



**ENVIRONMENTAL
SOLUTIONS LTD**

Panther Environmental Solutions Ltd,
Units 3 & 4, Innovation Centre,
Institute of Technology,
Green Road, Carlow, Ireland.
R93 W248

Telephone 059-9134222

Email: info@pantherwms.com
Website: www.pantherwms.com

APPROPRIATE ASSESSMENT
SCREENING
REPORT

**CONSTABLE HILL,
HACKETSTOWN,
Co. CARLOW**

2021

DATE:	15 th July 2021	AUTHOR:	Ross Donnelly-Swift, PhD
REPORT NO:	PES_AA_21193	REVIEWED:	Mike Fraher, BSc.

TABLE OF CONTENTS

TABLE OF CONTENTS.....	2
1.0 INTRODUCTION.....	3
2.0 LEGISLATIVE CONTEXT	3
3.0 METHODOLOGY.....	4
3.1 METHODOLOGY GUIDELINES	4
3.2 DESKTOP RESEARCH	5
3.3 FIELD SURVEY	5
4.0 DESCRIPTION OF PROPOSED DEVELOPMENT AND EXISTING SITE.....	6
4.1 PROPOSED DEVELOPMENT	6
4.2 EXISTING ENVIRONMENT	8
4.2.1 Information on Water Quality.....	10
5.0 EUROPEAN SITES (NATURA 2000 SITES) WITHIN ZONE OF INFLUENCE.....	13
5.1 SLANEY RIVER VALLEY SAC	14
6.0 ASSESSMENT OF LIKELY IMPACTS	23
6.1 DISTURBANCE TO PROTECTED HABITATS AND SPECIES	23
6.2 INVASIVE SPECIES	23
6.3 POTENTIAL IMPACTS ON WATER QUALITY	24
6.4 IN COMBINATION EFFECTS.....	25
7.0 SCREENING STATEMENT AND CONCLUSIONS.....	27
8.0 REFERENCES.....	27
APPENDIX A PROTECTED SITES.....	30
APPENDIX B SITE LAYOUT.....	33
APPENDIX C PHOTO LOG.....	37

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

1.0 INTRODUCTION

Panther Environmental Solutions Ltd was commissioned by the client, Carlow County Council, to carry out an Appropriate Assessment as part of a planning application for the proposed development of a new single storey dwelling along with all associated site works at Constable Hill, Hacketstown, Co. Carlow.

The principal aim of this study is to assess whether significant effects to European sites (the Natura 2000 network) are likely to occur as a result of this project in accordance with Article 6(3) of the Habitats Directive and the Planning and Development (Amendment) Act, 2001, as amended. This report has been prepared with regards to the European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997), and the later amendment regulations (S.I. No. 233 of 1998; S.I. No. 237 of 2005).

A study was undertaken by Mr Tom Madden (BSc (Hons) Environmental Science and Dr Ross Donnelly-Swift (BSc (Hons) Biology, MSc Environmental Science and PhD Biosystems Engineering) of Panther Environmental Solutions Limited. This comprised a review of the proposed development, a site visit on the 9th July 2021 to examine the ecological context of the proposed development, a desk study of the information on European sites within the potential zone of influence of the site and an analysis of the information in the context of the guidance to determine if a Natura Impact Statement is required.

2.0 LEGISLATIVE CONTEXT

The EU Habitats Directive (92/43/EEC) on the conservation of natural habitats and of wild fauna by council directive 97/62/EC, 2006/105/EC, and Regulation EC1882/2003 of September 2003, as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/11), provides the framework for legal protection for habitats and species of European importance. The Natura 2000 network provides an ecological infrastructure for the protection of sites that are of particular importance for rare, endangered or vulnerable habitats and species within the EU. The Natura 2000 network in Ireland is made up of European Sites which include:

- Special Areas of Conservation (SACs)
- Special Protection Areas (SPAs)

Article 6(3) of the Habitats Directive establishes the requirement for appropriate assessment when planning new developments that might affect a Natura 2000 site. Article 6(3) of the Habitats Directive states;

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

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

3.0 METHODOLOGY

Screening is the first stage in the Appropriate Assessment process, and is carried out to determine whether a Stage 2 Appropriate Assessment and a Natura Impact Statement (NIS) is required. Screening addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3);

1. Whether a plan or project is directly connected to or necessary for the management of the European (Natura 2000) site; and
2. Whether a plan or project, alone or in combination with other plans or projects, is likely to have significant effects on a European (Natura 2000) site, in view of its conservation objectives.

Screening should be undertaken without the inclusion of mitigation measures. If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 AA and an NIS.

The findings and conclusions of the screening process should be documented, with the necessary supporting evidence and objective criteria. This is of particular importance in the cases where the Appropriate Assessment process ends at the screening stage because the conclusion is that no significant effects are likely.

Screening for Appropriate Assessment involves:

- Description of the project and area characteristics (existing environment);
- Identification and description of Natura 2000 sites that could potentially be affected, and compilation of information on their qualifying interests and conservation objectives;
- Assessment of likely effects – direct, indirect and cumulative, undertaken on the basis of availability of objective information as necessary;
- Screening statement with conclusions.

3.1 METHODOLOGY GUIDELINES

This Appropriate Assessment has been carried with reference to the following guidelines:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidelines for Planning Authorities.* DoEHLG, 2009.
- Circular NPWS 1/10 & PSSP 2/10 Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities
- *Managing Natura 2000 sites – The Provisions of Article 6 of The Habitats Directive 92/43/EEC.* European Commission, 2000.
- Circular L8/08 Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments 2 September 2008

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

- *Assessment of Plans and Projects Significantly Affecting Natura 2000 sites. Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.* European Commission, 2002.
- Commission Notice “Managing Natura 2000 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission, 21.11.2018
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

3.2 DESKTOP RESEARCH

Desktop research was carried out to gather information on the ecology of the site and surrounding areas. The locations of the Natura 2000 sites within 15km of the proposed development at Constable Hill, Hacketstown, Glynn, Co. Carlow were identified from National Parks and Wildlife Service (NPWS) online map viewer. Other Natura sites beyond 15km were also reviewed and considered for the potential for the project to have a negative effect.

Water quality data from the EPA was reviewed for the assessment of biological and environmental data collected on waterbodies in Ireland (Water Quality in Ireland 2013-2018 (2020))

Information on the characteristics of the Natura 2000 sites within the potential zone of influence was reviewed from the conservation objectives documents, site synopses and Standard Natura 2000 data forms available on the NPWS website.

3.3 FIELD SURVEY

A site characterisation assessment was undertaken on the 9th July 2021 to examine the ecological context of the development site, by systematically walking the site and boundaries and determining the habitats present. The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt’s “*A Guide to Habitats in Ireland*”, a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Cognisance was also taken of the Heritage Council guidelines, “*Best Practice Guidance for Habitat Survey and Mapping*”, (Smith *et al.*, 2011).

Bird species and signs of fauna activity and dwellings were also noted. Particular attention was given to the possible presence of habitats and/or species, which are legally protected under Irish and European legislation and to assessing any potential ecological connectivity with Natura 2000 sites or supplementary or steppingstone habitats of relevance to Natura 200 sites.

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

4.0 DESCRIPTION OF PROPOSED DEVELOPMENT AND EXISTING SITE

4.1 PROPOSED DEVELOPMENT

The site is located at Constable Hill, Hacketstown, Co. Carlow at ITM Coordinates 694945X, 679010Y. The proposed site is 0.359 Hectares/0.89 Acres comprising of grassland. The site is accessed by the local L6009 road which runs adjacent to the proposed development site. This local road connects to the regional R727 road approximately 1.2km north-east or 1.5km north-west of the site. The R727 road provides connectivity between Hacketstown and Carlow town. Hacketstown is situated approximately 2.7km to the north-east. The Slaney River Valley SAC is approximately 945m north-west of the proposed site. See Figure 4.1 and 4.2 below.

The proposed development will involve the construction of a single storey dwelling. Existing ground at the site will be rotavated, levelled off and reseeded once the construction phase of the development has been completed. To provide adequate sightlines for access to the site, sections of existing hedgerows and treelines along the eastern boundary of the site will be removed, levelled off, reseeded with grass seed and a 1.3m high timber post and four rail fence and PVC coated chain link fence will be installed. A new double row of native hedging (Elder, hawthorn and blackthorn) will be planted inside this chain link fence. Existing hedgerows in other areas of the site will be maintained and strengthened by further planting of native hedgerow species.

The proposed dwelling will be comprised of four bedrooms, a kitchen/dining area, living room and utility room. Parking and driveway areas will be finished with a tarmac surface. The total floor area of the dwelling will be 136m² with the proposed heating system to be an air to water heating unit. Access to the property would be via a new 4.6m wide access gate which will be located on the south-eastern corner of the site.

With regards drainage, it is proposed to discharge surface water generated at the site to six new soak pits which will be located in areas of amenity grassland surrounding the dwelling. These soak pits will measure 1.2m Wide x 1.2m Long x 1.2m Deep. Two new soak pits will also be installed outside the chain link fence on the eastern boundary to capture surface water runoff from the road. The two soak pits outside the eastern boundary will be located along the L6009 road and they will measure 1m Wide x 12m Long x 0.8m deep. All soak pits at the site will be filled with clean drainage stone and surrounded by a geotextile membrane and covered with topsoil.

Potable water will be supplied by a new private well and pump house. Wastewater from the proposed dwelling will be discharged to a new wastewater treatment plant and percolation area.

During excavation works, excavated soil would be temporarily stored onsite, for re-use in landscaping and reinstatement works where possible. Following site clearance works, the construction of the dwelling, drainage systems and associated works would commence. The estimated construction timeframe would be approximately 8 months. No construction works would take place within or adjacent to any watercourses. All waste from the site will go to a licenced waste facility.

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

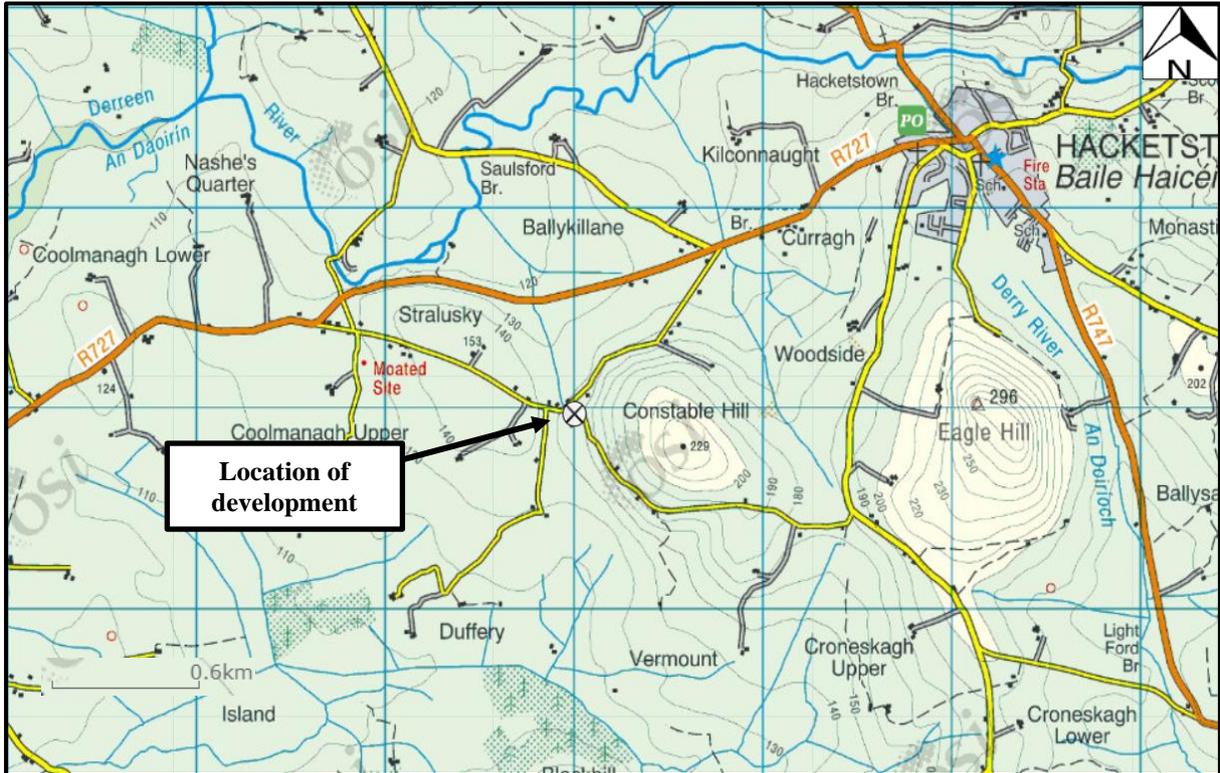


Figure 4.1: Location of Proposed Development at Constable Hill, Hacketstown, Co. Carlow

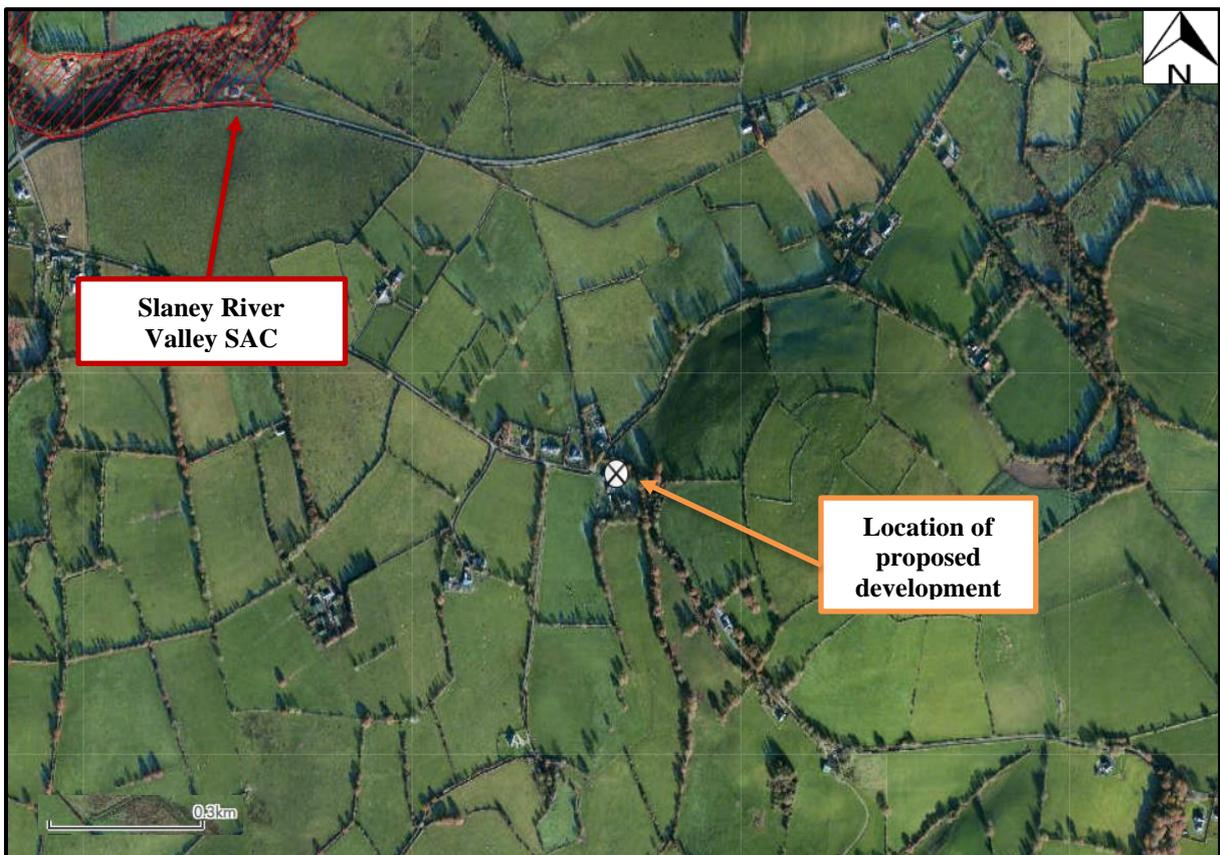


Figure 4.2: Location of Proposed Development and Natura 2000 Sites

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

4.2 EXISTING ENVIRONMENT

The proposed development site is mainly grassland. Hedgerows/treelines are along the north and east boundary of the site. The L6009 local road runs adjacent to this boundary. The southern end of the site is bounded by an existing wooden and chain link fence and the western boundary consists of wire fencing. Residential properties are located immediately to the south and west of the proposed development site. There are further residential dwellings located north of the site, across the L6009 road. The surrounding area consists of predominantly agricultural grassland with residential properties linearly aligned with the local road network.

According to the Preliminary Flood Risk Assessment (PFRA) Mapping tool by the OPW, the proposed development site is not located within an area of fluvial flood, indicative of 10% AEP (10-yr) event, 1% AEP (100-yr) event or 0.1% AEP (1000-yr) event. However, it should be noted that this map is based on broad-scale simple analysis and may not be accurate for a specific location.

A site characterisation assessment was undertaken on the 09th July 2021 to examine the ecological context of the development site, by systematically walking the site and boundaries and determining the habitats present. The habitat survey was undertaken in accordance with the standard methodology outlined in Fossitt's "A Guide to Habitats in Ireland", a hierarchical classification scheme based upon the characteristics of vegetation present. The Fossitt system also indicates when there are potential links with Annex I habitats of the E.U. Habitats Directive (92/43/EEC). Cognisance was also taken of the Heritage Council guidelines, "Best Practice Guidance for Habitat Survey and Mapping", (Smith *et al.*, 2011).

Bird species and signs of fauna activity and dwellings were also noted. Particular attention was given to the possible presence of habitats and/or species, which are legally protected under Irish and European legislation.

The majority of the site is comprised of semi-improved Neutral Grassland (GS1) habitat. The flora found here included; Yorkshire Fog (*Holcus lanatus*), Bent grasses (*Agrostis spp.*), Meadow Fox-tail (*Alopecurus pratensis*), Annual Meadow-grass (*Poa annua*), Creeping Buttercup (*Ranunculus repens*), Clover (*Trifolium spp.*), Creeping Thistle (*Cirsium arvense*), Black Medick (*Fabaceae spp.*), Common Mouse-ear (*Cerastium fontanum*), Daisy (*Bellis perennis*), Dandelion (*Taraxacum spp.*), Broad-leaved Dock (*Rumex obtusifolius*), Dock (*Rumex spp.*), Spear Thistle (*Cirsium vulgare*) and Nettle (*Urtica dioica*).

Areas at the entrance to the site could be classified as Recolonising Bare Ground (ED3). Stones and gravel are present but vegetation covers greater than 50% of the area here. Species found here include; Ragwort (*Senecio jacobaea*), Common Knapweed (*Asteraceae spp.*), Sow-thistle (*Sonchus spp.*), Smooth Hawksbeard (*Crepis capillaris*), Dandelion (*Taraxacum spp.*), Clover (*Trifolium spp.*), Broad-leaved Dock (*Rumex obtusifolius*) and Groundsel (*Senecio vulgaris*).

Hedgerows (WL1) and Treeline (WL2) habitat is present along the north and east boundaries of the site. This habitat is comprised of Lime Trees (*Lima Cordata*), Oak (*Quercus spp.*), Ash (*Fraxinus Excelsior*), Sycamore (*Acer Pseudoplatanus*), Blackthorn (*Prunus Spinosa*), Elderberry (*Sambucus nigra*), Holly (*Ilex Aquifolium*) and, With Herb-robert (*Geraniaceae spp.*), Common Hemp-nettle (*Lamiaceae spp.*), Nipplewort (*Asteraceae*), Dog-rose (*Rosa canina agg.*), Bramble (*Rubus fruticosus*), Bluebell (*Hyacinthoides non-scripta*), Foxglove (*Digitalis purpurea*), Cleavers (*Galium aparine*), Nettle (*Urtica dioica*), Bindweed (*Calystegia*

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

spp.), Dandelion (*Taraxacum* spp.), Hogweed (*Heracleum sphondylium*), Cow Parsley (*Anthriscus sylvestris*), Bramble (*Rubus fruticosus*), Bracken (*Pteridium aquilinum*), Vetch (*Vicia* spp.) and Ivy (*Hedera helix*).

The majority of habitats identified within the boundary of the site such as semi-improved agricultural grassland and recolonising bare ground are considered to be modified and of low conservation value. The hedgerows/treelines would be moderate conservation value. There are no plant species of conservation significance nor or are there any Third Schedule high impact invasive plant species recorded within the site. See Table 4.1 for summary for habitats located at the proposed development.

Table 4.1: Habitats found in and adjacent to the development site

HABITAT CLASSIFICATION HIERARCHY		
LEVEL 1	LEVEL 2	LEVEL 3
E – Exposed Rock and Disturbed Ground	ED – Disturbed Ground	ED3 – Recolonising Bare ground
G – Grassland and marsh	GS – Semi-Natural Grassland	GS1 – Dry calcareous and neutral grassland
W – Woodland and scrub	WL – Linear woodland / scrub	WL1 - Hedgerows WL2 - Treelines

Bird species noted during the site walkover included Jackdaw (*Corvus monedula*), Rook (*Corvus frugilegus*), Magpie (*Pica Pica*), Woodpigeon (*Columba palumbus*), Blackbird (*Turdus merula*), Chaffinch (*Fringilla coelebs*) and Swallow (*Hirundo rustica*). No species is red listed, one species, the Swallow is amber listed. None of the bird species recorded are listed under Annex I of the E.U. Birds Directive.

Rabbit (*Oryctolagus cuniculus*) tracks were noted as coming from the hedgerow. No other fauna, or evidence of fauna, were noted during the survey. Fauna typical of that found throughout the rest of Ireland which would be expected to be found in the area would include; Bat species, Badger (*Meles meles*), Otter (*Lutra lutra*), Fox (*Vulpes vulpes*), Pine Marten (*Martes martes*), Stoat (*Mustela erminea hibernica*), American Mink (*Mustela vison*), Irish Hare (*Lepus timidus hibernicus*), Hedgehog (*Erinus europaeus*), Red Squirrel (*Sciurus vulgaris*), Grey Squirrel (*Sciurus carolinensis*), Wood Mouse (*Apodemus sylvaticus*), Pygmy Shrew (*Sorex minutus*) and Brown Rat (*Rattus norvegicus*).

In addition to the site walkover, flora and fauna records were reviewed on the National Biodiversity Data Centre (NBDC) website for the proposed development site and vicinity. No protected plant species under the Flora (Protection) Order, 2015 (S.I. No. 356 of 2015) were recorded within the 10km square (Tetrad – S97) in which the proposed development site is located. Invasive plant species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) were recorded within the 10km square (Tetrad – S97): Japanese Knotweed (*Fallopia japonica*) and Rhododendron ponticum

Protected fauna species of note recorded within the NBDC 10km square (Tetrad – S97) include the protected species, Common Frog (*Rana temporaria*), Common Lizard (*Zootoca vivipara*),

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

Brown Long-eared Bat (*Plecotus auritus*), Daubenton's Bat (*Myotis daubentonii*), Badger (*Meles meles*), Red Squirrel (*Sciurus vulgaris*), European Otter (*Lutra lutra*), Pine Marten (*Martes martes*), Pipistrelle (*Pipistrellus pipistrellus sensu lato*), Red Deer (*Cervus elaphus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and European Hedgehog (*Erinaceus europaeus*).

High impact invasive species listed in the Third Schedule of the European Communities Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) include American Mink (*Mustela vison*), Grey Squirrel (*Sciurus carolinensis*) and Sika Deer (*Cervus nippon*).

Bird species of note include Barn Owl (*Tyto alba*), Swallow (*Hirundo rustica*), Black-headed Gull (*Larus ridibundus*), Common Grasshopper Warbler (*Locustella naevia*), Kestrel (*Falco tinnunculus*), Linnet (*Carduelis cannabina*), Pheasant (*Phasianus colchicus*), Snipe (*Gallinago gallinago*), Starling (*Sturnus vulgaris*), Wood Pigeon (*Columba palumbus*), Curlew (*Numenius arquata*), Tree Sparrow (*Passer montanus*), Great Black-backed Gull (*Larus marinus*), Herring Gull (*Larus argentatus*), House Martin (*Delichon urbicum*), House Sparrow (*Passer domesticus*), Lesser Black-backed Gull (*Larus fuscus*), Mallard (*Anas platyrhynchos*), Mew Gull (*Larus canus*), Rock Pigeon (*Columba livia*), Sand Martin (*Riparia riparia*), Sky Lark (*Alauda arvensis*), Spotted Flycatcher (*Muscicapa striata*), Pigeon (*Columba oenas*) and Yellowhammer (*Emberiza citrinella*).

4.2.1 Information on Water Quality

The proposed development is located within the Derreen sub-catchment (Derreen_SC_010), which is part of the Slaney and Wexford Harbour Catchment (ID_12).

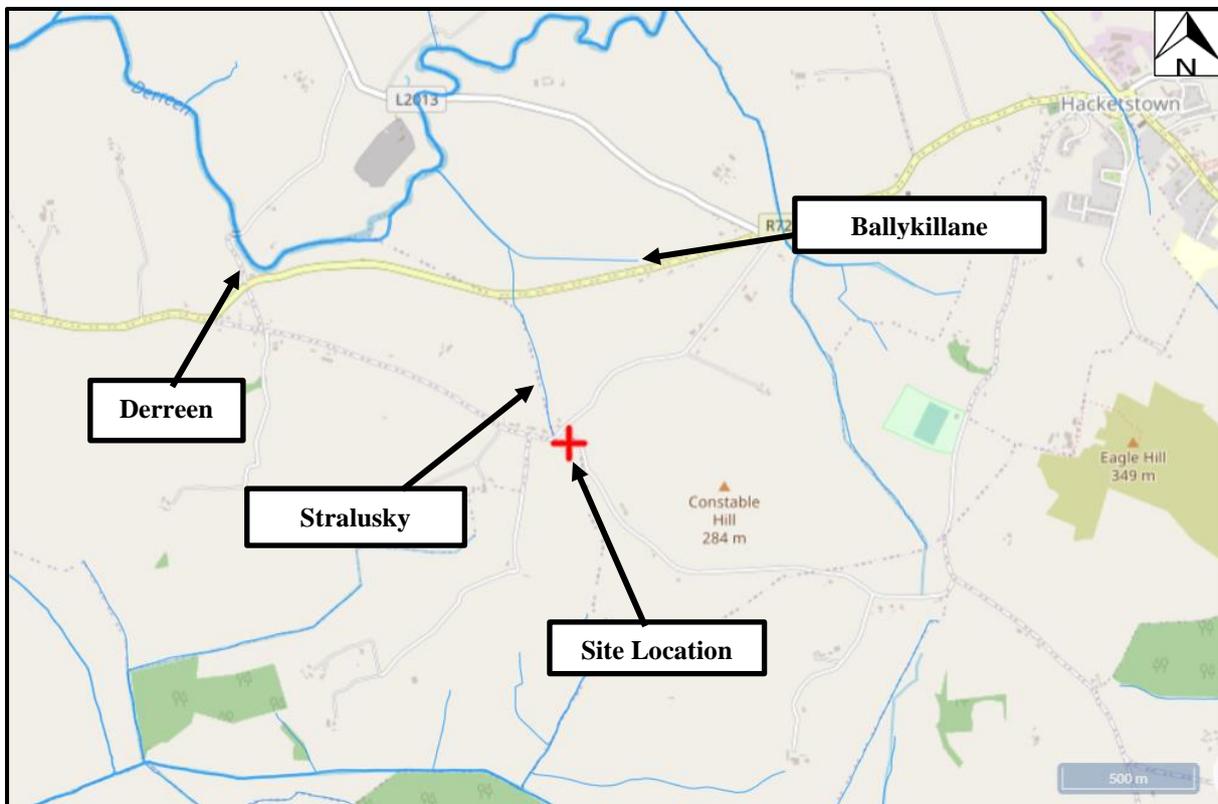


Figure 4.3: Watercourses surrounding the proposed development site

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

The closest watercourse to the proposed development site is the Stralusky Stream (EPA code: 12S16 – Order 1) approximately 41m west of the site boundary. The Stralusky merges with another order 1 stream named Ballykillane approximately 744m to the north of the site. At this juncture, the Stralusky becomes an order 2 watercourse. It then flows for 402m in a north-west direction before flowing into the River Derreen (EPA Code: 12D01 – Order 4). The River Derreen then flows in a south-west direction for approximately 22.28km before flowing into the River Slaney. The River Derreen and River Slaney are designated as part of the Slaney River Valley SAC. See Figure 4.3 for map of watercourses surrounding the proposed development.

The Conservation Objectives document for the Slaney River Valley SAC shows that water quality objectives have been set for Atlantic Salmon (*Salmo salar*), with a Q4 (good status) value set as the objective in freshwater. Water quality objectives have also been set for Twaite Shad, with a target of oxygen levels no lower than 5mg/l.

The Environmental Protection Agency (EPA) undertakes surface water monitoring along the River Derreen. The results for the nearest monitoring stations of the River Derreen (as per Table 4.3) with available monitoring results for the period 2001 – 2019 are summarised in Figure 4.4 below for indicative purposes.

Table 4.3: Active Monitoring Stations of the River Derreen

STATION NO.	STATION LOCATION	EASTING	NORTHING	APPROX. DISTANCE FROM SITE
RS12D010300	Hacketstown Br	296727	180759	3.8km Upstream of Stralusky and Derreen Confluence
RS12D010420	Br d/s Saulsford Br	293731	179751	1km Downstream of Stralusky and Derreen Confluence
RS12D010500	Derreen - Acaun Br	289989	177957	7.43km Downstream of Stralusky and Derreen Confluence

As can be seen in Figure 4.4 below, the Derreen River is achieving a water quality status of Q4 (Good) both upstream and downstream of the confluence with the Stralusky Stream for the past two monitoring periods in 2016 and 2019.

EPA comments on the most recent monitoring results for the River Derreen are as follows; *“Good ecological conditions were recorded at most sites on the Derreen in 2019 (stations 0100, 0150, 0300, 0500, 0550 and 0700). The uppermost station maintained High ecological status from 2018, an improvement on 2016. Station 0420 (Br d/s Saulsford Br) maintained good ecological conditions but this site showed signs of eutrophication and poaching by horses/livestock”*.

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

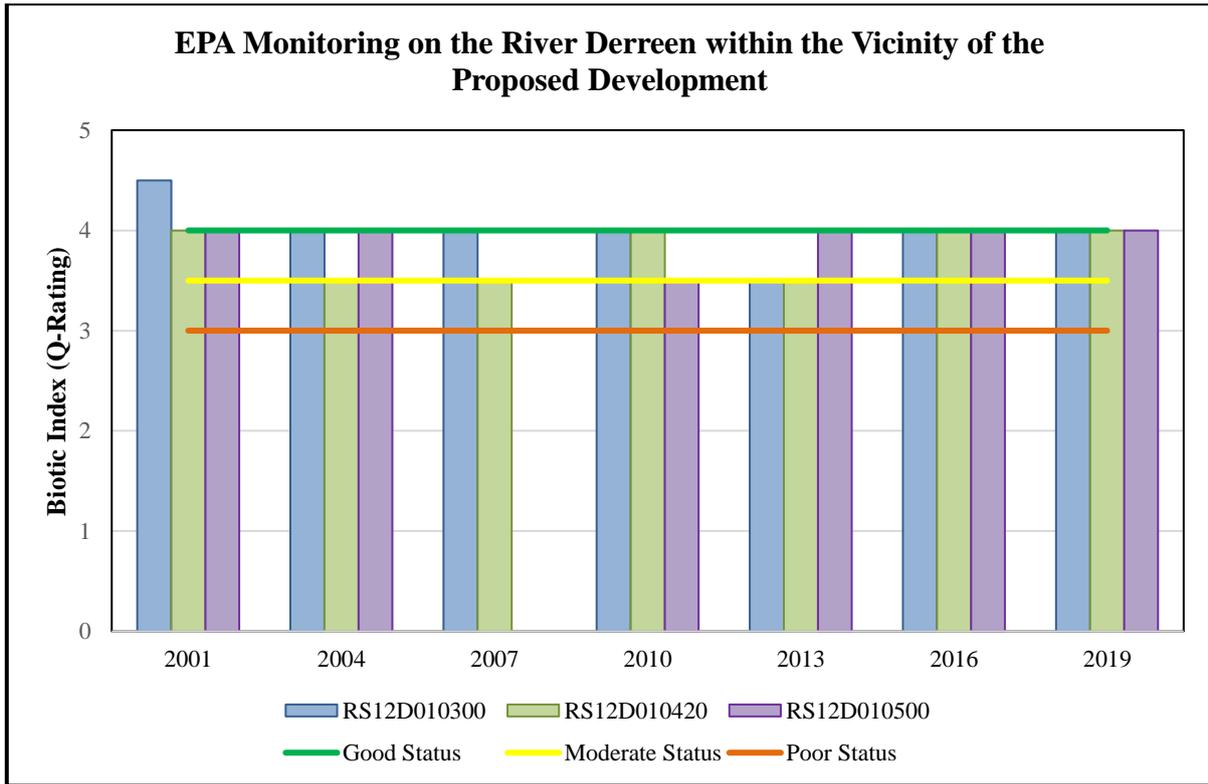


Figure 4.4: EPA Ecological Monitoring of the Derreen River from 2001 – 2019

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

5.0 EUROPEAN SITES (NATURA 2000 SITES) WITHIN ZONE OF INFLUENCE

In assessing the zone of influence of this project upon European sites, the following factors have been considered:

- Potential impacts arising from the project
- The location and nature of European sites
- Pathways between the development and European sites

There is no standard radius that can be used to select which European sites are to be analysed. This can only be determined by looking at the zone of influence of the project at hand. A rule of thumb often used is to include all European sites within a distance of 15km. One Special Protection Area (SPA) site occurs within 15km of the proposed development. Three Special Area of Conservation (SAC) sites occur within 15km of the proposed development and are shown in the Table 5.1

Table 5.1: Special Areas of Conservation and Special Protection Area potentially within the zone of influence

SITE NAME	DESIGNATION	SITE CODE	DISTANCE TO PROPOSED SITE
Slaney River Valley	SAC	000781	947m North-West
Holdenstown Bog	SAC	001757	8.91km North-West
Wicklow Mountains	SAC	002122	10.92km North-East
Wicklow Mountains	SPA	004040	14.1km North-East

The location of the site in relation to Natura 2000 sites is shown Appendix A.

The Wicklow Mountains SAC and Wicklow Mountains SPA are both located a considerable distance upstream of the development site. The proposed development site does not contain the habitats (Northern Atlantic wet heaths with *Erica tetralix* [4010] / European dry heaths [4030]) for which this site has been designated.

The Holdenstown Bog SAC is located 8.91km to the north-west of the proposed development site, on the western side of the River Slaney main channel. This SAC is not hydrologically connected to the proposed development site. It is located in a different sub-catchment from that which the proposed development site is located. The proposed development site does not contain the habitats (Transition mires and quaking bogs [7140]) for which this site has been designated.

Therefore, in the absence of a source-pathway-receptor relationship and given the hydrological links from the development site, these three Natura 2000 sites have been screened out.

For this assessment, the site considered to be within the potential zone of influence of the proposed development is the Slaney River Valley SAC (Site Code: 000781) due to the distance and the possible hydrological connectivity.

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

5.1 SLANEY RIVER VALLEY SAC

This site comprises almost the entire Slaney system, from the headwater streams in the Wicklow Mountains to the extensive estuarine area of Wexford Harbour. The main river tributaries included are the Bann, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers. The tidal influence extends upriver as far as Enniscorthy. In the upper and central regions, the geology consists of granite. Above Kilcarrig Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. South of Kildavin the Slaney flows through an area of Ordovician slates and grits. The river is often fringed by woodland and/or swamp vegetation. Other habitats which occur alongside the river include wet grassland, scrub and, in higher areas, heath and bog. Improved grassland and arable land is included alongside the river for water quality reasons. Salt marshes are a feature of the lower estuarine area of the site. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

ANNEX I HABITATS	
CODE	DESCRIPTION
1130	Estuaries
1140	Tidal Mudflats and Sandflats
1330	Atlantic Salt Meadows (<i>Glauco-Puccinellietalia maritimae</i>)
1410	Mediterranean Salt Meadows (<i>Juncetalia maritimi</i>)
3260	Floating River Vegetation
91A0	Old Oak Woodlands
91E0	Alluvial Forests*

* denotes a priority habitat

ANNEX II SPECIES		
CODE	COMMON NAME	SCIENTIFIC NAME
1029	Freshwater Pearl Mussel	<i>Margaritifera margaritifera</i>
1095	Sea Lamprey	<i>Petromyzon marinus</i>
1096	Brook Lamprey	<i>Lampetra planeri</i>
1099	River Lamprey	<i>Lampetra fluviatilis</i>
1103	Twaite Shad	<i>Alosa fallax</i>
1106	Atlantic Salmon	<i>Salmo salar</i>
1355	Otter	<i>Lutra lutra</i>
1365	Common (Harbour) Sea	<i>Phoca vitulina</i>

The conservation objectives for the SAC site are to maintain or restore the favourable conservation condition of the qualifying interests. An excerpt from the Natura 2000 Data Form for the Slaney River Valley SAC is included below, while further details are available within the site's site synopsis (NPWS, 2015).

“This site comprises the freshwater stretches of the River Slaney as far as the Wicklow Mountains; a number of tributaries, the larger of which include the Bann, Boro, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers; the estuary at Ferrycarrig; and Wexford Harbour. The site flows through the Counties of Wicklow, Wexford and Carlow. Towns along the site but not within it include Baltinglass, Hacketstown, Tinahely, Tullow, Bunclody,

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

Camolin, Enniscorthy and Wexford. The river is up to 100m wide in places and is tidal at the southern end from Edermine Bridge below Enniscorthy. In the upper and central regions almost as far as the confluence with the Derry River the geology consists of granite. Above Kilcarrig Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. Where these tributaries cut through this belt of hard rocks, they have carved deep gorges, more than two miles long at Tinahely and Shillelagh. South of Kildavin the Slaney flows through an area of Ordovician slates and grits.”

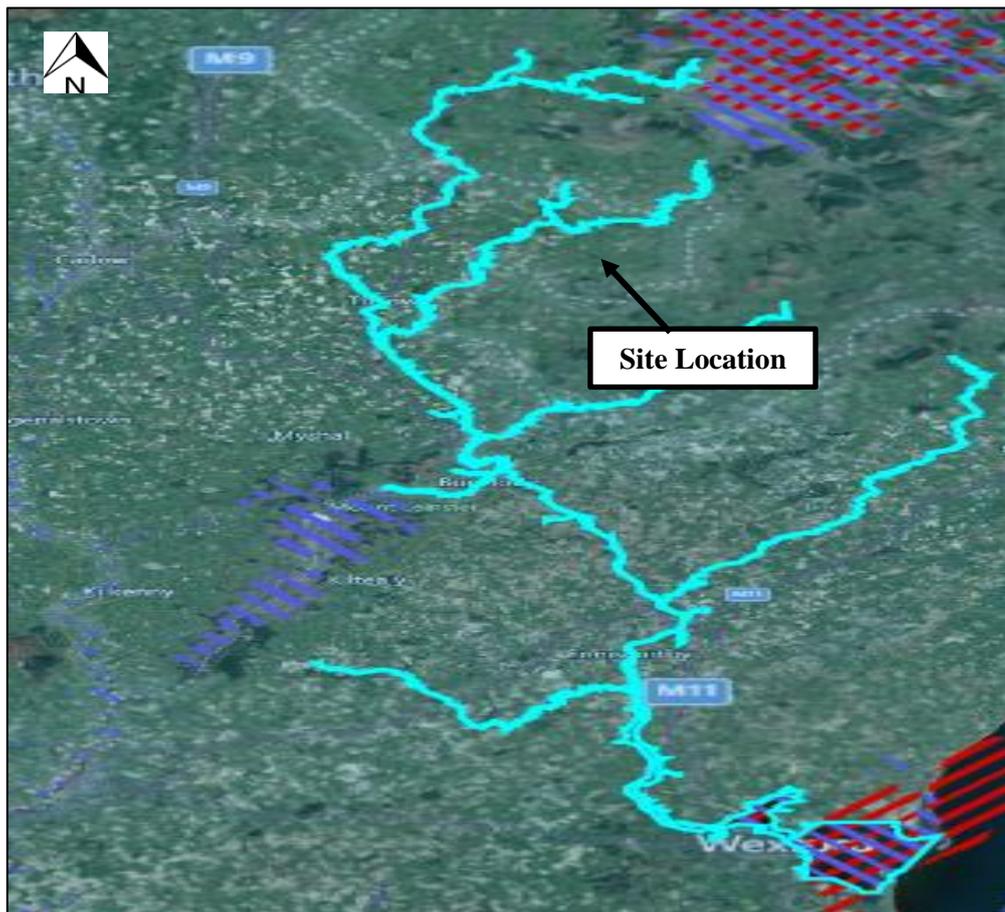


Figure 5.1: Slaney River Valley SAC

The site supports populations of several species listed on Annex II of the E.U. Habitats Directive, including Sea Lamprey, River Lamprey and Brook Lamprey, Otter, Salmon, small numbers of Freshwater Pearl Mussel, and in the tidal stretches, Version date: 11.12.2015 5 of 6 000781_Rev15.Docx Twaite Shad. A survey of the Derreen River in 1995 estimated the population of Freshwater Pearl Mussel at about 3,000 individuals. This is a significant population, especially in the context of eastern Ireland. The Slaney is primarily a spring salmon fishery and is regarded as one of the top rivers in Ireland for early spring fishing. The upper Slaney and tributary headwaters are very important for spawning. The site supports regionally significant numbers of Common Seal. This Annex II species occurs year-round in Wexford Harbour where several sandbanks are used for breeding, moulting and resting activity. At least 27 Common Seal regularly occur within the site.

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

The high pressures/threats to this SAC are forest and plantation management & use, invasive non-native species, Cultivation (includes increase of agricultural area), fertilisation and groundwater pollution by discharge to ground such as disposal of contaminated water to soakaways.

Slaney River Valley SAC Conservation Objectives

The Habitats Directive requires the Appropriate Assessment process to assess the potential impacts of the development “in view of the site’s conservation objectives”. Site specific conservation objectives (SSCOs) for the qualifying interests of the Slaney River Valley SAC are provided in the table below, where available from the NPWS document “Conservation Objectives: Slaney River Valley SAC 000781” (NPWS, 2011).

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

ATTRIBUTE	MEASURE	TARGET
[1130] Estuaries		
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes
Community distribution	Hectares	The following community types should be maintained in, or restored to, a natural condition: Mixed sediment community complex; Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex
[1140] Tidal Mudflats and Sandflats		
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes.
Community distribution	Hectares	The following community types should be maintained in a natural condition: Estuarine muds dominated by polychaetes and crustaceans community complex; and Sand dominated by polychaetes community complex
[1330] Atlantic Salt Meadows		
None Specified	-	-
[1410] Mediterranean Salt Meadows		
None Specified	-	-
[3260] Floating River Vegetation		
Habitat distribution	Occurrence	No decline, subject to natural processes
Habitat area	Kilometres	Area stable at 12.6km or increasing, subject to natural processes
Hydrological regime: river flow	Metres per second	Maintain appropriate hydrological regimes
Hydrological regime: tidal influence	Daily water level fluctuations - metres	Maintain natural tidal regime
Substratum composition: particle size range	Millimetres	For the tidal sub-type, the substratum of the channel must be dominated by particles of sand to gravel, with silt at the river margins
Water quality: nutrients	Milligrams per litre	The concentration of nutrients in the water column must be sufficiently low to prevent changes in species composition or habitat condition
Vegetation composition: typical species	Occurrence	Typical species of the relevant habitat sub-type reach favourable status
Floodplain connectivity: area	Hectares	The area of active floodplain at and upstream of the habitat must be maintained
[91A0] Old Oak Woodlands		

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

ATTRIBUTE	MEASURE	TARGET
Habitat area	Hectares	Area stable or increasing, subject to natural processes, at least 146.17ha for sub-sites surveyed.
Habitat distribution	Occurrence	No decline.
Woodland size	Hectares	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size
Woodland structure: cover and height	Percentage and metres	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy
Woodland structure: dead wood	m ³ per hectare; number per hectare	At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter
Woodland structure: veteran trees	Number per hectare	No decline
Woodland structure: indicators of local distinctiveness	Occurrence	No decline
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including oak (<i>Quercus petraea</i>) and birch (<i>Betula pubescens</i>)
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control
[91E0] Alluvial Forests		
Habitat area	Hectares	Area stable or increasing, subject to natural processes, at least 18.7ha for sites surveyed
Habitat distribution	Occurrence	No decline.
Woodland size	Hectares	Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size
Woodland structure: cover and height	Percentage and metres	Diverse structure with a relatively closed canopy containing mature trees; subcanopy layer with semi- mature trees and shrubs; and well-developed herb layer
Woodland structure: community diversity and extent	Hectares	Maintain diversity and extent of community types

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

ATTRIBUTE	MEASURE	TARGET
Woodland structure: natural regeneration	Seedling: sapling: pole ratio	Seedlings, saplings and pole age-classes occur in adequate proportions to ensure survival of woodland canopy
Hydrological regime: Flooding depth/height of water table	Metres	Appropriate hydrological regime necessary for maintenance of alluvial vegetation
Woodland structure: dead wood	m ³ per hectare; number per hectare	At least 30m ³ /ha of fallen timber greater than 10cm diameter; 30 snags/ha; both categories should include stems greater than 40cm diameter (greater than 20cm diameter in the case of alder)
Woodland structure: veteran trees	Number per hectare	No decline
Woodland structure: indicators of local distinctiveness	Occurrence	No decline
Vegetation composition: native tree cover	Percentage	No decline. Native tree cover not less than 95%
Vegetation composition: typical species	Occurrence	A variety of typical native species present, depending on woodland type, including alder (<i>Alnus glutinosa</i>), willows (<i>Salix</i> spp) and, locally, oak (<i>Quercus robur</i>) and ash (<i>Fraxinus excelsior</i>)
Vegetation composition: negative indicator species	Occurrence	Negative indicator species, particularly non-native invasive species, absent or under control
[1029] Freshwater Pearl Mussel		
The status of the FPM as a qualifying Annex II species for the Slaney River Valley SAC is currently under review		
[1095] Sea Lamprey		
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem length of rivers accessible from estuary
Population structure of juveniles	No. of age/size groups	At least three age/size groups present
Juvenile density in fine sediment	Juveniles/m ²	Juvenile density at least 1/m ²
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds. Improved dispersal of spawning beds into areas upstream of barriers
Availability of juvenile habitat	Number of positive sites in 3 rd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive
[1096] Brook Lamprey		
Distribution: extent of anadromy	% of river accessible	Access to all water courses down to first order streams
Population structure of juveniles	No. of age/size groups	At least three age/size groups of brook/river lamprey present

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

ATTRIBUTE	MEASURE	TARGET
Juvenile density in fine sediment	Juveniles/m ²	Mean catchment juvenile density of brook/river lamprey at least 2/m ²
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds
Availability of juvenile habitat	Number of positive sites in 2 nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive
[1099] River Lamprey		
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem and major tributaries down to second order accessible from estuary
Population structure of juveniles	No. of age/size groups	At least three age/size groups of river/brook lamprey present
Juvenile density in fine sediment	Juveniles/m ²	Mean catchment juvenile density of brook/river lamprey at least 2/m ²
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning beds
Availability of juvenile habitat	Number of positive sites in 2 nd order channels (and greater), downstream of spawning areas	More than 50% of sample sites positive
[1103] Twaite Shad		
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem length of rivers accessible from estuary
Population structure- age classes	Number of age classes	More than one age class present
Extent and distribution of spawning habitat	m ² and occurrence	No decline in extent and distribution of spawning habitats
Water quality- oxygen levels	Milligrams per litre	No lower than 5mg/l
Spawning habitat quality: Filamentous algae; macrophytes; sediment	Occurrence	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

ATTRIBUTE	MEASURE	TARGET
[1106] Atlantic Salmon		
Distribution: extent of anadromy	% of river accessible	100% of river channels down to second order accessible from estuary
Adult spawning fish	Number	Conservation Limit (CL) for each system consistently exceeded
Salmon fry abundance	Number of fry/5 minutes electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold value. Currently set at 17 salmon fry/5 min sampling
Out-migrating smolt abundance	Number	No significant decline
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes
Water quality	EPA Q value	At least Q4 at all sites sampled by EPA
[1355] Otter		
Distribution	% positive survey sites	No significant decline
Extent of terrestrial habitat	Hectares	No significant decline. Area mapped and calculated as 64.7ha above high water mark (HWM); 453.4ha along river banks/ around ponds
Extent of marine habitat	Hectares	No significant decline. Area mapped and calculated as 534.7ha
Extent of freshwater (river) habitat	Kilometres	No significant decline. Length mapped and calculated as 264.1km
Extent of freshwater (lake/lagoon) habitat	Hectares	No significant decline. Area mapped and calculated as 0.4ha
Couching sites and holts	Number	No significant decline
Fish biomass available	Kilograms	No significant decline
Barriers to connectivity	Number	No significant increase
[1365] Common (Harbour) Seal		
Access to suitable habitat	No. of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use.
Breeding behaviour	Breeding sites	The breeding sites should be maintained in a natural condition.
Moulting behaviour	Moult haul-out sites	The moult haul-out sites should be maintained in a natural condition
Resting behaviour	Resting haul-out sites	The resting haul-out sites should be maintained in a natural condition.
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the harbour seal population at the site.

Slaney River Valley SAC Conservation Status

According to the Habitat’s Directive, favourable conservation status of a habitat is achieved when:

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

According to the Habitat’s Directive, favourable conservation status of a species is achieved when:

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

The conservation statuses for the qualifying interests for the Slaney River Valley SAC are outlined below.

Code	Qualifying Interest	Conservation Status*	Site Level Conservation Status**
1130	Estuaries	Inadequate	Good
1140	Tidal Mudflats and Sandflats	Inadequate	Good
1330	Atlantic Salt Meadows	Inadequate	Excellent
1410	Mediterranean Salt Meadows	Inadequate	Good
3260	Floating River Vegetation	Inadequate	Good
91A0	Old Oak Woodlands	Bad	Good
91E0	Alluvial Forests	Bad	Good
1029	Freshwater Pearl Mussel	Bad	Good
1095	Sea Lamprey	Bad	Good
1096	Brook Lamprey	Favourable	Good
1099	River Lamprey	Unknown	Good
1103	Twaite Shad	Bad	Good
1106	Atlantic Salmon (<i>Salmo salar</i>)	Inadequate	Good
1355	Otter (<i>Lutra lutra</i>)	Favourable	Excellent
1365	Common (Harbour) Seal	Favourable	Good

*Sourced from the Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a and 2019b)

**Sourced from NPWS (2017)

6.0 ASSESSMENT OF LIKELY IMPACTS

6.1 DISTURBANCE TO PROTECTED HABITATS AND SPECIES

The proposed development does not directly impinge on any part of a European site, and as such would not be expected to impact upon a protected site through destruction of habitat, fragmentation of habitat, disturbance of habitat or direct reduction in species density.

It is not considered that the proposed development site would contain the habitats or species for which the Slaney River Valley SAC has been designated as the site is predominately semi-improved agricultural grassland.

The proposed development site is located approximately 44.5km north of the tidal stretches of the River Slaney at Edermine Bridge, thus qualifying interests associated with saltwater and tidal conditions would not be present.

The beginning of the Stralusky stream channel is approximately 41m from the western boundary of the proposed development site. There is no riparian habitat within or directly adjacent the site boundary. The site does not contain any watercourses; therefore, aquatic habitats or species would not be present within the site boundary.

No areas of woodland exist within the site boundary therefore the site does not contain any habitat which would have potential links to Old Oak Woodlands [91A0] or Alluvial Forests [91E0].

The proposed development site is mainly comprised of grassland which can be considered as modified and of lower value to foraging otters. In the absence of evidence of otter (including spraints and tracks) during the site assessment, it is unlikely the site would support this species.

The potential disturbance on protected species due to noise would not be considered significant, given the residential nature and small scale of the proposed development. While there would be increased noise emissions during the construction phase, these would not be considered to pose a significant risk owing to the transient nature of construction works, the construction timeframe and the small scale of the development (total combined footprint of site including proposed dwelling, access road and gardens is approximately 0.359 Hectares/0.89 Acres).

It is therefore considered that the proposed development would not result in any significant risk to the protected habitats and species of the Slaney River Valley SAC due to habitat fragmentation or loss, disturbance or reduction in species density.

6.2 INVASIVE SPECIES

Under Regulation 49(2) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), save in accordance with a licence granted under paragraph (7), any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to any plant which is included in Part 1 of the Third Schedule shall be guilty of an offence. Materials containing invasive species such as Japanese Knotweed are considered “controlled waste”, and, as such, there are legal restrictions on their handling and disposal. Under Regulation 49(7) of the European

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

Communities (Birds and Natural Habitats) Regulations 2011, it is a legal requirement to obtain a license to move “vector materials” listed in the Third Schedule, Part 3.

Table 6.1: National Biodiversity Data Centre records of high impact invasive species within 10km square (Tetrad-S97) of the proposed development.

INVASIVE FLORA SPECIES	
Rhododendron ponticum	Japanese Knotweed (<i>Fallopia japonica</i>)

The spread of invasive plant and animal species can negatively impact on the conservation objectives of certain Annex I habitats and species designated within SACs.

There are no high impact invasive species within or adjacent the site boundary. The risk of invasive species being introduced onto the site during the operational phase of the project is considered to be low, with no import of materials with the potential to contain invasive flora species. Any topsoil will be thoroughly checked and screened before being imported into the site. The landscape plan will use native and non-invasive ornamental flora in its design.

Therefore, it is considered that there would be no significant risk to protected habitats and species as a result of invasive species from the site.

6.3 POTENTIAL IMPACTS ON WATER QUALITY

The proposed development is located within the Derreen sub-catchment (Derreen_SC_010) which is part of the Slaney and Wexford Harbour Catchment (ID_12). The closest watercourse to the proposed development site is the Stralusky Stream (EPA code: 12S16 – Order 1), with the beginning of the stream channel approximately 41m west of the site boundary. This is over 1km upstream of the confluence with the River Derreen.

The River Derreen and River Slaney are designated as part of the Slaney River Valley SAC. See Figure 4.3 for map of watercourses surrounding the proposed development.

The proposed development is located within the Slaney and Wexford Harbour catchment, thus the proposed development would be hydrologically linked to the Slaney River Valley SAC. However, no evidence of a direct surface-water pathway was identified during the site survey. With no local drainage channels and ground contours sloping to the west, percolation to ground would be the preferred pathway. Existing drainage on the local road passing east-to-north of the proposed site is directed to existing soak-ways along the site boundary and to ground.

During the construction phase of projects, a deterioration in water quality can arise through the release of suspended solids during soil disturbance works, the release of uncured concrete and the release of hydrocarbons (fuels and oils).

Construction works would be confined to the proposed development footprint, the closest watercourse to the proposed development is Stralusky stream approximately 44m north-west of the site boundary, with no works taking place within or adjacent to riparian or aquatic habitat.

In the event suspended solids become entrained in surface water run-off, there is considered to be no significant risk of impact on water quality as suspended solids would be retained on site as run-off percolates to the ground. The risk of water quality deterioration as a result of uncured concrete would be considered low, given that precast concrete would be used where possible

**APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW**

and surplus concrete would be returned to the batching plant. Given the scale of the proposed development, the relatively short duration of the construction works and the limited construction plant and equipment required, the risk of water quality deterioration as a result of hydrocarbon spillage would be considered low.

With regard to the completed development, storm water, comprised of rainwater run-off from roof and hard surface areas, will be collected via a system of gullies and stormwater drains, and will be directed to soakaways located within the site boundary. The wastewater from the development will flow to a new purpose built on-site WWTP within the site boundary. This system would be greater than 10m from any watercourse or drainage ditches as outlined within EPA (March 2021) “Code of Practice – Domestic Waste Water Treatment Systems (Population Equivalents ≤ 10)”.

It is not considered that the proposed development would have a significant impact upon the SAC site due to flooding, as the proposed development site is not located within an area of fluvial, pluvial or coastal flood.

It is therefore considered that, due to nature and location of the proposed development, the scale and extent of construction works and the proposed drainage, the proposed development would not pose a significant risk upon the Slaney River Valley SAC due to a deleterious effect on water quality during either the construction or operational phases.

6.4 IN COMBINATION EFFECTS

The following plans and projects were reviewed and considered for in-combination effects with the proposed development:

- Carlow County Development Plan 2015-2021;
- County Carlow 2021 Local Economic and Community Plan 2016-2021;
- Proposed and permitted developments in the area available on Carlow County Council planning system.

The proposed development is located in the townland of Constablehill with the town of Hacketstown approximately 2.4km north east of the proposed site. The N81 national road is approximately 8.73km via the R727. The following plans and projects were reviewed and considered for in-combination effects with the proposed development:

Table 6.4: Recent planning applications close to the proposed site

Application No.	Development Type	Outcome	Approximate Distance
15327	Permission to construct private dwelling with detached garage, private well, waste water treatment and percolation area, new site entrance and associated site works	Granted - Conditional	265m NW
12133	Permission to construct a single storey garage and all associated works (adjacent to granted 2 storey dwelling under planning ref no. 10/243	Granted - Conditional	567m SE
16370	Planning Permission to construct a one and a half storey dwelling garage, bored well, waste water treatment system and new entrance	Granted - Conditional	685m NW

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

Application No.	Development Type	Outcome	Approximate Distance
14237	Permission sought for a 105.6sqm extension to the existing mezzanine floor in existing clubhouse, single storey extension (floor area = 13.3sqm) to front (western) elevation of existing clubhouse, together with internal alterations and minor elevation amendments to existing clubhouse and all associated site works	Granted - Conditional	1.25km E
15328	Permission for the construction of a 40 square metre extension to the side of existing dwelling which will consist of a multi-sensory room with w.c. extension of existing kitchen, minor internal alterations, replacement of existing roof tiles with new plain black tile/slate finish, and all ancillary site works	Granted - Conditional	1.39km NE
19221	Permission for the construction of a dormer type dwelling, a domestic garage/store, use of existing entrance, a septic tank and percolation area, bored well and all associated site works	Granted - Conditional	1.53km NW
17269	Permission for the construction of a two storey dwelling, domestic garage, septic tank and percolation area, bored well, new entrance and all associated site works.	Granted - Conditional	1.66km NE
18481	Permission for for the erection of a dwelling house and domestic garage with associated site works and services	Granted - Conditional	1.95km NE

Continued implementation of the Water Framework Directive would result in achieving, or maintaining, improvements to water quality in the Slaney Catchment. Developments such as this proposed development could act in combination with existing environmental pressures on the Slaney Catchment, including agriculture, anthropogenic, domestic and urban wastewater, urban run-off, industry and forestry. However, as noted in Section 6.3, it is not considered that the development would pose a significant risk upon any Natura 2000 site due to a deleterious effect on water quality, during either the construction or operational phase.

As discussed in Sections 6.1 – 6.3 above, it is considered that there would be no significant in-combination risk to any European site owing to the development. As there are no anticipated significant risks from the development and proposed works given the small scale nature of recent nearby developments, the type of proposed heating system for the dwelling, the distances of other developments in the area, it is considered that there would be no significant cumulative water, noise or air impacts which would pose a significant risk to designated sites or species.

7.0 SCREENING STATEMENT AND CONCLUSIONS

It is the conclusion of this screening study that there would be no potential for significant effects on European Sites (Natura 2000 network) as a result of the proposed development, by itself or in combination with other developments, and an Appropriate Assessment is not warranted. Screening establishes that there is no potential for significant effects, and the project is recommended to proceed as proposed.

8.0 REFERENCES

- Aas, G., Riedmiller, A. (1994) *Trees of Britain & Europe*. Harper Collins Publishers
- Averis, B. (2013) *Plants and Habitats: An introduction to common plants and their habitats in Britain and Ireland*. United Kingdom: Swallowtail Print Ltd
- Bang, P., Dahlstrøm, P. and Walters, M. (2006) *Animal Tracks and Signs*. Oxford University Press
- Byrne, A., Moorkens, E.A., Anderson, R., Killeen, I.J. & Regan, E.C. (2009) *Ireland Red List No. 2 – Non-Marine Molluscs*. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.
- Cabot, D. (2004) *Irish Birds*. Harper Collins Publishers, London
- Cummins, S., Fisher, J., McKeever, R. G., McNaghten, L. and Crow, O. (2010) *Assessment of the distribution and abundance of Kingfisher Alcedo atthis and other riparian birds on six SAC river systems in Ireland*. BirdWatch Ireland.
- Curtis, T. and Thompson, R. (2009) *The Orchids of Ireland*. National Museums Northern Ireland
- Devlin, Z. (2014) *Wildflowers of Ireland: A Field Guide*. Cork: Collins Press.
- DoEHLG (2010) *Freshwater Pearl Mussel Mountain Sub-Basin Management Plan*. Department of the Environment, Heritage and Local Government.
- DoEHLG (2009) *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*.
- Environment DG, European Commission (2002) *Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*.
- Environmental Protection Agency Licence public access information, Available at: <http://www.epa.ie/licensing/iedipcse/>

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

EPA (March 2021) *“Code of Practice – Domestic Waste Water Treatment Systems (Population Equivalents ≤10)”*.

European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272 of 2009).

European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (S.I. 296 of 2009)

European Communities (Quality of Salmonid Waters) Regulations 1988 (S.I. No. 293 of 1988)

Fitzpatrick, U., Weeks, L., Wright, M. (2016) *Identification Guide to Irelands Grasses*. National Biodiversity Data Centre

Fossitt, J.A. (2000) *A Guide to Habitats in Ireland*. Kilkenny: The Heritage Council.

Harrap, S. (2013) *Wild Flowers, A Field Guide to the Flowers of Britain & Ireland*. Bloomsbury Publishing

Johnson, O. and More, D. (2006) *Collins Tree Guide: The Most Complete Field Guide to the Trees of Britain and Europe*. London: HarperCollins Publishers.

Marnell, F., Kingston, N. and Looney, D. (2009). *Ireland Red List No. 3: Terrestrial Mammals*, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.

National Parks and Wildlife Service, available at: <http://www.npws.ie/protected-sites>

NPWS (2020) Natura Standard Data Form for Slaney River Valley SAC.

NPWS (2019a) *The Status of Protected EU Habitats and Species in Ireland*. Volume 1: Summary Overview Unpublished Report, National Parks and Wildlife Services, Department of Culture, Heritage and the Gaeltacht.

NPWS (2019b) *The Status of EU Protected Habitats and Species in Ireland*. Volume 2: Habitats Assessments. Unpublished report. National Parks and Wildlife Services, Department of Culture, Heritage and the Gaeltacht.

NPWS (2019c) *The Status of EU Protected Habitats and Species in Ireland*. Volume 3: Species Assessments. Unpublished report. National Parks and Wildlife Services, Department of Culture, Heritage and the Gaeltacht.

NWPS (2019d) *Site Synopsis: Wicklow Mountains SAC 002122*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2019e) *Site Synopsis: Wicklow Mountains SPA 004040*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NPWS (2018) *Site Synopsis: Holdenstown Bog SAC 001757*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

NPWS (2017) Natura Standard Data Form for Slaney River Valley SAC.

NWPS (2015) *Site Synopsis: Slaney River Valley SAC 000781*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

NWPS (2011a) *Conservation Objectives: Slaney River Valley SAC 000781*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

NPWS (2011b) *Conservation Objectives: Wicklow Mountains SAC 002122*. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

O'Neill, F.H. & Barron, S.J. (2013) Results of monitoring survey of old sessile oak woods and alluvial forests. Irish Wildlife Manuals, No. 71. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Parnell, J. and Curtis, T. (2012) *Webb's An Irish Flora*. Cork: Cork University Press.

Philips, R. (1980) *Grasses, Ferns, Mosses & Lichens of Great Britain and Ireland*. London: Pan Books.

Rose, F. (2006) *The Wildflower Key: How to identify wildflowers, trees and shrubs in Britain and Ireland*. China: Frederick Warne & Co.

Smith, G.F., O'Donoghue, P., O'Hora, K. and Delaney, E. (2011) *Best Practice Guidance for habitat survey and mapping*. The Heritage Council, Kilkenny. Available at: www.heritagecouncil.ie/wildlife/publications/

Streeter, D. (2018) *Collins Wild Flower Guide*. Harper Collins Publishers, London

Sterry, P. (2004) *Complete Irish Wildlife*. Harper Collins Publishers, London

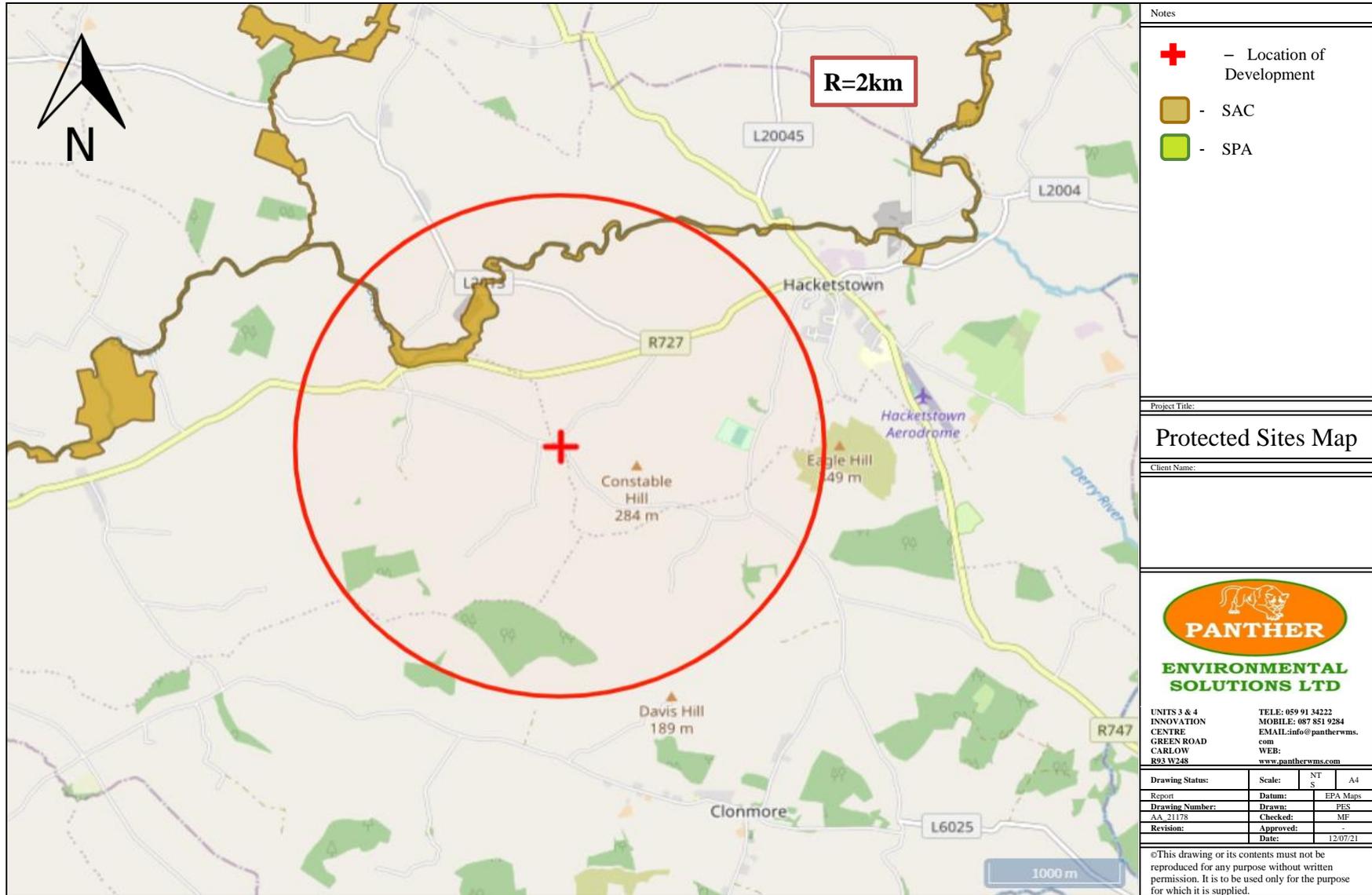
Sutherland, W.J. (Ed.). (2006) *Ecological Census Techniques*. United Kingdom: Cambridge University Press.

Wheater, C.P., Bell, J.R. and Cook, P.A. (2011) *Practical Field Ecology: A Project Guide*. John Wiley & Sons.

Wilson, J. and Carmody, M. (2013) *The Birds of Ireland*. Gill Books

APPENDIX A
PROTECTED SITES

APPROPRIATE ASSESSMENT SCREENING REPORT
 CONSTABLEHILL, HACKETSTOWN, CO. CARLOW



Notes

- + - Location of Development
- SAC
- SPA

Project Title:

Protected Sites Map

Client Name:



PANTHER
ENVIRONMENTAL SOLUTIONS LTD

UNITS 3 & 4
 INNOVATION CENTRE
 GREEN ROAD
 CARLOW R93 W248

TELE: 059 91 34222
 MOBILE: 087 851 9284
 EMAIL: info@pantherwms.com
 WEB: www.pantherwms.com

Drawing Status:	Scale:	NT	A4
Report	Datum:	S	EPA Maps
Drawing Number:	Drawn:		PS
AA-21178	Checked:		MF
Revision:	Approved:		-
	Date:		12/07/21

©This drawing or its contents must not be reproduced for any purpose without written permission. It is to be used only for the purpose for which it is supplied.

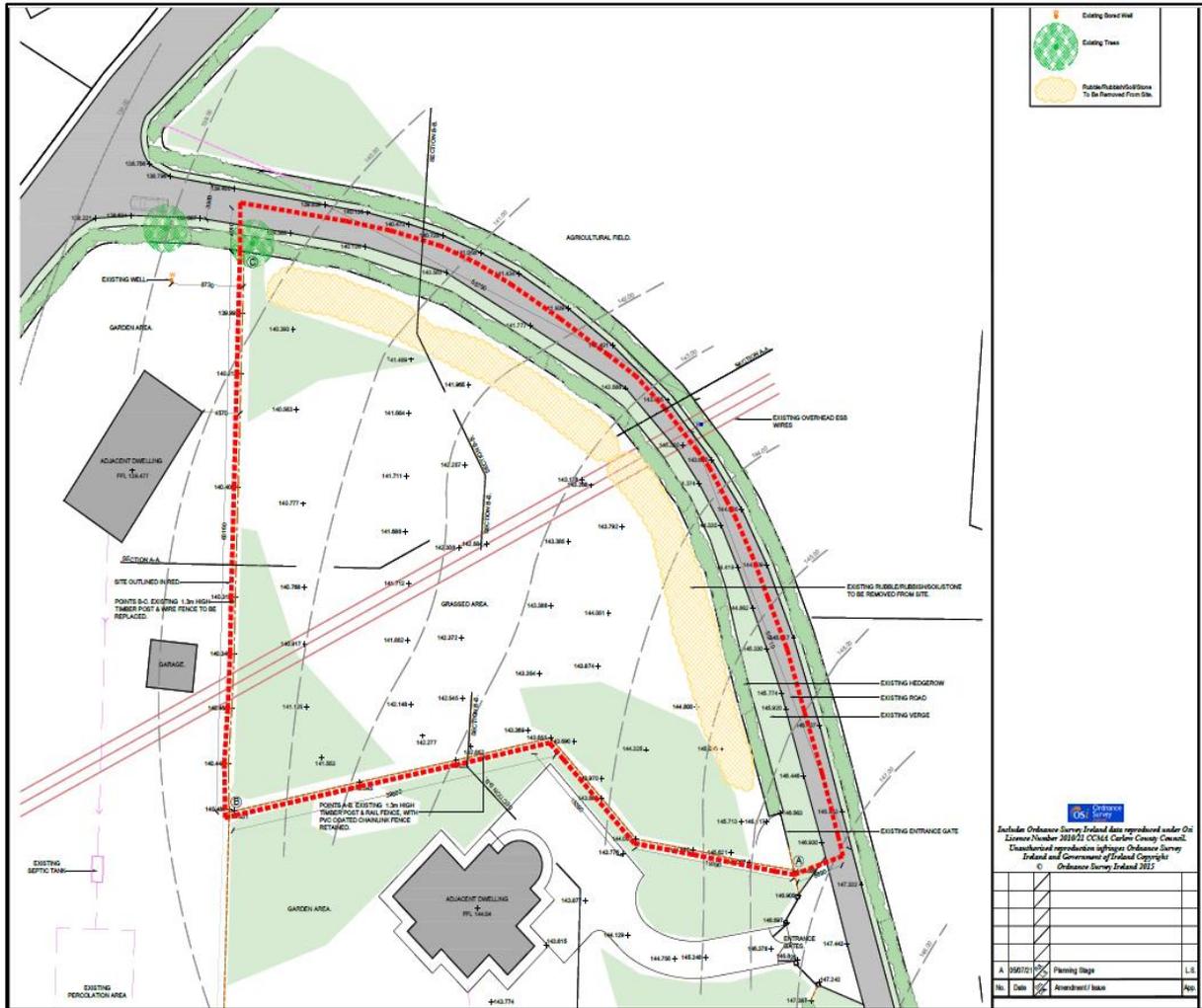
APPROPRIATE ASSESSMENT SCREENING REPORT
 CONSTABLEHILL, HACKETSTOWN, CO. CARLOW



APPENDIX B
SITE LAYOUT

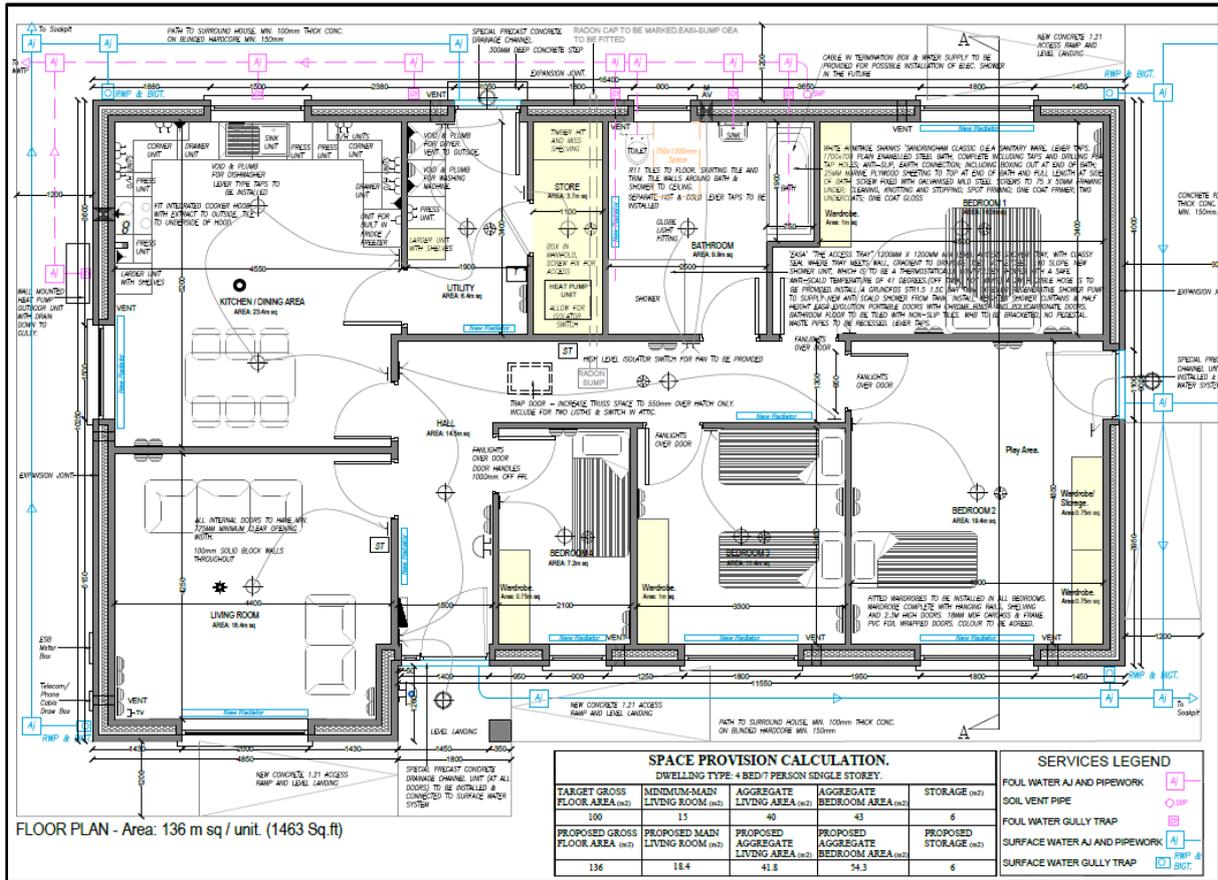
APPROPRIATE ASSESSMENT SCREENING REPORT

CONSTABLEHILL, HACKETSTOWN, CO. CARLOW

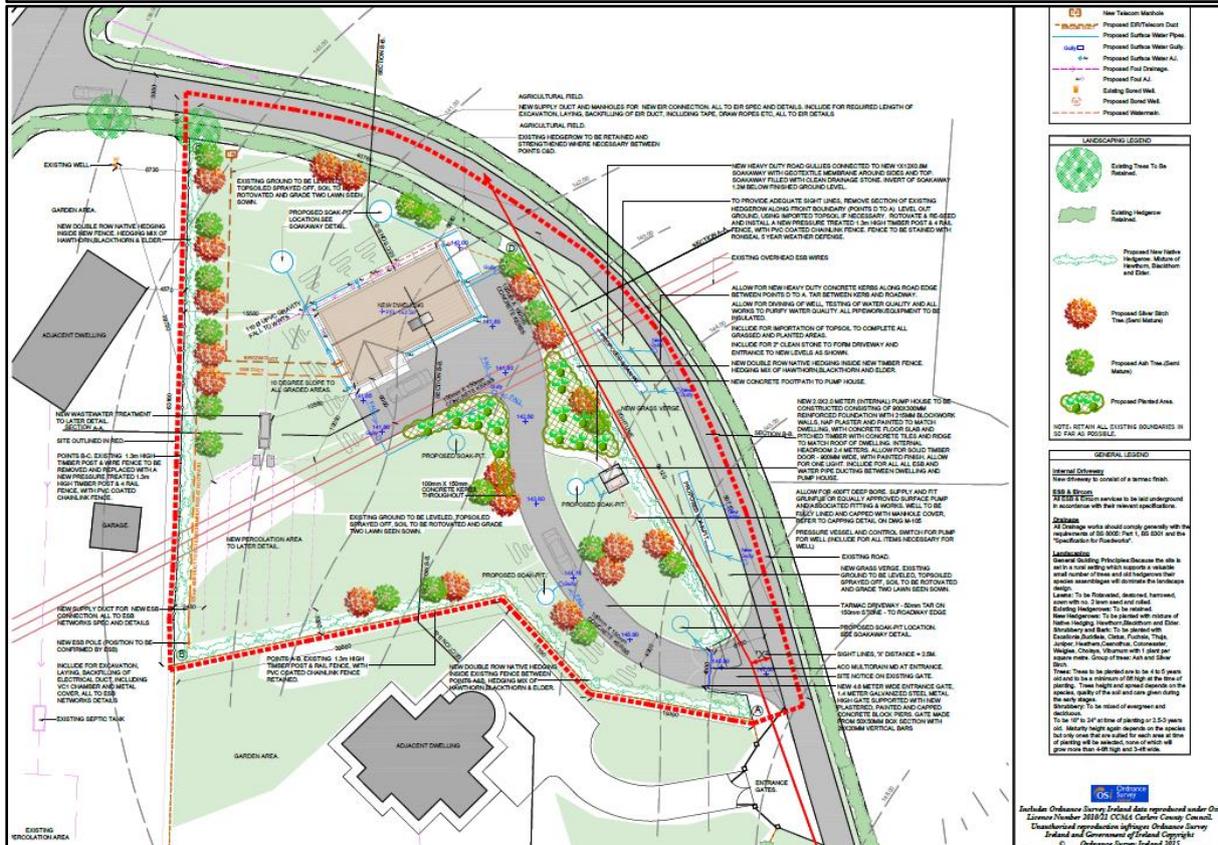


APPROPRIATE ASSESSMENT SCREENING REPORT

CONSTABLEHILL, HACKETTSTOWN, CO. CARLOW

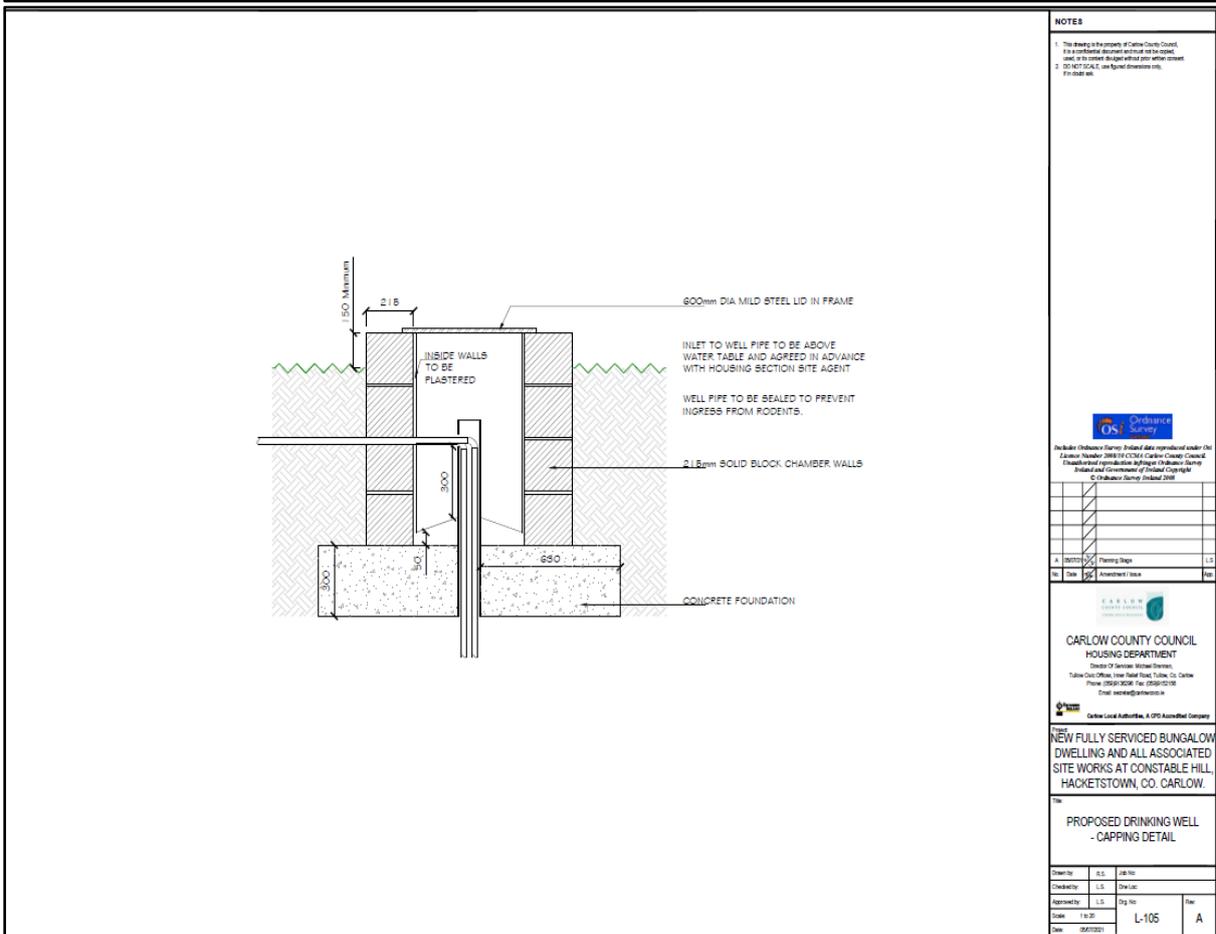


FLOOR PLAN - Area: 136 m sq / unit. (1463 Sq.ft)



APPROPRIATE ASSESSMENT SCREENING REPORT

CONSTABLEHILL, HACKETSTOWN, CO. CARLOW



APPENDIX C
PHOTO LOG

APPROPRIATE ASSESSMENT SCREENING REPORT
 CONSTABLEHILL, HACKETSTOWN, CO. CARLOW



Plate 1: Site entrance and recolonising bare ground (ED3)



Plate 2 Treeline (WL2) at site entrance



Plate 3: Semi-Natural Neutral Grassland (GS1) habitat



Plate 4: Grassland (GS1) and Hedgerow / Treeline (WL1 / WL2) habitat along the Eastern Boundary.

Notes:

CONSTABLEHILL, HACKETSTOWN,
 CO. CARLOW

APPENDIX C
 PHOTO LOG



UNITS 3 & 4
 INNOVATION
 CENTRE
 GREEN ROAD
 CARLOW

TELEPHONE: 059 91 34222
 MOBILE: 087 851 9284
 EMAIL: info@pantherwms.com
 WEB: www.pantherwms.com

file location:	scale:	N/A	A4
drawing status:	REPORT	datum:	N/A
		drawn:	PES
drawing no.	rev	checked:	MF
AA_21178	A	approved:	-
		date:	12/07/2021

©This drawing or its contents must not be reproduced for any purpose without written permission. It is to be used only for the purpose for which it is supplied.

**APPROPRIATE ASSESSMENT SCREENING REPORT
CONSTABLEHILL, HACKETSTOWN, CO. CARLOW**



Plate 5: View of Entrance from inside the Site Facing South-East



Plate 6: View of the Site Facing North-West towards Neighbouring Residences.



Plate 7: Inside Site at North Boundary, facing North-East.



Plate 8: Roadside Soak-way on North Site Boundary

Notes:

**CONSTABLEHILL, HACKETSTOWN,
CO. CARLOW**

**APPENDIX C
PHOTO LOG**



**ENVIRONMENTAL
SOLUTIONS LTD**

UNITS 3 & 4 INNOVATION CENTRE GREEN ROAD CARLOW	TELEPHONE: 059 91 34222 MOBILE: 087 851 9284 EMAIL: info@pantherenvms.com WEB: www.pantherenvms.com
---	---

file location:	scale:	N/A	A4
drawing status:	REPORT	datum:	N/A
		drawn:	PES
drawing no.	rev	checked:	MF
AA_21178	A	approved:	-
		date:	12/07/2021

©This drawing or its contents must not be reproduced for any purpose without written permission. It is to be used only for the purpose for which it is supplied.