and clearfell will be replanted with a broadleaf/ conifer mix. The areas of scrub and immature woodland to close to the existing car park will be cleared to create open glades.

	Construction Management Plan	The submission notes that a full assessment of the imapcts of the project cannot be made with a construction management plan detailing the location of compounds settlement ponds etc.	An invasive species will survey will be undertaken as part of the pre-construction surveys. All areas containing invasive species will be demarcated and treated appropriately.
Hellfire Massy Residents Association & Others	2	Appriasal of Nightime Photo-montages	
	2.1	Nighttime photomontage after 5 years is mid-summer when screening by foliage is at its highest	The hours of operation will be during daylight hours. Outside this time low level bollard lighting will be provided to allow staff to reach the car park safely.
	2.2	There is no lightspill modelling during construction phase, therefore an assessment of the impacts cannot be made.	Section 6.6.2.2 states "The lighting design will incorporate measures to minimise light spillage and disturbance for Bats and other nocturnal species". The visitor centre will operated during daylight hours only, therefore light spill from the building will not impact wildlife.
	3.2	Qualifications and experience of surveyors not detailed in accordance with EIA good practice.	Surveys were undertaken by Patrick O'Shea. Patrick holds a BA in botany, an MSc in ecology and has 5 years experience in ecological consultancy in Ireland and the UK. Patrick has undertaken surveys for protected mammals, habitats and birds on major infrastructure projects including roads, bridges and buildings. Patrick has held a number of project specific species licences (badger, bat, red squirrel, newt) and currently holds an NPWS licence for bat roost disturbance. Owen O'Keefe has a degree ecology from UCC two years experience in ecological consultancy. Kate Moore has a degree in environmental biology from UCD and has 1.5 years experience in ecological consultancy.

	3.4	The true ecological value of the woodland cannot be assessed because the surveys were not at the optimum time of year.	The habitats recorded within the study area are described in section 6.4.1 and include conifer plantation, felled woodland and broadleaf woodland (dominated by non-native beech and invasive shrubs). The field layer under conifers and beech trees (both non-native) is restricted by light and chemical compounds in the fallen leaves respectively that prevent other plants growing. In other areas of Massy's Wood invasive Cherry Laurel, Himalayan Honeysuckle and Snowberry dominate the field layer. Conifer Plantations, Scrub and Felled Woodland on Montpelier Hill do not provide diverse habitats and therefore it was considered that the habitat survey, even outside the optimum vegetation survey sufficient in characterising the area.
	3.5	No freshwater invert surveys carried out of the Glendoo Brook. Although no in-stream works are taking place, stream can be effected by other activities eg. run-off.	There will be no in-stream works undertaken as part of the proposed development. Protective and enhancement measures are proposed for the Glendoo Brook. The Glendoo Brook will be protected during construction and enhanced in the long term through the provision of improved trails to reduce bankside erosion the removal of invasive species and establishment of a field layer to reduce bankside erosion and sedimentation. Surface water run-off from Montpelier Hill will be drained into a number of attenuation pounds and into a petro-chemical interceptor next to the military road. Surface-water will be carried under military road in a culvert which will flow into an open drain in Massy's Wood. Monitoring of the Glendoo Brook will be undertaken by an ecological clerk of works prior to construction and by an ecologist employed to undertake annual monitoring during the operational phase as described in section 6.6.2.2 of the EIAR. This will include macroinvertebrate sampling and turbidity testing. The protection of the water quality of the Glendoo Brook is described in section 6.6.2.1 which includes the provision of a Construction, Erosion and Sedimentation Plan.
	3.6	Two Annex I habitats overlooked- dry heath and petrifying springs.	Dry heath is described in the submission as occurring alongside the tracks of the Hellfire Forest. The habitats between the tracks and the conifer plantations, scrub and immature woodland vary in width from 0.5m to 5m. When the site was being mapped the track verges were included in the adjecent habitat block, whether scrub, recently felled woodland or conifer plantation. It was not considered at the time of the survey that these areas corresponded to Annex I European Dry Heath for the following reasons: The high percentage of disturbed ground in the vicinity, the high percentage of non-native species in the vicinity (non-native conifers), low % cover of dwarf shrubs (must be >25%) and high percentage cover of grasses and rushes. The positive indicator species Calluna vulgaris and Erica cinerea were rare. Ulex gallii, a positive indicator species, was common and found alongside Ulex europeaus, which is not a positive indicator species. As described in Fossit (2000) Gorse should only be considered a component of heath where it is low growing. Large areas of previously felled woodland on Montpelier Hill have been succeeded by scrub consisting of Gorse species. In the areas where

			gorse scrub has not become the dominant the habitats are transitional habitats which will become gorse scrub if left unplanted. Annex I European Dry Heath is not considered to be present along the forest tracks on Montpelier Hill. Calcareous springs containing tufa were noted along the link path in the submission. The link path in question has been omitted from the design.
	3.7	Fields containing devils bit scabious are north of the hell fire club.	These fields are outside the proposed development site boundary and users will not have access to this area.
	3.8	Errors in Tables	The corrected Tables are being submitted with the response to DCHG.
	3.9	No assessment whether the species in the desk study actually occur in the ZOI.	The desk study results are based on a polygon query of the site boundary and zone of influence and is considered background information to assist in the design of the surveys. Species listed in the desk study results were considered to potentially be present within the site of the proposed development.
	3.10	No bryophyte field survey	The proposed works in Massy's Wood are minor and include trail upgrades, short lengths of new trails, works in the walled garden and works adjacent to the R115 for the canopy bridge. There are no anticipated impacts on bryophytes.
	3.11	Some level of bryophyte survey should have been undertaken	The proposed works in Massy's Wood are minor and include trail upgrades, short lengths of new trails, works in the walled garden and works adjacent to the R115 for the canopy bridge. There are no anticipated impacts on rare or protected bryophytes.
	3.12	No detail on transect routes	Transects were walked in to a level where there was confidence that each area had been covered. No records were kept of the transect routes. 8x42 binoculars were used to assist in drey identification.
	3.13	Feeding signs not mapped	The mapping of feeding signs was not considered necessary because of the number of sightings of live red squirrels, which were mapped. Section 6.4.2.1 states that feeding sign were recorded throughout the site and based on the habitats present, red squirrels are considered to be present throughout the site.
	3.14	No information on dreys in Massy's Wood	No dreys were recorded in Massy's Wood. 6.4.2.1 states that red squirrel are likely to occur throughout Massy's Wood and Montpelier Hill. Section 6.6.2.1 states that a pre-construction survey will be undertaken which will identify any new dreys within the derogation limits of works, and seek licences from NPWS, as required.

	3.15	No bat activity surveys accross the site or survey of buildings	The bat roost suitability assessment of the site was carried out as part of the multidisciplinary surveys. The mixed broadleaf and conifer woodlands that make up Massy's Wood, along with the Glendoo Brook offer good quality habitat for bats including Myotis species and Brown long-eared bats which are likely to be present in area. The site of the proposed building and associated car parking was surveyed on two nights. Conditions were ideal and bat activity was low on both nights. The main impact of the project on bats was considered to be disturbance or destruction of trees with bat potential close to the site of the proposed building/car park. The habitat in this area is felled conifer woodland with occasional mature beech trees and is not considered to be high quality bat habitat. Following construction, broadleaved woodland and new ponds will have a positive impact on bats. Although Myotis and brown long-eared bats may be present in Massy's Wood and the wider area, night-time presence/ absence surveys in Massy's Wood were not undertaken because their presence, if confirmed, would be inconsequential, because there would be no negative impacts on the foraging habitat as works within Massy's wood are minor. A preliminary roost inspection was undertaken throughout the site, and included the Hellfire Club building, the walled garden in Massey's Wood as well as the bridge structures. These structures were deemed to have no potential to support roosting bats. Prior to tree-felling and works on any structure, a preconstruction survey will be carried out to identify any changes on the condition and potential to support bat roosts. A preliminary roost inspection was undertaken throughout the site, and included the Hellfire Club building, the walled garden in Massey's Wood as well as the bridge structures. These structures were deemed to have no potential to support roosting bats. Prior to tree-felling and works on any structure, a preconstruction survey will be carried out to identify any changes on the condition and potential to support bat roosts.
	3.16	No detail on survey methodology for bats, cross reference to tree report or trees requiring pruning along track.	The bat surveys followed best practice guidance (Collins (eds.), 2016). The emergence/dusk surveys were undertaken on the 30th May 2017 and began 15 minutes before dusk and lasted for two hours. The re-entry surveys were undertaken on the 7th June 2017 and began two hours before dawn and lasted two hours. For these surveys, the surveyors stood facing the potential roost feature using either an Anabat Walkabout Bat Detector or a Song Meter EM3+ Bat Detectors. The surveyors watched the potential roost features for the duration of the survey for bats exiting or swarming behaviour. Both Bat detectors allow visual validation of echolocation recordings (species identification) in real time. Following the emergence/ re-entry surveys, recordings (detections) were processed using Kaleidoscope Pro Analysis software to extract information including sound recordings, sonograms, time, date and species identification confidence values. The data was manually checked following the automated processing. Notes were taken on each survey on the weather conditions and bat activity.

			The number of recording is not a suitable method to count bats as a single foraging bat may generate numerous recordings in a feeding area, therefore the surveyors assertion of low levels of activity on both surveys was used. 21 and 1 bat passes were recorded during the surveys respectively. The tree report was not used in determining what trees had potential roost features.
	3.17	No assessment of U class trees, not mention of trees with bat potential in tree survey report.	The tree report was not used in determining what trees had potential roost features.
	3.19	No tree climbing surveys for potental bat roosts carried out	The two trees identified close to the site of the proposed developments were surveyed using one dusk/ emergence and one dawn/ re-entry survey. These did not confirm a bat roost. As the submission notes, a negative result does not necessarily confirm that bats do not use these features from time to time. Section 6.6.2.1 describes the surveys which should be undertaken prior to works to ensure no bats are present. If a bat roost is discovered during the pre-construction survey, a derogation licence must be applied for from the NPWS.
	3.20	Results of emergence/ re-entry surveys not clear, no definition of 'low activity' and no photos of the features.	Neither of the trees surveyed contained a bat roost. The number of passes recorded was 21 and 1 on the surveys, which is considered low. The number of recordings is not a suitable method to counting bats as a single foraging bat may generate numerous recordings in a feeding area, therefore the surveyors assertion of low levels of activity on both surveys was used.
	3.21	The survey methodology was not suitable for detecting quieter species. Static detectors over several nights would be more appropriate.	It is recognised that quieter species such as Myotis species and Brown long-eared bats are likely to be present in Massy's Wood. Static surveys throughout the site would provide a more detailed picture of use by bats, however the presence of these species would not alter the mitigation as there are, other than the area around footprint of the car park, visitor centre and canopy bridge, no impacts on foraging.
	3.23	Badger sett along wall at the eastern side not recorded during survey.	Two setts were recorded during the walkover surveys and are detailed in the EIAR.
	3.24	Sett on Hellfire Club seemed active. Camera monitoring requried to inform a licence application.	During the survey in January 2017 the sett on Montpelier Hill was classified as inactive becasue there were no signs of recent digging or entry by a badger sized mammal. Many of the entrances were covered with pine needles and fallen sticks. Rabbit scrapes and droppings were also recorded in the area close to the sett. It is recognised that the status of a sett may change over time, and section 6.6.2.1 prescribes a pre-construction survey to assess any changes to exisitng badger setts and idenfy

			any new setts. On the 11th August 2017 NPWS responded to the licence application stating that if the mitigation is implemented as described then no licence is required where the setts are not damaged.
	3.25	Pine Marten record not mapped.	The Pine Marten sighting was not mapped because the species is highly mobile and likely that the study area forms part of Pine Marten territories.
	3.27	Pine Marten were not included as a KER	Pine Marten were not included as a KER because no den was located, the species is widespread in Ireland and will there is suitable habitat in the surrounding area, therefore it was determined that the species would not be impacted by the proposed development.
	3.28	Concern over Merlin and Peregrine because they are SCI's.	Peregrine and Merlin are Special Conservation Interests of the Wicklow Mountains SPA and therefore the only species relevant to the AA Screening. Both species are likely to hunt within the site. The site does not provide suitable nesting habitat for Peregrine (cliffs and tall buildings). The site of the visitor centre consists of recently felled woodland with occasional mature beech trees, scrub and conifer plantation. This area is currently subject to disturbance from people and dog walkers. Massy's wood is primarily non-native beech woodland and Montpellier Hill conifer plantation of varying ages. Merlin may nest in conifer plantations, however given that there is vast areas of heath and blanket bog, the preferential nesting habitat of Merlin, close by, the conifer plantations are unlikely to provide an important nesting resource for this species. Considering there is currently human based disturbance along the trails on Montpellier Hill, the fact the Merlin vary their nest sites from year to year and that the species has extensive nesting opportunities in the surrounding areas, both in conifer plantation and more traditional heather uplands, there are not considered to be potential impacts on the Conservation Objectives for this species in the Wicklow Mountain SPA . In addition, a research report produced by the Forestry Commission in the UK entitled 'Recreational use of forests and disturbance of wildlife' (Mazano & Dandy, 2012) cites two scientific papers which investigated the potential impacts of recreational users on Merlin populations. Newton et al. (1981) concluded that recreational walkers were unlikely to have caused a sharp decline in Merlin. Another study, Meek (1988) suggest little negative impact on Merlin by recreation. Mazano & Dandy (2012) concludes that "On balance, the available evidence does not indicate significant negative impacts on UK forest birds following 'flight' responses to walking- including no clear long-term or population-level impacts". Section 6.6.2.1 of the EIAR highlights the mitigation that will be employed prior to construction to identify nesting birds including peregrine and merlin. In the unlikely event that an active merlin nest is discovered, an appropriate buffer will be strictly implemented until the chicks have fledged.

	3.31	Abscence of bird surveys is a significant deficiency.	The multidisciplinary walkover survey determined that the habitats within the study area were unlikely to contain significant populations of birds of conservation concern. Species such as Barn Owl, Peregrine and Merlin are likely to be present in the wider area. Section 6.6.2.1 of the EIAR highlights the mitigation that will be employed to avoid nesting birds. In the unlikely event that an active nest is discovered, an appropriate buffer will be strictly implemented until the chicks have fledged.
	3.32	No infomation on the HSI scores for ponds	The Habitat Suitability Index was developed to assist in the survey of Great Crested Newt (GCN), a European Protected Species found in the Britain but not Ireland. The HSI uses habitat features to determine the suitability of a pond, and therefore the likelihood of GCN being present. Smooth Newt are less particular than GCN s and found in a wider range of habitats. Therefore the HSI as developed for GCN is not suitable, but a number of it's features can reflect the suitability of a pond for Smooth Newt. These elements include the presence of other ponds in proximity and the presence of fish and birds. No score was generated however the types of habitat determined that further surveys were necessary and the follow up survey identified Smooth Newt in Pond 1.
	3.33	One pond west of pond 1 may have been missed.	No pond west of Pond 1 was identified during the walkover surveys.
	3.35	Lack of lizard surveys a deficiency.	The edges of the conifer plantations are predominantly gorse scrub and rank grassland. These do not provide quality lizard habitat. Grassy verges along the forest tracks will not be impacted by the proposed development
	3.36	No mapping of invasive species	The distribution of invasive species are described in Section 6.4.2.5 of the EIAR. Detailed distribution maps will be developed as part of the invasive species management plan which will be development by the contractor.
	3.37	Red Squirrel should be County Level importance.	The population of red squirrel in the area of connected woodlands is of county importance, however the population within the site boundary forms a small part of this and that is the rationale behind classifying red squirrel as Local Importance (Higher Value).
	3.38	Pine Marten should have been classified as a KER of County Level Importance.	Pine Marten are a highly mobile species with large ranges. The fact that no dens were recorded within the study area and the large territory size of this species, Pine Marten was not included as a Key Ecological Receptor.
	3.39	Impacts of habtiat loss are not objective or quantified.	The direct habitat loss as a result of the proposed development is considered secondary to the impacts of the extra footfall on Montpelier Hill and within Massy's Wood. The habitats within the footprint of the proposed development are described in Section 6.4.1 and are also mapped, illustrating the habitats in the areas where the proposed developments is located.

	3.40	No breakdown of habitat loss at differant stages	The direct habitat loss as a result of the proposed development is considered secondary to the impacts of the extra footfall on Montpelier Hill and within Massy's Wood. The habitats within the footprint of the proposed development are described in Section 6.4.1 and are also mapped, illustrating the habitats in the areas where the proposed developments is located.
	3.41	Impact assessment defiecient because potential Annex I habtiats are not included.	See 3.6
	3.42	Cross reference with hand rail lighting, tree report, culvert and SW pipe, foundations for tree top bridge, temp site compounds, ponds, masonry works, stewards house and have not been made.	There is no hand rail lighting proposed. The tree report was not referenced in for the EIAR biodiversity chapter. The culvert/ SW pipe will pass underneath the road and along the existing track into Massy's Wood where it will drain into an open ditch. Standard best practice pollution prevention controls will prevent pollution from the bridge foundations. Temporary site compounds will be located within the footprint of the proposed development.
	3.43	Tree survey is described as preliminary, trails plan is also described as preliminary.	The tree survey was carried out in accordance with TBS 5837 (2012). The trails plan illustrates the proposed improvements and upgrade of many existing routes, and new sections of trail in places. The routes indicated can be considered the intended alignment. At detailed design stage minor adjustments to the trail routes may be made in response to localised site gradients, variations and obstacles.
	3.44	Impacts on trees lost cannot be assessed based on the fact that the tree report is a preliminary assessment.	The tree survey was carried out in accordance with TBS 5837 (2012).
	3.45	EIAR Section 6.6.2.1 states CESCP will have regard to in-stream works in contradiction with other sections that state there will be no in-stream works.	This is an error. There are no instream works proposed.

	3.48	No reference to security lighting at temproary compounds. No reference to surface water drainage during construction.	Lighting of temporary compounds will follow section 6.6.2.1 of the EIAR: "The use of artificial lighting on site will be minimised in terms of the area required to be illuminated and the length of time for which any lighting is switched on. Light spillage with be prevented as far as reasonably practicable; Artificial lighting will be shut off at night when not in use or when works cease at the end of the day in order to minimise the effects of light pollution and disturbance to crepuscular and nocturnal species". Surface water drainage during construction is dealt with in Section 8.6.1 and states "A new surface water drainage system has been designed to cater for the new hardstanding areas additional surface water runoff of 792 cu. m in the 1 in 100 year event. Runoff will be stored on site with an allowable outflow of 2 l/s/ha and to limit the flow into the open stream in the Massy Estate".
	3.50	No trees with high potential in the table but referenced in construction stage mitigation. No reference to derogation licence requirement.	This reference to 'high potential' refers to trees identified during the pre-construction survey. Since the survey in November 2016/ January 2017, it is possible for new potential roost features to emerge following storms i.e ex-hurricane Ophelia.
	3.51	No detail on Annual Review/ Surveys/ Baseline	The annual reviews will use the EIAR as a baseline. The surveys will be designed by the ecologist employed to carry out the review.
	3.52	No sites for replacement dreys in EIAR. Dreys in Massy's Wood need to be addressed.	This will be determined by the contractors ecologist/ ECoW prior to construction and will be based on the construction program, the location of compounds/ sources of disturbance and suitable trees to put the artificial dreys. Indicative location for additions artificial dreys to be provided as an enhancement are shown in the draft Red Squirrel Conservation Management Plan submitted as requested by DCHG.
	3.53	The following statements lack clarity: "rope bridges will be provided"; "planting will seek to establishes new linkages at the landscape scale"	The number and locations of rope bridges to allow red squirrel to cross the road safely has not been specified in order to allow the contractor's ecologist/ ECoW and contractor to place them based on the locations of trees/ suitable locations to site a telegraph pole, habitat connectivity and locations away from sources of disturbance.
	3.54	No detail on numbers/ type/placement of bat boxes.	No bat roosts will be impacted by the proposed development, therefore the bat boxes are an enhancement measure. The location/ type and placement of the bat boxes will be determined by the contractors ecologist/ ECoW. It is likely that crevice type woodcrete boxes will be used which are self cleaning.

	3.55	No detail for monitoring light-spill	The impacts on bats are considered to be overall positive. No monitoring of light spill is proposed, other than as part of the ECoW role during construction. Section 6.6.2.2 states "The lighting design will incorporate measures to minimise light spillage and disturbance for Bats and other nocturnal species". The visitor centre will operated during daylight hours only, therefore light spill from the building will not impact wildlife.
	3.56	No measure to protect amphibians in winter refuges	Smooth Newt utilise a range of features to overwinter including rock piles, vegetation and mud. No specific features that could provide winter refuges were identified.
	3.57	Planting of treelines/ hedgrows mentioned but no reference to species or placement.	This is dealt with in the landscaping chapter and associated drawings (Chapter 10) which details the locations of planting and species composition.
	3.58	The term 'no net loss' could be used to describe all the ecological elements.	This is correct, and the mitigation (Section 6.6) aimed to achieve this. Red Squirrel were deemed to be the only KER with residual impacts following mitigation.
	3.59	The realignmnet of tracks and trails poses a risk to calcareous springs.	The link path has been omitted from the design.
	3.60	Habitat enhancement is aspirational and does not contain specific targets.	The proposals for habitat management are often in tandem with other elements of the project. The planting of native broadleaved trees comes under the landscape plan, the drainage plan includes a series of ponds and the woodland management includes invasive species eradication. The location/ type and placement of the bat boxes, red squirrel dreys and pine marten nest boxes will be determined by the contractors ecologist/ ECoW.
	3.61	Notes residual impacts on Annex I habitats and others not included as KERs not complete (Pine Marten, Sika Deer, Badger etc)	There will be Annex I habitats impacted by the proposed development. A visual recording of a Pine Marten was made during a bat survey. No dens or potential dens were recorded during the surveys. Pine Martens have large territories (O'Mahony, 2011) and are mainly nocturnal and elusive, they are unlikely to be affected by the project as a result of existing disturbance by people and dogs, which may result in them being habituated to human disturbance or nesting away from the area of the development. During operation Pine Marten will continue to inhabit the area. The Red Squirrel Conservation Management Plan will address enhancements for Pine Marten as a form of grey squirrel control. Sika Deer are a non-native invasive species and damage native eco-systems through browsing on saplings (preventing woodland regeneration) and through hybridisation with native red deer. For this reason, Sika Deer were not considered in the EIAR. Coillte and the NPWS currently manage deer in

			the wider area. No badger setts will be directly impacted by the proposed development.
	4.1	The potential for Peregrine and Merlin on the site and impacts these SCIs cannot be ruled out.	Peregrine and Merlin are Special Conservation Interests of the Wicklow Mountains SPA and therefore the only species relevant to the AA Screening. Both species are likely to hunt within the site. The site does not provide suitable nesting habitat for Peregrine (cliffs and tall buildings). The site of the visitor centre consists of recently felled woodland with occasional mature beech trees, scrub and conifer plantation. This area is currently subject to disturbance from people and dog walkers. Massy's wood is primarily non-native beech woodland and Montpellier Hill conifer plantation of varying ages. Merlin may nest in conifer plantations, however given that there is vast areas of heath and blanket bog, the preferential nesting habitat of Merlin, close by, the conifer plantations are unlikely to provide an important nesting resource for this species. Considering there is currently human based disturbance along the trails on Montpellier Hill, the fact the Merlin vary their nest sites from year to year and that the species has extensive nesting opportunities in the surrounding areas, both in conifer plantation and more traditional heather uplands, there are not considered to be potential impacts on the Conservation Objectives for this species in the Wicklow Mountain SPA . In addition, a research report produced by the Forestry Commission in the UK entitled 'Recreational use of forests and disturbance of wildlife' (Mazano & Dandy, 2012) cites two scientific papers which investigated the potential impacts of recreational users on Merlin populations. Newton et al. (1981) concluded that recreational walkers were unlikely to have caused a sharp decline in Merlin. Another study, Meek (1988) suggest little negative impact on Merlin by recreation. Mazano & Dandy (2012) conclues that "On balance, the available evidence does not indicate significant negative impacts on UK forest birds following 'flight' responses to walking- including no clear long-term or population-level impacts".
	5.1	Insufficient data means ABP are obligued to refuse the application	The EIAR and the clarifications in the responses to submissions provide enough information to adequately assess the impacts of the proposed development on biodiversity.
	5.2	ABP reminded of NPWS circular regarding derogation licneses for European Portected Species to be made in advance of a planning application.	No licensable activates which impact European Protected Species (Bats/ Otter/ Pine Marten etc) were identified in the EIAR, therefore no applications for such activates were made. The EAIR noted the potential for impacts on these species including disturbance to foraging/ feeding area and habitat fragmentation. These are not licensable activities.

Inland Fisheries Ireland	Ecology/Biodiversity	Proposed development is in the Owendoher/Dodder catchment which is home to Atlantic Salmon (listed under Annex II and V of the habitats directive), Lamprey, Sea Trout, Brown trout populations which highlight the sensitivity of the catchment - salmonid water constraints must apply to any development in the area..	There will be no in-stream works undertaken as part of the proposed development. A CESCP will be developed by the contractor in relation to run-off (Section 6.6.2.1).
	Ecology/ Biodiversity	local eco system should be considered a local natural heritage feature warranting careful protection/conservation.	The Mitigation Section (6.6) of the EIAR provides for the protection of the local area with respect to the project.
	Ecology/ Biodiversity	Construction works run the risk of releasing sediments and pollutants in the surrounding watercourses which can significantly impact the flora and fauna of the surface water system. A comprehensive/integrated approach for achieving stream protection during construction and operation in line with international best practice should be implemented	The contractor will develop a CESCP which will be an intrinsic part of the works (Section 6.6.2.1).

	Ecology/ Biodiversity	recommends a comprehensive Construction Management Plan (including biosecurity actions), a Construction Erosion and Sediment Control Plan, PPE gear and an Invasive Species Management Plan.	The CMP, CESCP and invasive species management plan will be developed by the contractor prior to works (Section 6.6.2.1).
	Ecology/ Biodiversity	IFI recommends 10m riparian vegetation zone on each side of the watercourse. All planting to be native. - any habitat enhancement measures associated with watercourses should be approved by IFI.	The existing trails are within the 10m vegetated buffer proposed by IFI. These trails will be upgraded following best practice guidelines for working adjacent to watercourses. Currently there is little vegetation on the bank of the stream due to excessive shading from both beech and non-native species. The invasive species management plan will be developed by the contractor. IFI will be consulted on works within 10m of the Glendoo Stream.
Declan McKeever	Ecology/ Biodiversity	there is little separation between Massy's and HFW when explaining their environments. Massy's should be protected from such a large increase in visitors in a different way than Montpelier Hill. A Woodland Management Plan should be implemented- no consideration has been given to this in any report which is a mistake.	There is no Woodland Management Plan proposed in the EIAR, however the landscaping plan and commitments to plant native tree species, continue conservation measures in Massy's Wood and eradicate invasive species will all contribute to the sustainable management of the woodlands. Coillte will continue to manage the conifer plantations on Montpelier Hill.

	Ecology/ Biodiversity	red squirrel - these are a protected species- however, when this development is considered, they do not seem to matter.	The potential impacts on Red Squirrel were assessed in the Biodiversity chapter of the EIAR. The potential impacts identified included disturbance, habitat loss (including loss of dreys) and habitat fragmentation. Appropriate measures were proposed to mitigate these impacts, including the implementation of a Red Squirrel Conservation Management Plan which is being prepared as part of the responses to submissions. This includes grey squirrel control, the provision of artificial dreys and pine marten nest boxes and rope bridges over the Military Road. There will be no residual long-term effects on Red Squirrel considering the mitigation measures proposed.
	Ecology/ Biodiversity	No information on birds- except one paragraph on page 90. Peregrine Falcons are protected and are around the area. "Hellfire Hill" written by Michael Fewer indicates many different species of the local bird population including the Merlin (a rare visitor to the site).	All wild birds are protected in Ireland. The species at the site of the proposed development are common and widespread in Ireland and the site does not support significant populations. Evidence of greater-spotted woodpecker was also noted during the field survey however this species is not afforded any extra protection under the Wildlife Acts. Peregrine Falcon and Merlin are listed under Annex I of the birds directive and are Special Conservation Interests of the Wicklow Mountains SPA, however peregrine is unlikely to breed at the site and although it is possible that merlin nest in the conifer plantations, there is an abundance of heath and blanket bog in the Dublin/ Wicklow Mountains and this species does not reuse nest sites like peregine. In summary, the potential for the habitats present to support significant populations of birds was considered low and therefore no detailed surveys were undertaken.
	Ecology/ Biodiversity	No mention of deer in the EIAR. This is a serious omission considering the impact they would have.	Sika Deer are a non-native invasive species and damage native eco-systems through browsing on saplings (preventing woodland regeneration) and through hybridisation with native red deer. For this reason, Sika Deer were not considered in the EIAR. Coillte and the NPWS currently manage deer in the wider area.
	Ecology/ Biodiversity	Sensitive habitat surveys were conducted in December 2016... not the optimum time to obtain a full view of all species in the area- December would be a hibernation period. what was the priority of the survey and how serious was the survey conducted?	The habitats recorded within the study area are described in section 6.4.1 and include conifer plantation, felled woodland and broadleaf woodland (dominated by non-native beech and invasive shrubs). The field layer under conifers and beech trees (both non-native) is restricted by light and chemical compounds in the fallen leaves respectively that prevent other plants growing. In other areas of Massy's Wood invasive Cherry Laurel, Himalayan Honeysuckle and Snowberry dominate the field layer. Conifer Plantations, Scrub and Felled Woodland on Montpelier Hill do not provide diverse habitats and therefore it was considered that the habitat survey, even outside the optimum vegetation survey season, was sufficient in characterising the area.

Hester Scott	Ecology/ Biodiversity	Biodiversity study was inadequate - inaccurate in parts and impoverished in detail with extraordinary omissions.	The EIAR Biodiversity Chapter included habitat surveys and surveys for rare and protected species. Mapping was provided for habitats and the results of the mammal surveys (e.g. Badger, Squirrel, Otter). The habitats present and the current levels of disturbance, coupled with the proposed works, concluded that certain detailed surveys were unnecessary. The reasons for not undertaking lizard and bird surveys are detailed in sections 6.4.2.2 and 6.4.2.3.
	Ecology/ Biodiversity	Multidisciplinary walk with 2 people is unsatisfactory.	The multidisciplinary walkover survey was carried out over two days by experienced professional ecologists. This allowed the entire site to be surveyed and habitats mapped. Following this, additional dedicated surveys were undertaken for red squirrel, bats and smooth newt.
	Ecology/ Biodiversity	More than 2 Badger setts in Massey.	Two setts were recorded during the walkover surveys and are detailed in the EIAR. The applicant acknowledges that the status of a sett may change over time and that new setts may be excavated by badgers between the planning application and construction, which may require additional mitigation. Section 6.2.2.1 of the EIAR states that “prior to any works being carried out, a pre-construction Badger survey will be undertaken”. If a sett is identified that could be impacted by the project, a licence will be sought from NPWS prior to any licensable works being carried out.
	Ecology/ Biodiversity	There are 8 visible red Squirrel dreys visible but only 1 identified.	Given the size of the wooded area of Massy's Wood and Montpelier Hill and the Red Squirrel population in these areas and adjoining woodlands it is reasonable to expect that more dreys are present in the are. One drey was identified and confirmed as a red squirrel drey in the EIAR that will be impacted by the proposed development. Section 6.2.2.1 of the EIAR states that “Prior to any works being carried out, a pre-construction Red Squirrel survey will be undertaken 2 to 3 weeks prior to works to ensure no new dreys have be made within 50 m of the works”. If a drey is identified that could be impacted by the project, a licence will be sought from NPWS prior to any licensable works being carried out.
	Ecology/ Biodiversity	Surface water runoff into Glendoo/Owendoher/Dodder catchment will be catastrophic to salmon and sea trout	Works will be undertaken following best practice guidelines from Inland Fisheries Ireland for working adjacent to salmonid waters. The contractor will prepare and implement a Construction Management Plan, which will include a Construction Erosion and Sediment Control Plan, to address the risk of run-off during the construction phase. Currently, there is little vegetation on the bank of the stream due to excessive shading from beech and other non-native species. This is detrimental to water quality and will be addressed in the contractor's Invasive Species Management Plan. No works in or adjacent to the Glendoo Brook will be undertaken between July and September inclusive. During operation surface water run-off from the development will be collected in a number of attenuation ponds. These are used to clean and temporarily store the water. Run-off from the car park will be further cleaned using a petro-chemical interceptor. The surface water will be released from the attenuation ponds at the Greenfield

			run off rate and will flow under the old military road though an underground pipe before opening up into a small natural stream inside Massy's Woods.
	Ecology/ Biodiversity	The potential to affect the SACs, SPAs and pNHA in the zone of influence is unacceptable.	Both the Habitats Directive and Birds Directive were considered as part of the Appropriate Assessment Screening Report which concluded that the project does not have the potential to significantly impact on the Conservation Objectives of the three Natura 2000 Sites that occur within the Likely Zone of Impact.
	Ecology/ Biodiversity	EIAR acknowledges a loss of breeding habitats, degradation of necessary conditions, direct mortality and pollutions during construction phase (newts, frogs, red squirrels, bats, etc.) Long term impact therefore is significant, not unimportant as stated.	Following the inclusion of the mitigation measures proposed in the EIAR to protect biodiversity, there will be no significant ecological impacts in the long term. Planting of native species, invasive species eradication, the provision of bat boxes, artificial red squirrel dreys, squirrel rope bridges over the military road, artificial pine marten nest boxes, new ponds and protection measures for ponds will lead to an over-all enhancement of biodiversity in the area. The operational phase mitigation is detailed in section 6.6.2.2 of the EIAR. Squirrel and Pine Marten enhancements are detailed in the draft red squirrel conservation management plan.
	Ecology/ Biodiversity	The woodlands are not a parkland.	The EIAR does not states that either Massy's Wood or Montpelier Hill is a parkland.
South Dublin Conservation Society	Ecology/ Biodiversity	Has referenced a study in this observation noting that buildings with large glass windows pose a serious threat to bats (smooth surface disrupts their echolocation system) http://science.sciencemag.org/content/357/6355/1045 (there is an additional link in the observation, p.3). This raises concern of proposed development and its interaction with local bats.	The site of the proposed building and associated car parking was surveyed on two nights. Conditions were ideal and bat activity was low on both nights. The main impact of the project on bats was considered to be disturbance or destruction of trees with bat potential close to the site of the proposed building/car park. The habitat in this area is felled conifer woodland with occasional mature beech trees and is was not considered to be high quality bat habitat. Following construction, broadleaved woodland and drainage ponds will have a positive impact on bats.

David Stanley	Ecology/ Biodiversity	Architects Design Report mentioned 11 key objectives for development and preserving biodiversity, though ecological environment and wildlife of the two sites doesn't get mentioned. Emphasis has been on The Building and Increasing Footfall, with little consideration on the impact to the wider forest environment.	While biodiversity is not mentioned explicitly in the 11 key objectives, it is included within the "natural environment" in the Architect's Design Report's overriding objective of "conserving the unique, natural and man-made environment of the Dublin Mountains in a manner that is economically, socially and environmentally sustainable".
	Ecology/ Biodiversity	Professional Consultants should not invite visitors to roam freely across the woods and claim there will be no negative effect (p.9 landscape report)	Table 6.16 (Key Ecological) describes the potential for operational phase impacts of the project which include habitat deterioration, sett abandonment and potential colonisation by grey squirrels. Section 6.6.6.2 details operational phase mitigation that includes planting and new ponds which will reduce the impacts of the additional footfall in the area. Improved trails will encourage users to stay on paths rather than roam freely in the woodland, thereby further reducing the impacts of additional footfall.
	Ecology/ Biodiversity	Increasing footfall will destroy the magic of Massy's, no specific mitigation measures are mentioned. This footfall is a far more significant impact to both woodlands than the building itself.	

	Ecology/ Biodiversity	The higher the footfall, the lower the biodiversity and wildlife. How can the Key Receptors not be severely affected? Mitigation measures have not been proposed to address this.	
	Ecology/ Biodiversity	Massy's is a refuge for wildlife in winter and is a wildlife corridor- disturbing wildlife here will have a knock-on effect on the mountains, Wicklow Mountains National Park, SAC's, SPA's	The Dublin Mountains Visitor Centre links directly to a spur of the Dublin Mountain Way. The spur currently circles Montpelier Hill and follows the existing paths in Massy's Wood where it follows the Glendoo Brook upstream to the bend in the Cruagh Road where is joins the main trail of the Dublin Mountain Way. The path to the east crosses Cruagh Wood and then the Glendoo Road where it travels east along Tibradden Mountain. The Dublin Mountain Way does not enter either the Wicklow Mountains SAC or SPA. The Dublin Mountain Way does come close to these sites in the Cruagh Wood area, however it is on established and well used trails and within conifer plantation. Going west from the bend in the Cruagh Road the Dublin Mountain Way follows the old military road, forest paths and an unnamed road around Annamount Spink and into the Glenasmole Valley. The Dublin Mountain Way enters the Glenasmole Valley SAC at the top of the upper reservoir where it follows the maintenance road along the eastern side of the reservoir 7.7km west of the bend in the Cruagh Road. It is anticipated that there will be an increase in people accessing the Dublin Mountain Way as a result of the Dublin Mountains Visitor Centre, however impact on the conservation objectives of the Natura 2000 sites are not anticipated to occur because the Dublin Mountain Way utilises established trails and public roads and does not enter either the Wicklow Mountains SAC or Wicklow Mountains SPA. The Glenasmole Valley SAC, which the Dublin Mountain Way does enter, is protected for rare grassland habitats which are farmland and not accessible to the public.