KILNAHUE GOREY EIAR

VOLUME III APPENDICES - PART 2

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KILNAHUE GOREY EIAR

VOLUME III - PART 2 | **Contents**

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APPENDIX 10-1 WFD/EPA HA 11 Cycle 3 Owenavorragh

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Cycle 3

HA 11 Owenavorragh Catchment Report, May 2024

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

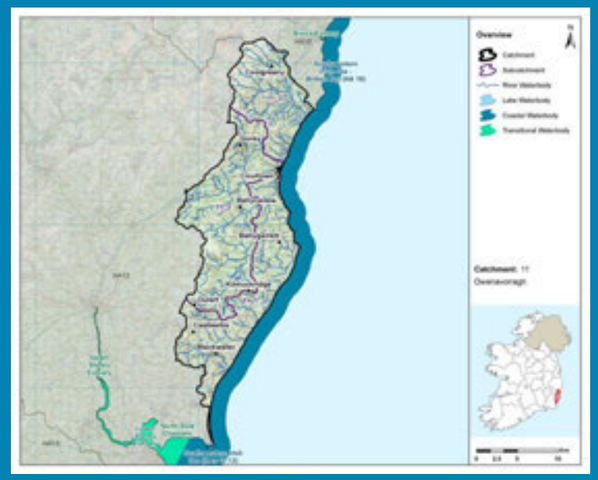
Introduction

This report provides an overview of the water quality in the Owenavorragh Catchment and the pressures impacting on water quality. This report is based on data up to 2021. The latest water quality data, dashboards and maps throughout this report are available on catchments.ie and EPA Water Map.

The Owenavorragh catchment includes the area drained by the River Owenavorragh and by all streams entering tidal water between Kilmichael Point and Raven Point, Co. Wexford, draining a total area of 395km². The largest urban centre in the catchment is Gorey. The other main urban centre in this catchment is Courtown. The catchment is relatively hilly and is underlain by a mixture of metamorphic and volcanic rocks.

The Owenavorragh Catchment is divided into three subcatchments and has 30 surface water bodies and 11 groundwater bodies.

View the Owenavorragh Catchment on the EPA Water Map



Overview of Subcatchments in the Owenavorragh Catchment

Previous Catchment Assessments

Previous catchment assessments, which provide additional historic context and information, are archived on catchments.ie:

- Cycle 2 Catchment Assessments – published September 2018
- Cycle 3 Draft Catchment Assessments – published September 2021

Online Dashboards

Links to online dashboards are provided in this report – these numbers may vary from those in this document as time progress and the online dashboards are updated based on the latest data and scientific assessments.

Water Quality Summary

Introduction

Water Quality Summary

Water Quality Changes

WFD Risk

Significant Pressures

Action

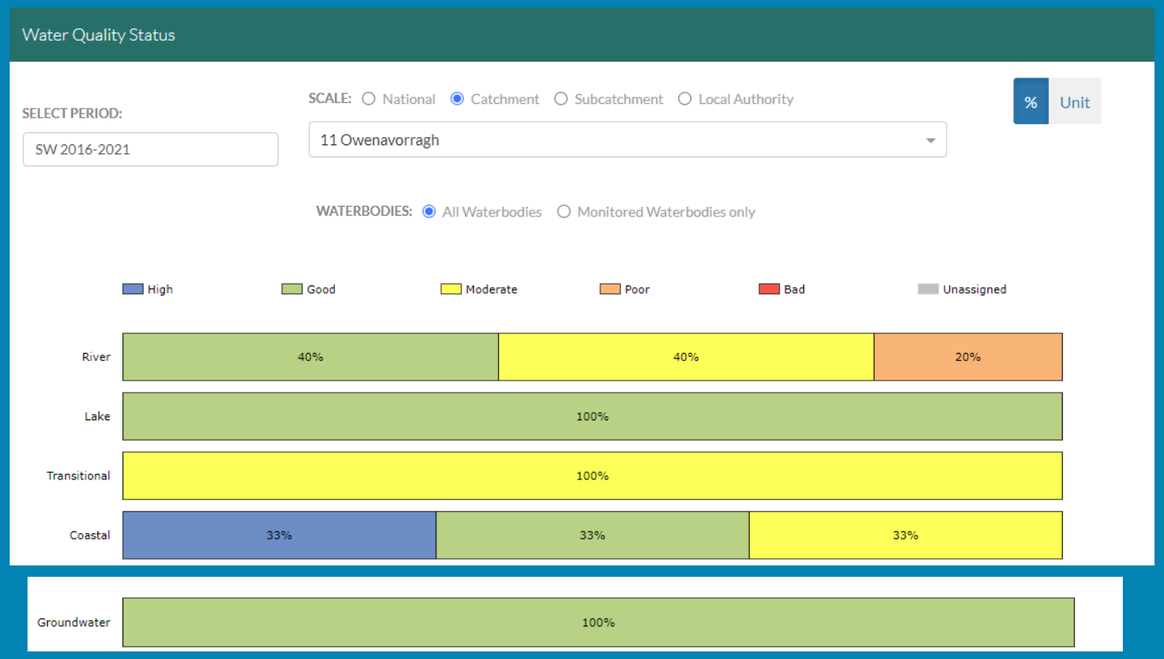
Summary Information

The dashboard below provides a breakdown of water quality status for surface and groundwater bodies in the Owenavorragh Catchment.

A total of 43% of surface waterbodies were at Good or High Ecological Status in the 2016-2021 monitoring period. One hundred percent of groundwater bodies were at Good status.

Go to EPA Water Maps for WFD Status

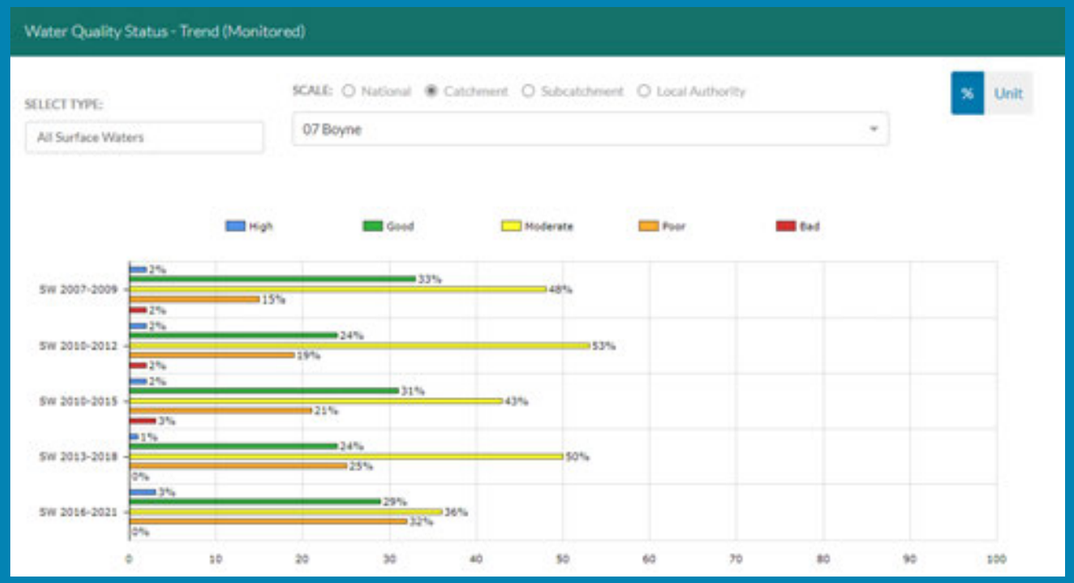
EPA Water Map



Water quality status 2016-2021 for the Owenavorragh Catchment.
View Online Dashboard: *https://www.catchments.ie/data/#/dashboard/waterquality*

Water Quality Changes

Below illustrates the changes in ecological status in monitored surface waterbodies over the last five monitoring cycles in the Owenavorragh Catchment. Nationally while there have been improvements in some waterbodies, these have been offset by declines elsewhere.



Ecological status trends for monitored surface waterbodies over the last five monitoring cycles in the Owenavorragh Catchment. ***View online dashboard:*** https://www.catchments.ie/data/#/dashboard/waterquality

A total of 24 (59%) waterbodies are currently meeting their environmental objective of Good Ecological Status.

	Total	Achieving Environmental Objectives (2016-2021)	High Status Environmental Objectives Waterbodies	Achieving High Status Environmental Objectives (2016-2021)
Rivers	25	10 *(40%)*	0	N/A
Lakes	1	1 *(100%)*	0	N/A
Transitional	1	0 *(0%)*	0	N/A
Coastal	3	2 *(67%)*	0	N/A
Groundwater	11	11 *(100%)*	0	N/A

WFD Risk

A total of 18 (44%) waterbodies are *At Risk* of not meeting their environmental objective in the Owenavorragh Catchment, while 12 (29%) are under *Review* and 11 (27%) are *Not At Risk.*

Go to EPA Water Map to see WFD Risk for this catchment

WFD Risk for the Owenavorragh Catchment based on 2016-2021 data.
View Online Dashboard: https://www.catchments.ie/data/#/dashboard/waterquality

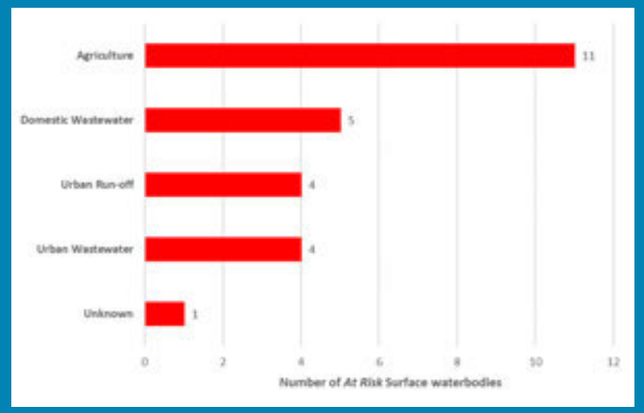
There are currently no heavily modified water bodies (HMWBs) in the Owenavorragh Catchment.

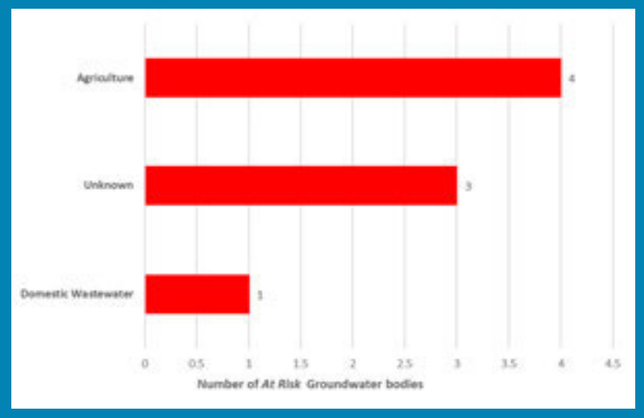
There are no artificial waterbodies in the Owenavorragh Catchment.

The EPA's characterisation outcome report has more information on WFD Risk

Significant Pressures driving risk

Significant pressure types impacting the 14 *At Risk* surface waterbodies and four groundwater bodies are broken down in the figures below.





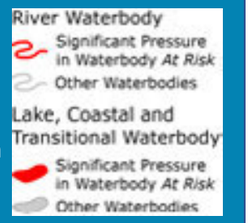
The issues driven by these pressures are mainly nutrient pollution, organic pollution, and unknown impacts for surface water, and nutrient pollution and chemical quality diminution for surface water impact for groundwaters. for more information, see https://www.catchments.ie/data/#/dashboard/pressure?_k=i351zs.

Go to the Summary Information section to get significant pressure and issue data for At Risk waterbodies within the Owenavorragh Catchment.

Click here for more information on significant pressures

Significant Pressures

Agriculture is the top significant pressure impacting 83% of the 18 *At Risk* waterbodies within the Owenavorragh Catchment, followed by 33% impacted by Domestic Wastewater and 22% by Urban Run-off.



i

ii

iii

The catchments.ie dashboards will show all significant pressures identified for this catchment.

www.catchments.ie/data/#/dashboard/pressure

Go to the EPA Water Maps for the locations of all significant pressure types identified for this catchment

Locations of At Risk surface waterbodies impacted by i) Agriculture, ii) Domestic Wastewater and iii) Urban Run-off.

Introduction

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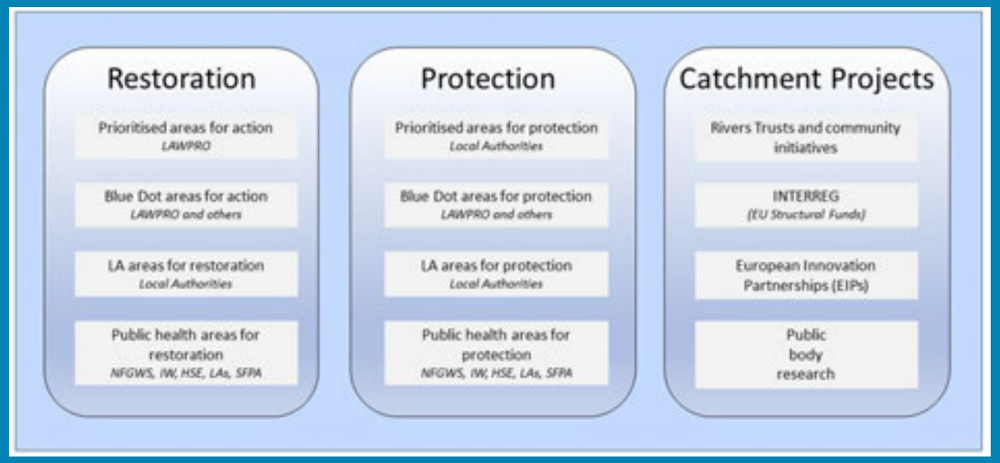
Priority Areas for Action

A number of waterbodies have been prioritised through the selection of Areas for Action. There were three Priority Areas for Action identified for the second river basin management planning cycle in the Owenavorragh Catchment. This has increased to a total of five Areas for Restoration and one Catchment Project for the third cycle. ***Go to the summary information section to get Area for Action information for waterbodies within the Owenavorragh Catchment.***



Types of Areas for Action under the third cycle River Basin Management Plan

- View the current progress of Areas for Action and Summary Reports completed by LAWPRO, on catchments.ie and the EPA Water Map:
  - https://www.catchments.ie/data/#/areaforaction
  - https://gis.epa.ie/EPAMaps/default?easting=?&northing=?&lid=EPA:WFD_AreasForAction
- LAWPRO have also published detailed desktop studies on Prioritised Areas for Action (PAAs) which are available their website: https://lawaters.ie/desktop-studies/

- Information on Areas for Action for the second cycle is available in Cycle 2 Catchment Assessments which have been archived on catchments.ie: https://www.catchments.ie/download/cycle-2-catchment-assessments-published-september-2018/

Summary information for all waterbodies in the Owenavorragh Catchment

The next page provides a table with a breakdown of key information for all waterbodies in this catchment. The key is provided below. Additional information for each waterbody is available on https://www.catchments.ie/data, including a breakdown of status, a monitoring schedule for monitored waterbodies and downloadable chemistry results, where available.

Protected Area categories	BW: Bathing Water DW: Drinking Water Fish: Salmonid Waters NSA: Nutrient Sensitive Areas SAC: Special Area of Conservation, Natura 2000 (water dependent habitats and species) SF: Shellfish Area SPA: Special Area of Protection, Natura 2000 (water dependent habitat and species)
Significant pressure* types categories ** For At Risk waterbodies only*	Ab: Abstractions Ag: Agriculture Aq: Aquaculture At: Atmospheric DWW: Domestic Wastewater For: Forestry HPS: Historically polluted sites HYMO: Hydromorphology Ind: Industry IS: Invasive Species M+Q: Mines and Quarries Peat: Peat Drainage and Extraction UR: Urban Run-Off UWW: Urban Wastewater Was: Waste WT: Water Treatment

Catchment Code	Waterbody (WB) Code	WB Name	WB Type	Local Authority	Protected Area	Status 10-15	Status 13-18	Status 16-21	Environmental Objective	Environmental Objective Date	WFD Risk 16-21	Significant Issue(s)	Significant Pressure(s)	Area for Action (AFA)	AFA (lead, type)	Link to WB page on catchments.ie	Link to WB on EPA Water Map
10, 11	IE_EA_140_0000	Southwestern Irish Sea - Brittas Bay (HA 10)	Coastal	Wicklow County Council	BW; SAC;	Unassigned	High	High	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
10, 11, 12, 13	IE_SE_010_0000	Southwestern Irish Sea (HAs 11;12)	Coastal	Wexford County Council	BW; SAC; SPA; NSA;	Good	Moderate	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11, 12	IE_SE_040_0000	Wexford Harbour	Coastal	Wexford County Council	SAC; SPA; SF; NSA;	Moderate	Good	Moderate	Good	2022-2027	At risk	Nutrients, Organic	UWW, Ag	Wexford Harbour	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
10, 11, 12, 9	IE_EA_G_076	Wicklow	Groundwater	Wicklow County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	At risk	Nutrients	Unknown, Ag			View WB Page	View WB on EPA Water Map
10, 11, 12, 13, 14, 9	IE_SE_G_011	Ballyglass	Groundwater	Wicklow County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	At risk	ChemicalQualityDiminutionForSW, Nutrients	Unknown, Ag			View WB Page	View WB on EPA Water Map
11, 12	IE_SE_G_025	Cahore Point	Groundwater	Wexford County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	At risk	ChemicalQualityDiminutionForSW, Nutrients	DWTS, Ag			View WB Page	View WB on EPA Water Map
11, 12, 13	IE_SE_G_031	Castlebridge North	Groundwater	Wexford County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11, 12	IE_SE_G_033	Castlebridge South	Groundwater	Wexford County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11, 12, 13	IE_SE_G_061	Enniscorthy	Groundwater	Wexford County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	At risk	Nutrients	Ag, Unknown			View WB Page	View WB on EPA Water Map
11, 12	IE_SE_G_071	Gorey	Groundwater	Wexford County Council	DWPA	Good	Good	Good	Good	2021 or earlier	Review					View WB Page	View WB on EPA Water Map
10, 11, 12	IE_SE_G_075	Inch	Groundwater	Wexford County Council	DWPA	Good	Good	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11, 12	IE_SE_G_162	Curracloe Gravels	Groundwater	Wexford County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11, 12	IE_SE_G_164	Castlebridge Gravels	Groundwater	Wexford County Council	DWPA; SAC	Good	Good	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11	IE_SE_G_172	Oulart Gravels	Groundwater	Wexford County Council	DWPA	Good	Good	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11	IE_SE_11_26	Kilmacoe	Lake	Wexford County Council	SAC;	Unassigned	Unassigned	Good	Good	2021 or earlier	Not at risk					View WB Page	View WB on EPA Water Map
11	IE_SE_11A020200	AUGHBOY (WEXFORD)_010	River	Wexford County Council		Bad	Bad	Poor	Good	2022-2027	At risk	Nutrients, Organic	Ag, UR	Aughboy - Cahore Canal	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11A030035	ASKINCH UPPER STREAM_010	River	Wexford County Council		Poor	Poor	Moderate	Good	2022-2027	At risk	UnknownImpactType	Unknown	Inch (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B010300	BALLYEDMOND_010	River	Wexford County Council		Poor	Poor	Moderate	Good	2022-2027	At risk	Nutrients, Organic	DWTS	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B020100	BANOGE_010	River	Wexford County Council		Moderate	Poor	Moderate	Good	2022-2027	At risk	Nutrients, Organic	Ag, UR	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B020200	BANOGE_020	River	Wexford County Council		Poor	Poor	Poor	Good	2022-2027	At risk	Nutrients, Organic	UR, UWW	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B020300	BANOGE_030	River	Wexford County Council		Poor	Poor	Poor	Good	2022-2027	At risk	Nutrients, Organic	UWW, UR, Ag	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B030300	BLACKWATER (WEXFORD)_010	River	Wexford County Council	SPA;	Poor	Moderate	Good	Good	2021 or earlier	Review			Blackwater (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B040200	BRACKAN_010	River	Wexford County Council		Moderate	Moderate	Good	Good	2021 or earlier	Review			Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11B490430	BALLYMONEY_LOWER_010	River	Wexford County Council		Unassigned	Moderate	Good	Good	2021 or earlier	Review					View WB Page	View WB on EPA Water Map
11	IE_SE_11C010100	CLONOUGH_010	River	Wexford County Council		Poor	Moderate	Good	Good	2021 or earlier	Review			Inch (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11C020150	CAHORE CANAL_010	River	Wexford County Council	SAC; SPA;	Unassigned	Moderate	Moderate	Good	2022-2027	At risk	Nutrients, Organic	Ag, DWTS	Aughboy - Cahore Canal	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11G010040	GORTEEN UPPER STREAM_010	River	Wexford County Council		Moderate	Moderate	Good	Good	2021 or earlier	Not at risk			Inch (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11G020720	GARRYMORE (Wexford)_010	River	Wexford County Council		Unassigned	Moderate	Good	Good	2021 or earlier	Review					View WB Page	View WB on EPA Water Map
11	IE_SE_11I010130	INCH (WEXFORD)_010	River	Wexford County Council		Moderate	Moderate	Moderate	Good	2022-2027	At risk	Nutrients	DWTS, Ag	Inch (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11I010200	INCH (WEXFORD)_020	River	Wexford County Council		Moderate	Moderate	Good	Good	2021 or earlier	Review			Inch (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11K070580	KILLINCOOLY_BEG_010	River	Wexford County Council	SAC;	Unassigned	Unassigned	Good	Good	2021 or earlier	Review					View WB Page	View WB on EPA Water Map
11	IE_SE_11K190350	KILMACOE_010	River	Wexford County Council	SPA;	Unassigned	Good	Good	Good	2021 or earlier	Review			Blackwater (Wexford)	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11L010400	LITTER_MORE_010	River	Wexford County Council	SAC;	Unassigned	Unassigned	Moderate	Good	2022-2027	Review					View WB Page	View WB on EPA Water Map
11	IE_SE_11M100800	MANGAN_LOWER_010	River	Wexford County Council		Unassigned	Poor	Moderate	Good	2022-2027	Review					View WB Page	View WB on EPA Water Map
11	IE_SE_11O010080	OWENAVORRAGH_010	River	Wexford County Council		Good	Good	Good	Good	2021 or earlier	Not at risk			Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11O010200	OWENAVORRAGH_020	River	Wexford County Council		Unassigned	Moderate	Poor	Good	2022-2027	At risk	Nutrients, Organic	Ag	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11O010300	OWENAVORRAGH_030	River	Wexford County Council		Poor	Moderate	Moderate	Good	2022-2027	At risk	Nutrients	Ag, DWTS	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11O010400	OWENAVORRAGH_040	River	Wexford County Council		Moderate	Moderate	Moderate	Good	2022-2027	At risk	Nutrients, Organic	Ag, DWTS	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_11O010500	OWENAVORRAGH_050	River	Wexford County Council		Moderate	Poor	Poor	Good	2022-2027	At risk	Nutrients, Organic	Ag, UWW	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map

11	IE_SE_11O010700	OWENAVORRAGH_060	River	Wexford County Council		Moderate	Moderate	Moderate	Good	2022-2027	At risk	Nutrients, Organic	Ag	Owenavorragh	LAWPRO, Restoration	View WB Page	View WB on EPA Water Map
11	IE_SE_020_0100	Owenavorragh Estuary	Transitional	Wexford County Council		Unassigned	Good	Moderate	Good	2022-2027	Review					View WB Page	View WB on EPA Water Map

APPENDIX 10-2 EPA Surface Water Catchment Mapping

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Kilnahue Gorey LSD EIAR Chapter 10 - Water

Appendix 10.2 – EPA Surface Water Catchment Mapping

Image 10.2.1: EPA Catchment Map of Banoge River Sub-Basins. Site in SW corner of Banoge_010. (Approximate site location is shown by the red cross).

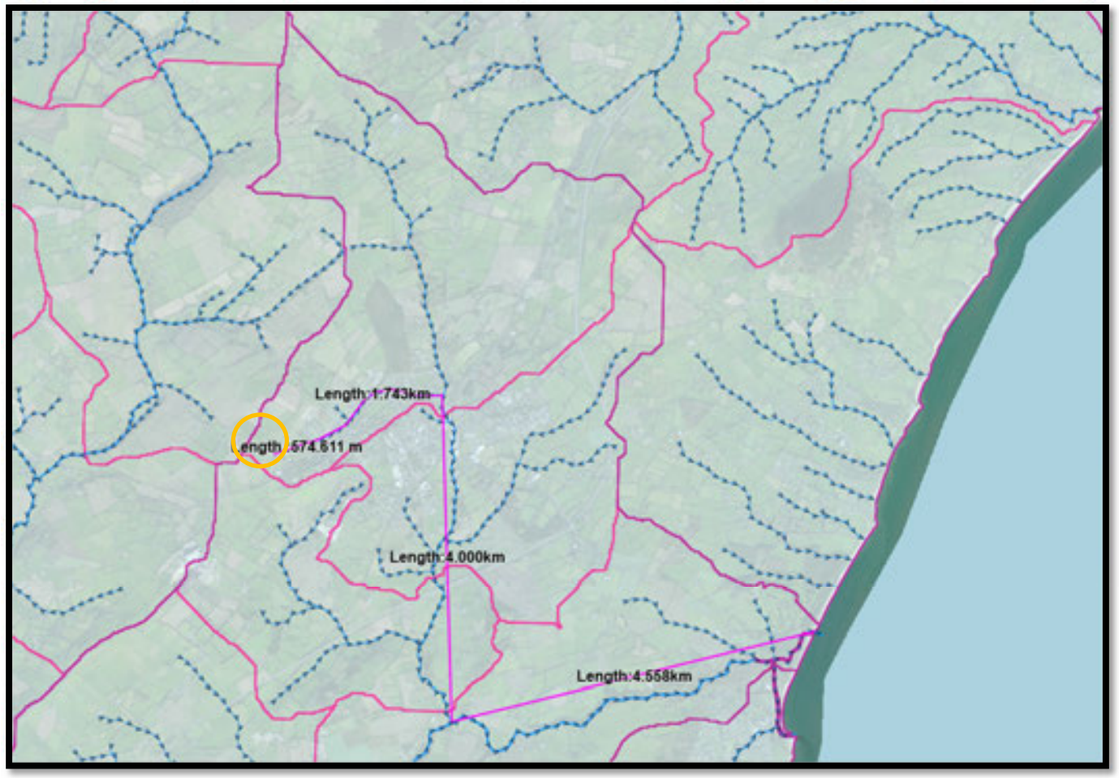

Image 10.2.2: EPA Catchment Map of Banoge River Sub-Basins showing water flow direction. (Approximate site location is shown by the orange circle & distances of water features shown).

Site is ~575m from the start of the Ballyowen Watercourse.
Ballyowen watercourse is about 1.75m long and joins main River Banoge_010 to the East.
Banoge River system joins the Owenavorragh River about 4km south of Gorey Town.
The Owenavorragh River meets the sea at Courtown about 4.56km to the East of Banoge confluence.

Chapter 10. Water – Kilnahue Gorey Residential LSD EIAR
Appendix 10.2: EPA Catchment & Hydrology Maps

Image 10.2.3: EPA Water Quality Status Map for River Banoge. Banoge_010 is Moderate Quality (yellow) while Banoge_020 and Banoge_030 is Poor Quality, (orange).

Image 10.2.4: EPA Water Quality Risk Status Map for River Banoge for period from 2019 to 2024. Whole system is 'At Risk', (red).

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APPENDIX 10-3 EPA Groundwater Catchment Mapping

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Kilnahue Gorey LSD EIAR Chapter 10 - Water

Appendix 10.3 – EPA Groundwater Catchment Mapping

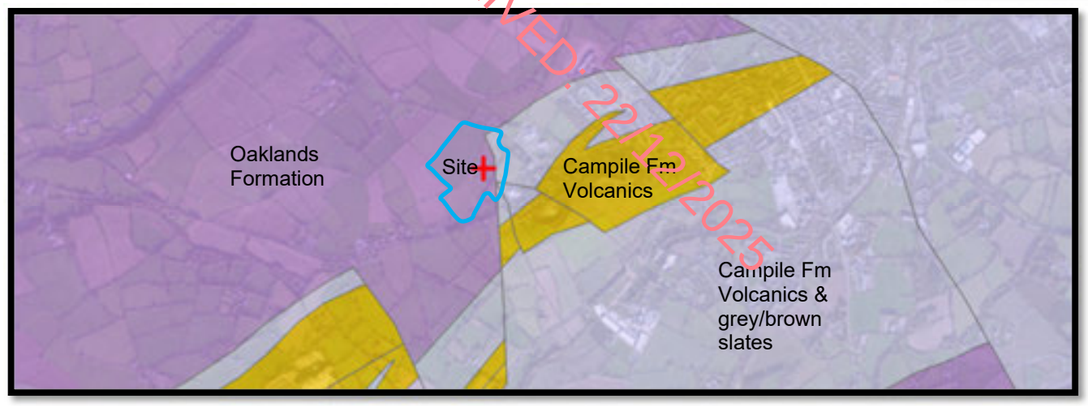

Image 10.2.1: EPA GSI Bedrock Mapping with geological bedrock formations. (Site in blue shape.)

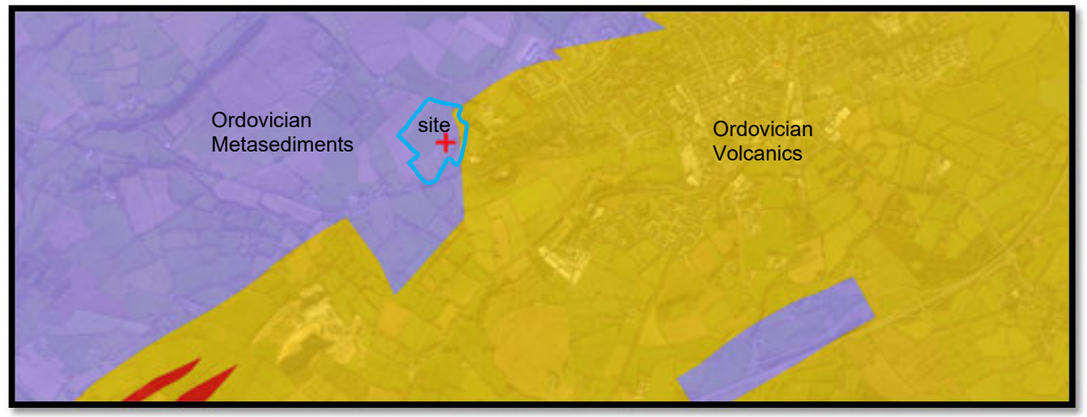

Image 10.2.2: EPA GSI Bedrock Rock Unit Group Map.

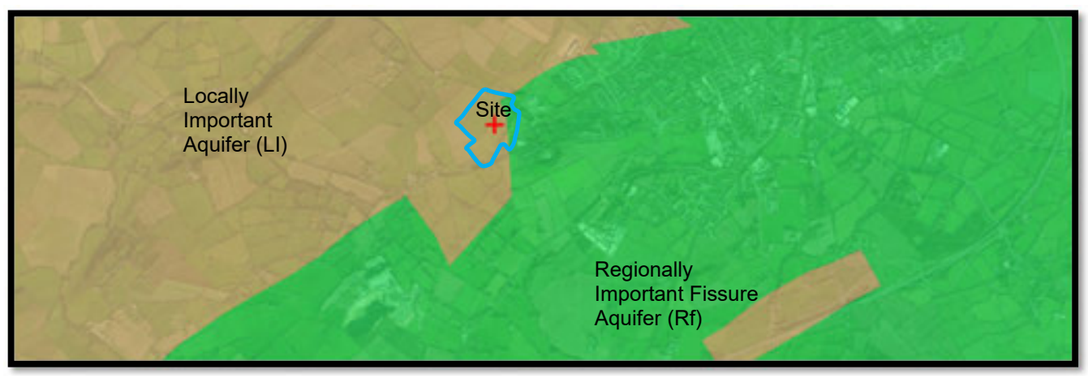

Image 10.2.3: EPA GSI Bedrock Aquifer Potential Map.

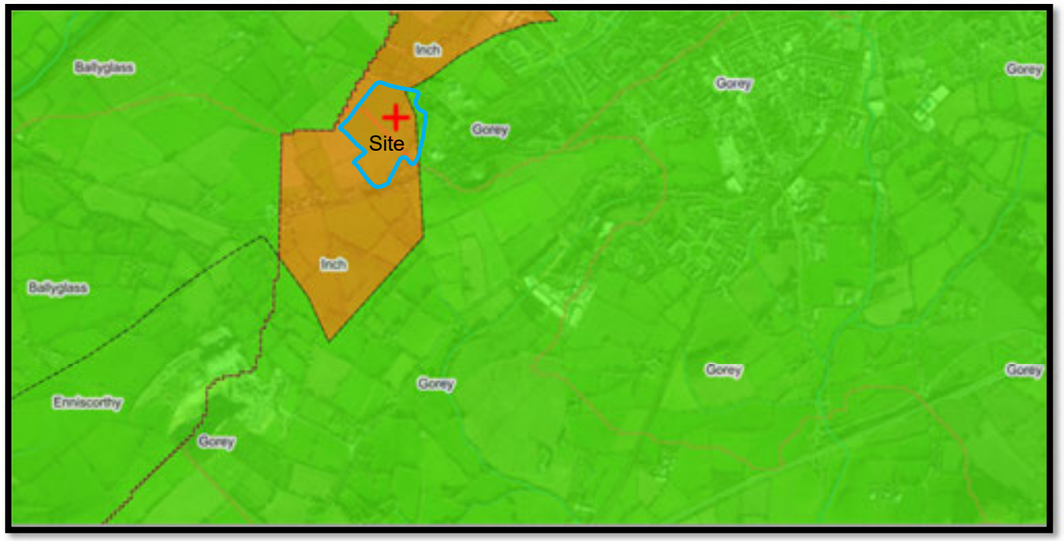

Image 10.2.4: WFD EPA Aquifer Quality Status 2019 to 2014 – Inch is Classed 'Poor', Gorey is 'Good'.

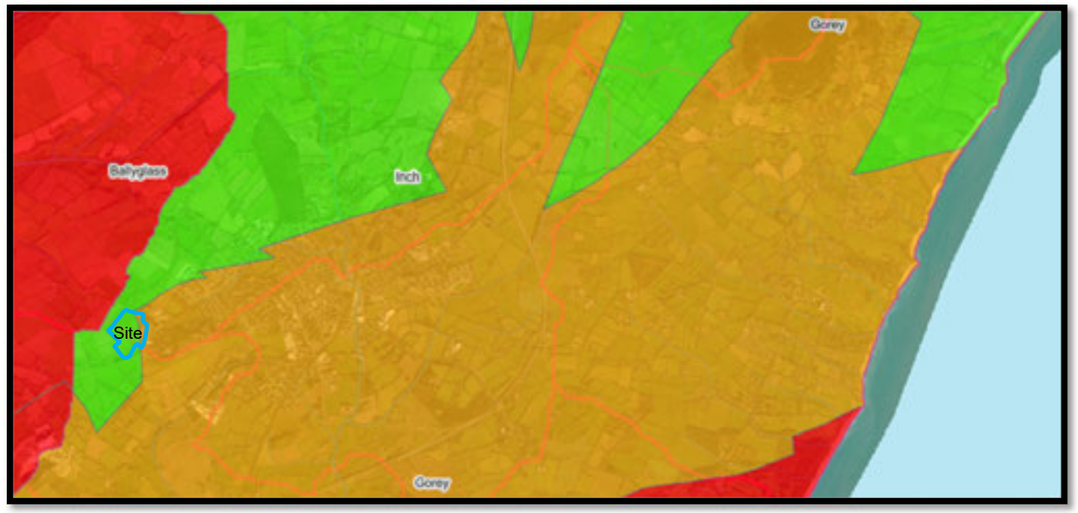

Image 10.2.5: WFD EPA Cycle 3 Aquifer Risk Status . Inch is 'Not At Risk', (green), Gorey is 'under Review' (brown) while the Ballyglass Groundwater Aquifer to the west is 'At Risk' (red).

Chapter 10. Water – Kilnahue Gorey Residential LSD EIAR
Appendix 10.3: EPA Hydrogeology Maps

Image 10.2.6: EPA Groundwater Bodies Map with overlap of Gorey GWB on east side of site, (2.24 Ha). The rest of the site is underlain by the Inch GWB. The Ballyglass GWB is located to the west & north.

(Sourced from EPA Web Site – Reproduced under Licence Ref CYAL50458194 © Tailte Eireann – Surveying)

APPENDIX 10-4 GSI Groundwater Mapping

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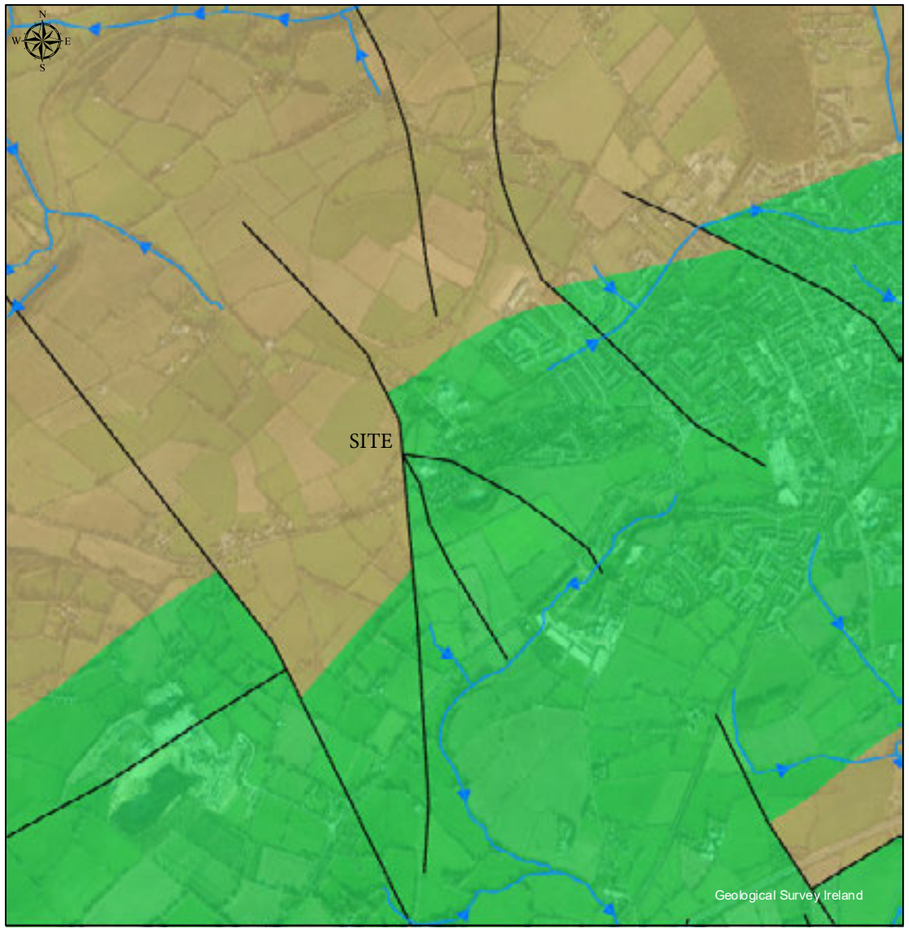
GSI Aquifer Mapping - Kilnahue Gorey



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department pf the Environment,
Climate and Communications

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Snapshot Date: September 23, 2025

Legend

River and River Flow Direction Arrow

Lake

IE_GSI_Sand_and_Gra...

Regionally important gravel aquifer

Locally important gravel aquifer

IE_GSI_Aquifer_G...

IE_GSI_Bedrock_Aquif...

Rkc - Regionally Important Aquifer - Karstified (conduit)

Rkd - Regionally Important Aquifer - Karstified (diffuse)

Rk - Regionally Important Aquifer - Karstified

Rf - Regionally Important Aquifer - Fissured bedrock

Rf/Rk - Regionally Important Aquifer - Fissured bedrock/Regionally Important Aquifer - Karstified

Lm - Locally Important Aquifer - Bedrock which is Generally Moderately Productive

Lk - Locally Important Aquifer - Karstified

Ll - Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones

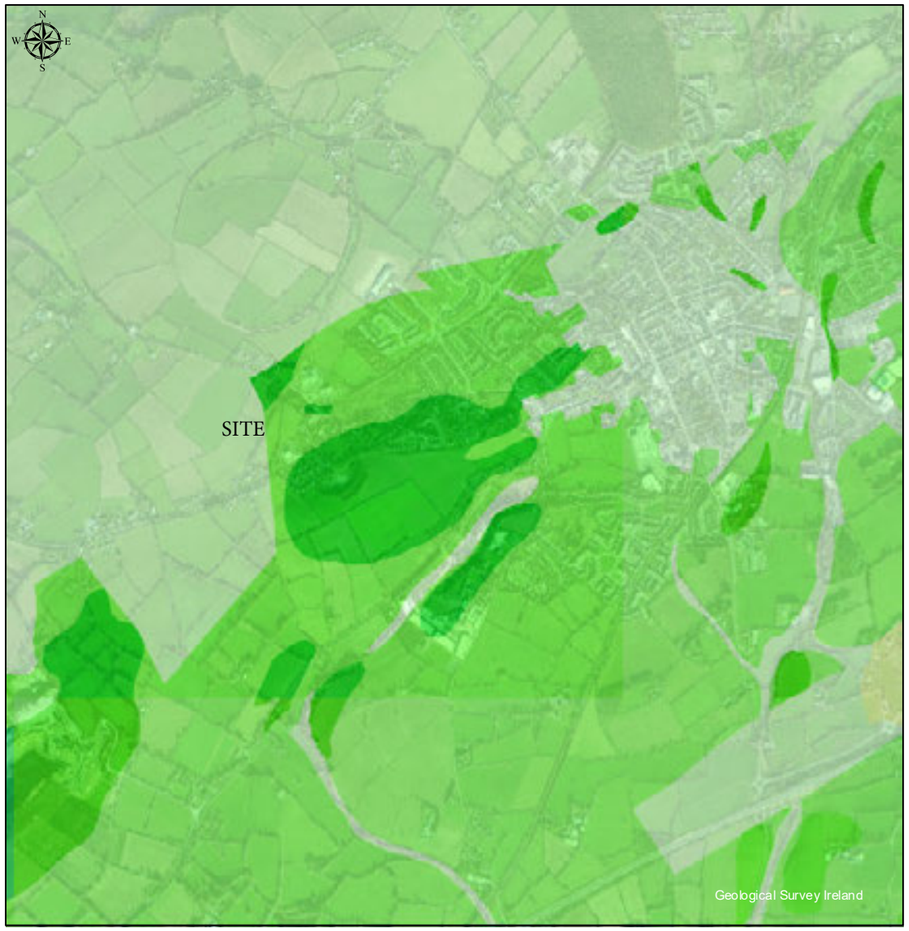
Pl - Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones

Pu - Poor Aquifer - Bedrock which is Generally Unproductive

Lake

Unclassified

GSI GW Recharge Mapping - Kilnahue



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department pf the Environment,
Climate and Communications

Tailte Eireann Surveying Reproduced Under license CYAL50458194

Snapshot Date: September 23, 2025

Legend

IE_GSI_Groundw...

- >2000 mm
- 1401-2000 mm
- 1001-1400 mm
- 901-1000 mm
- 801-900 mm
- 701-800 mm
- 601-700 mm
- 551-600 mm
- 501-550 mm
- 451-500 mm
- 401-450 mm
- 351-400 mm
- 301-350 mm
- 251-300 mm
- 201-250 mm
- 151-200 mm
- 101-150 mm
- 51-100 mm
- 1-50 mm
- 0 mm

RECEIVED: 22/12/2025

CHAPTER ELEVEN

BIODIVERSITY

APPENDIX 11-1 Bat Fauna Impact Assessment for a Proposed Large-Scale Residential Development (LRD) at Kilnahue, Gorey, Co. Wexford
APPENDIX 11-2 Application for Derogation
APPENDIX 11-3 A Bat and Badger Assessment of Lands Proposed for Development at Kilnahue, Gorey, Co. Wexford
APPENDIX 11-4 Breeding Bird Assessment for a proposed Large-scale Residential Development (LRD) at Kilnahue, Gorey, Co. Wexford

RECEIVED: 22/12/2025

APPENDIX 11-1 Bat Fauna Impact Assessment for a Proposed Large-Scale Residential Development (LRD) at Kilnahue, Gorey, Co. Wexford

RECEIVED: 22/12/2025

ALTEMAR

Marine & Environmental Consultancy

Appendix 11.1. Bat Fauna Impact Assessment for a Proposed Large-Scale Residential Development (LRD) at Kilnahue, Gorey, Co. Wexford.

17th December 2025

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Glenveagh Homes Ltd.

Altemar Ltd., 50 Templecarrig Upper, Delgany, Co. Wicklow. 00-353-1-2010713. info@altemar.ie
Directors: Bryan Deegan and Sara Corcoran
Company No.427560 VAT No. 9649832U
www.altemar.ie

SUMMARY

Structure: Greenfield site with two dilapidated stone buildings present to the northeast of site.

Location: Gorey, Co. Wexford

Bat species present: A single soprano pipistrelle bat roost (1 no. individual bat recorded utilising this roost) was recorded in a mature oak tree located in the north of the woodland. Common pipistrelle (*Pipistrellus pipistrellus*), Soprano pipistrelle (*Pipistrellus pygmaeus*) and Leisler's bat (*Nyctalus leisleri*) foraging activity recorded along onsite woodland and treeline/scrub habitats during handheld detector surveys. Daubenton's Bat (*Myotis daubentonii*), Whiskered Bat (*Myotis mystacinus*), Lesser Noctule (*Nyctalus leisleri*), Nathusius' pipistrelle (*Pipistrellus nathusii*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Common Pipistrelle (*Pipistrellus pipistrellus sensu lato*) bat activity was recorded onsite by static detectors positioned in the northeast corner of proposed development site.

Proposed work: Large-scale Residential Development (LRD)

Impact on bats: Consultation within the project team has taken place regarding the potential impact of artificial lighting on bat foraging activity. In response, the proposed lighting strategy has been revised to ensure that foraging opportunities are maintained across the site. This includes the establishment of a parkland habitat planted with native species where no lighting is proposed, thereby providing a naturally dark refuge and maintaining essential habitat structure, and further supported by the retention of the western boundary native hedgerow to reinforce linear features used by commuting and foraging bats.

A derogation licence is required for the felling of one Oak tree associated with existing bat roost on site. While the introduction of new buildings will alter the local environment, foraging activity is expected to continue on site. A pre-construction survey of all buildings and trees will be undertaken to confirm the status of roosting features immediately prior to works. With the implementation of the sensitive lighting strategy, habitat retention measures, and the enhancement provided by compensatory planting, the dark parkland habitat, the overall impact on bats is deemed to be low adverse/negative/long term/not significant.

Surveys by: Emma Peters & Jeff Boyle (Altemar)

Survey dates: 29th April 2025 & 14th May 2025

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 30 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2022)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Marnell, Kelleher and Mullen (2022), Bat Mitigation Guidelines for Ireland V2 (which update and replace the Bat Mitigation Guidelines for Ireland published in 2006).

The bat surveys for the site were carried out by Emma Peters and Jeff Boyle of Altemar Ltd.

Emma Peters (BSc Environmental Sciences)

Emma has experience in bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys and is a member of Bat Conservation Ireland. She is also skilled in habitat identification, native and non-native species identification, wintering and breeding ornithological surveys, and terrestrial mammal surveys.

Jeff Boyle (BSc Environmental Management)

Jeff is skilled in bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys. He is also experienced in habitat assessment and has undertaken flora/invasive species surveys and breeding/wintering bird surveys to produce numerous ecological assessments on a range of residential, industrial, and commercial projects.

Legislative Context

Wildlife Act 1976 (as amended by, inter alia, the Wildlife (Amendment) Act 2000).

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to "*Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. "*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended). See Art.73 of the 2011 Regulations which revokes the 1997 Regulations.

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), all bat species are listed under the First Schedule and, pursuant to, *inter alia*, Part 6 and Regulation 51, it is an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat particularly during the period of breeding, hibernating or migrating;
- Damage or destroy a breeding site or resting place of a bat;
- Keep, sell, transport, exchange, offer for sale or offer for exchange any bat taken in the wild.

Description of the Proposed Project

Glenveagh Homes Ltd are applying for permission for a Large-Scale Residential Development consisting of the construction of: 413 no. residential units **(comprising 349 no. houses and 64 no. apartment/duplex/maisonettes)**; 1 no. creche; and all associated site development works including the provision of road widening works, pedestrian/cyclist facilities and a raised pedestrian crossing along Kilnahue Lane, a right hand turning lane on Carnew Road, drainage upgrade works, 4 no. ESB substations, footpaths, lighting, parking, bicycle and bin stores and landscaping/amenity areas located at Kilnahue, Gorey, Co. Wexford. Access will be provided via 2 no. new entrances onto Killnahue Land and 1 no. new entrance onto the Carnew Road. The proposed drainage upgrade works **will consist of works along Carnew Road, Grattan Row, McCurtain Street, Charlotte Row, Main Street, and Esmonde Street and extend into the townlands** of Gorey Hill, Coolishal Lower, Creagh Demesne, Gorey Corporation Lands, Goreybridge, & Milllands.

The proposed site outline, location, and site plan is demonstrated in Figures 1 & 2.

Landscape

A Landscape & Green Infrastructure Report for the proposed development has been prepared by Simon Ronan Landscape Architects. The proposed landscape masterplan is demonstrated in Figure 3. As outlined in the Landscape Strategy in relation to ecological connectivity:

'Preserving ecologies through strengthening existing green connections

The continuity of the hedgerows on the site plays a vital role in maintaining ecological connectivity, supporting wildlife movement, and enhancing biodiversity. By preserving and extending these natural corridors, the site provides critical habitats for various species, while offering residents a unique opportunity to engage with nature.'

03.3 Ecological Connectivity

Arborist

A Tree Survey Report has been prepared by CMK Hort & Arb Ltd. to accompany this planning application. The report outlines the following in relation to the impacts of trees on site:

'Arboricultural Impacts

4 Loss of trees and hedgerows – The proposed development requires the removal of 110 trees and 14 tree/hedgerow groups, and the partial removal of 9 tree/hedgerow groups.

Of the 124 survey entries to be removed, 1 tree is of high quality (A Category), 10 trees and 1 tree/hedgerow group are of moderate quality (B Category), 77 trees and 13 tree/hedgerow groups are of low quality (C Category), and 22 trees are of poor quality (U Category).

Of the 9 tree/hedgerow groups to be partially removed, 2 are of moderate quality (B Category), and 7 are of low quality (C Category).

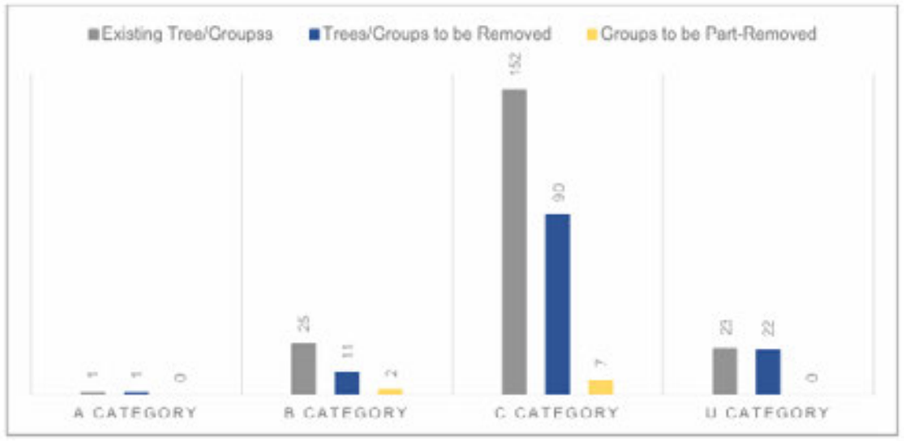


Figure 3: *Breakdown of tree removal required as part of the development.*

The loss of trees and hedgerows will have an initial impact on the local canopy cover and landscape character of the site. Visually, this impact will not be as significant within the wider local area, as the majority of trees and hedgerows to be removed are of low quality and located internally within the site.

The proposal has been carefully designed to retain as many of the existing trees and hedgerows as possible. Most notably, the proposal will retain the main tree and hedge line that runs on either side of the existing laneway, which is proposed to become a new greenway that will reconnect Kilnahue Lane to the R725. These significant tree and hedge lines were proposed to be removed in the previous planning application.

The overall impact that the loss of trees and hedgerows will have on the local area will be in the short term only, as substantial new high-quality tree and hedgerow planting is proposed to be carried out across the site to mitigate their loss.'

The tree protection plans and arboricultural impact assessment plans are demonstrated in Figures 5-14.

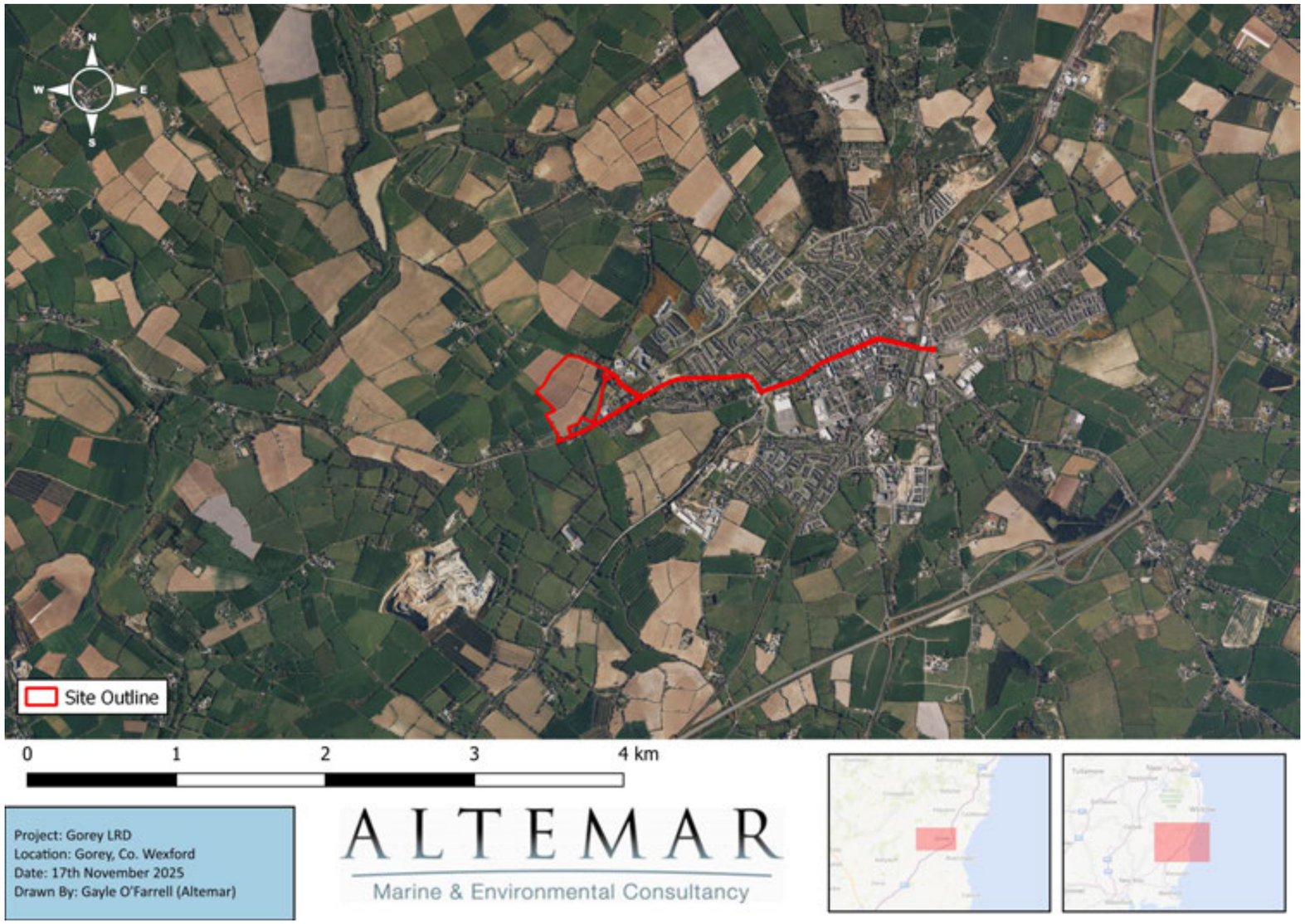


Figure 1. Proposed site outline and location context

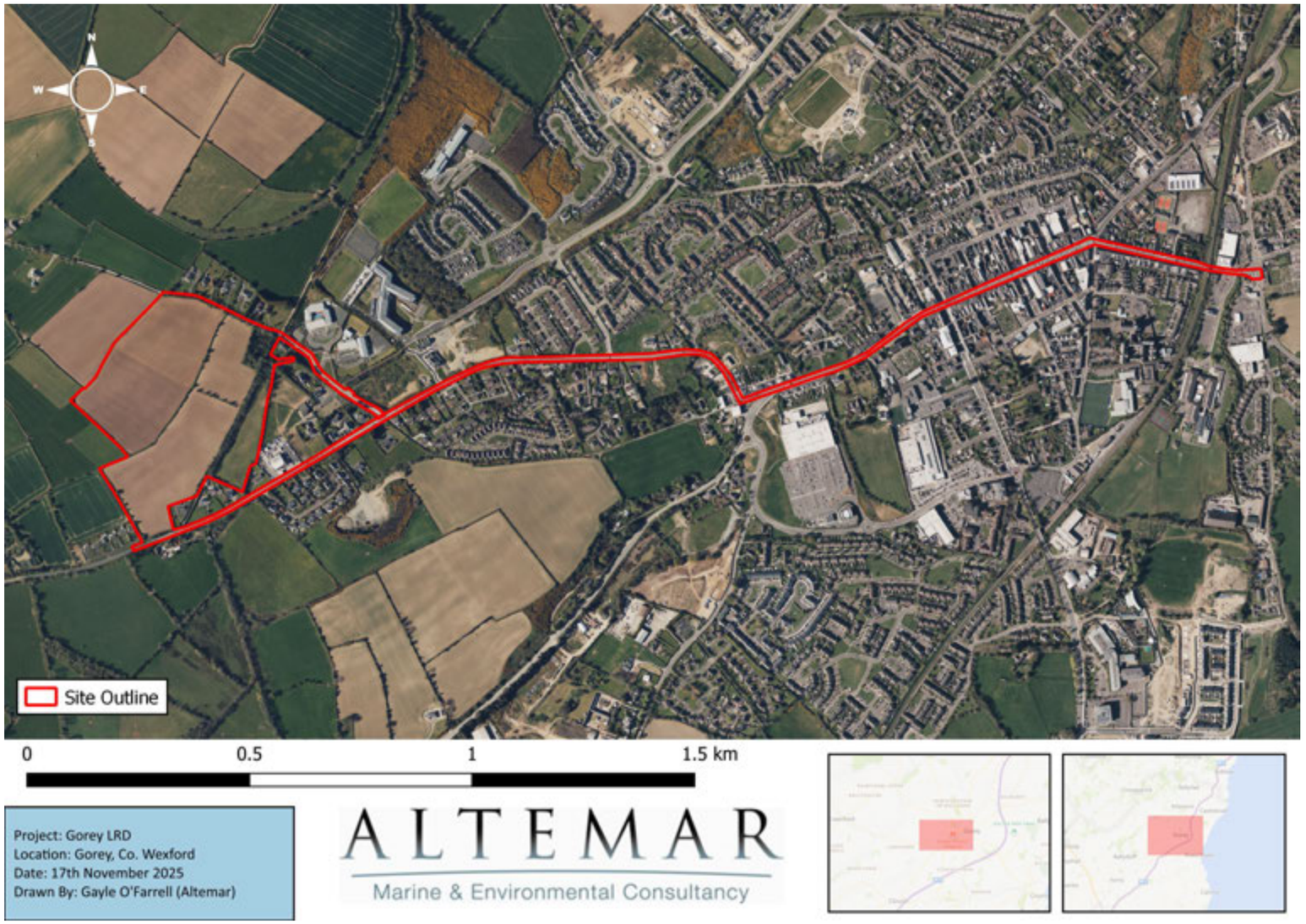


Figure 2. Proposed site outline

Figure 3. Proposed site plan

Figure 4. Proposed landscape plan

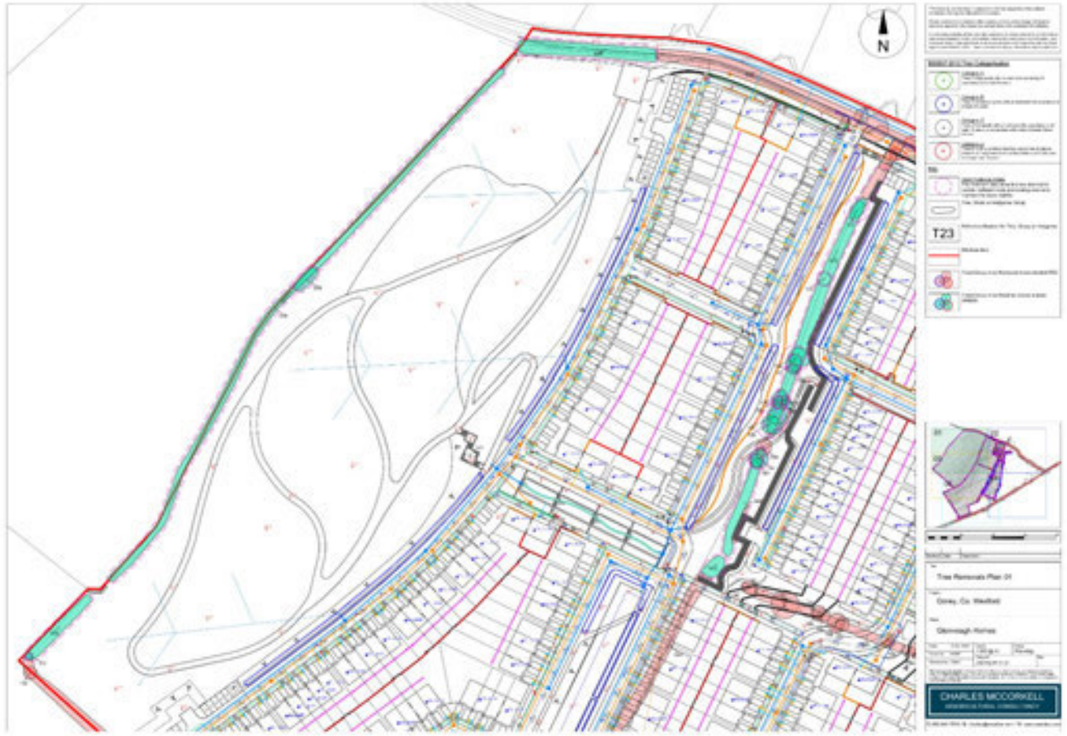


Figure 5. Tree removals plan – sheet 1

Figure 6. Tree removals plan – sheet 2

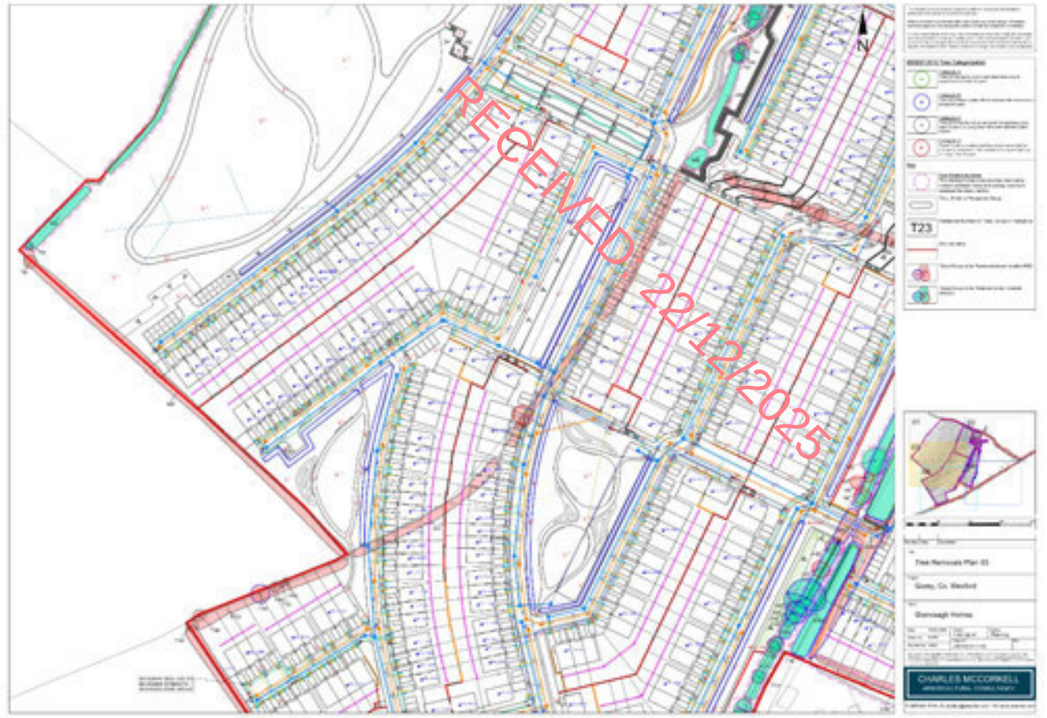


Figure 7. Tree removals plan – sheet 3

Figure 8. Tree removals plan – sheet 4

Figure 9. Tree removals plan – sheet 5

Figure 10. Tree protection plan – sheet 1

Figure 11. Tree protection plan – sheet 2

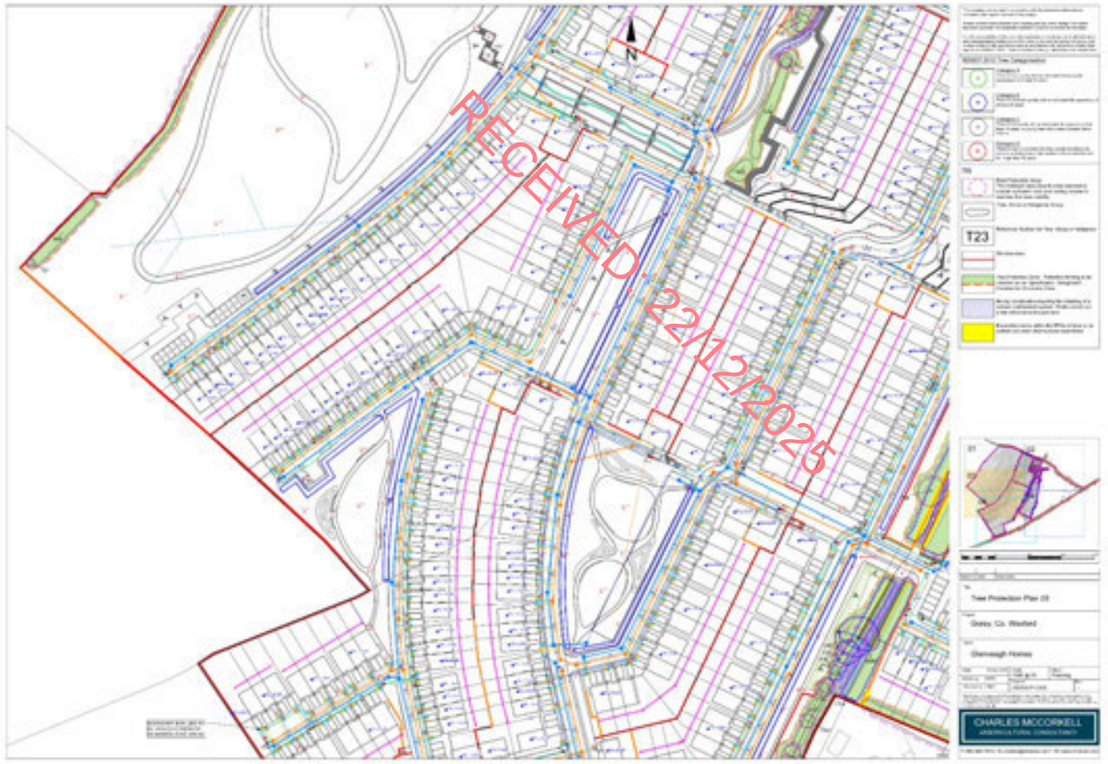


Figure 12. Tree protection plan – sheet 3

Figure 13. Tree protection plan – sheet 4

Figure 14. Tree protection plan – sheet 5

Lighting

A Public Lighting Report was composed by Kerrigan Consulting. The Public Lighting Layout is seen in Figure 15 & 16. It should be noted that Altemar consulted with Kerrigan Consulting in relation to the potential impact of artificial lighting on bat foraging activity. In response, the proposed lighting strategy has been revised to ensure that foraging opportunities are maintained across the site. No external lighting is proposed in the parkland habitat that will be established to the west of the development, and measures are in place to prevent light spill into adjacent habitats surrounding the proposed development site (rear guard fittings on lighting columns). The proposed lighting is compliant with Bat Lighting Guidelines and is set to 3000K.

The following lighting specifications are proposed:

Luminaire A - Veolite Metro Streetlight 19W LED Forward Throw A Optic

Construction:	Die-cast aluminium. IP66 and IK09 rated.
Driver and LED modules are accessible for maintenance and removeable.	
Lens:	Tempered glass
Finish:	Grey RAL 9006
Lamps:	8 LED; 3,000K; G4
Lamp Flux:	2.26
File Name:	SMTA08LGA-FTA.ies
Maintenance Factor:	0.80
Lmax 70, 80, 90 (cd/klm):	401.3, 47.0, 0.5
No. in Project:	19
Life:	L90 B10 >100,000 hours @25°C
Height:	6 metres

Luminaire B - Veolite Metro Streetlight 19W LED Street Optic R03

Construction:	Die-cast aluminium. IP66 and IK09 rated.
Driver and LED modules are accessible for maintenance and removeable.	
Lens:	Tempered glass
Finish:	Grey RAL 9006
Lamps:	8 LED; 3,000K; G4
Lamp Flux:	2.27
File Name:	SMTA08LGA-R03.ies
Maintenance Factor:	0.80
Lmax 70, 80, 90 (cd/klm):	537.8, 56.5, 0.3
No. in Project:	97
Life:	L90 B10 >100,000 hours @25°C
Height:	6 metres

Luminaire C - Veolite Metro Streetlight 14W LED Street Optic R01

Construction:	Die-cast aluminium. IP66 and IK09 rated.
Driver and LED modules are accessible for maintenance and removeable.	
Lens:	Tempered glass
Finish:	Grey RAL 9006
Lamps:	8 LED; 3,000K; G4
Lamp Flux:	1.57
File Name:	SMTA08LGB-R01-3K.ies
Maintenance Factor:	0.80
Lmax 70, 80, 90 (cd/klm):	680.3, 387.6, 0.6
No. in Project:	28
Life:	L90 B10 >100,000 hours @25°C
Height:	6 metres

Luminaire D - Veolite Metro Streetlight 36W LED Street Optic R03

Construction:	Die-cast aluminium. IP66 and IK09 rated.
Driver and LED modules are accessible for maintenance and removeable.	
Lens:	Tempered glass
Finish:	Grey RAL 9006
Lamps:	16 LED; 3,000K; G4
Lamp Flux:	4.54
File Name:	SMTA12LGA-R03-3K.ies
Maintenance Factor:	0.80
Lmax 70, 80, 90 (cd/klm):	537.8, 56.5, 0.3
No. in Project:	11
Life:	L90 B10 >100,000 hours @25°C
Height:	8 metres

Luminaire E - Veolite Metro Streetlight 19W LED Street Optic R03

Construction:	Die-cast aluminium. IP66 and IK09 rated.
Driver and LED modules are accessible for maintenance and removeable.	
Lens:	Tempered glass
Finish:	Grey RAL 9006
Lamps:	8 LED; 3,000K; G4
Lamp Flux:	2.27
File Name:	SMTA12LGA-R03-BS.ies
Maintenance Factor:	0.80
Lmax 70, 80, 90 (cd/klm):	532.0, 28.8, 9.0
No. in Project:	11
Life:	L90 B10 >100,000 hours @25°C
Height:	6 metres

Luminaire F - Veolite Metro Streetlight 19W LED Forward Throw A Option - BS

Construction:	Die-cast aluminium. IP66 and IK09 rated.
Driver and LED modules are accessible for maintenance and removeable.	
Lens:	Tempered glass
Finish:	Grey RAL 9006
Lamps:	16 LED; 3,000K; G4 – with External Luminaire Integrated Shield
Lamp Flux:	2.26
File Name:	SMTA12LGA-FTA-BS.ies
Maintenance Factor:	0.80
Lmax 70, 80, 90 (cd/klm):	491.4, 48.8, 11.0
No. in Project:	3
Life:	L90 B10 >100,000 hours @25°C
Height:	6 metres

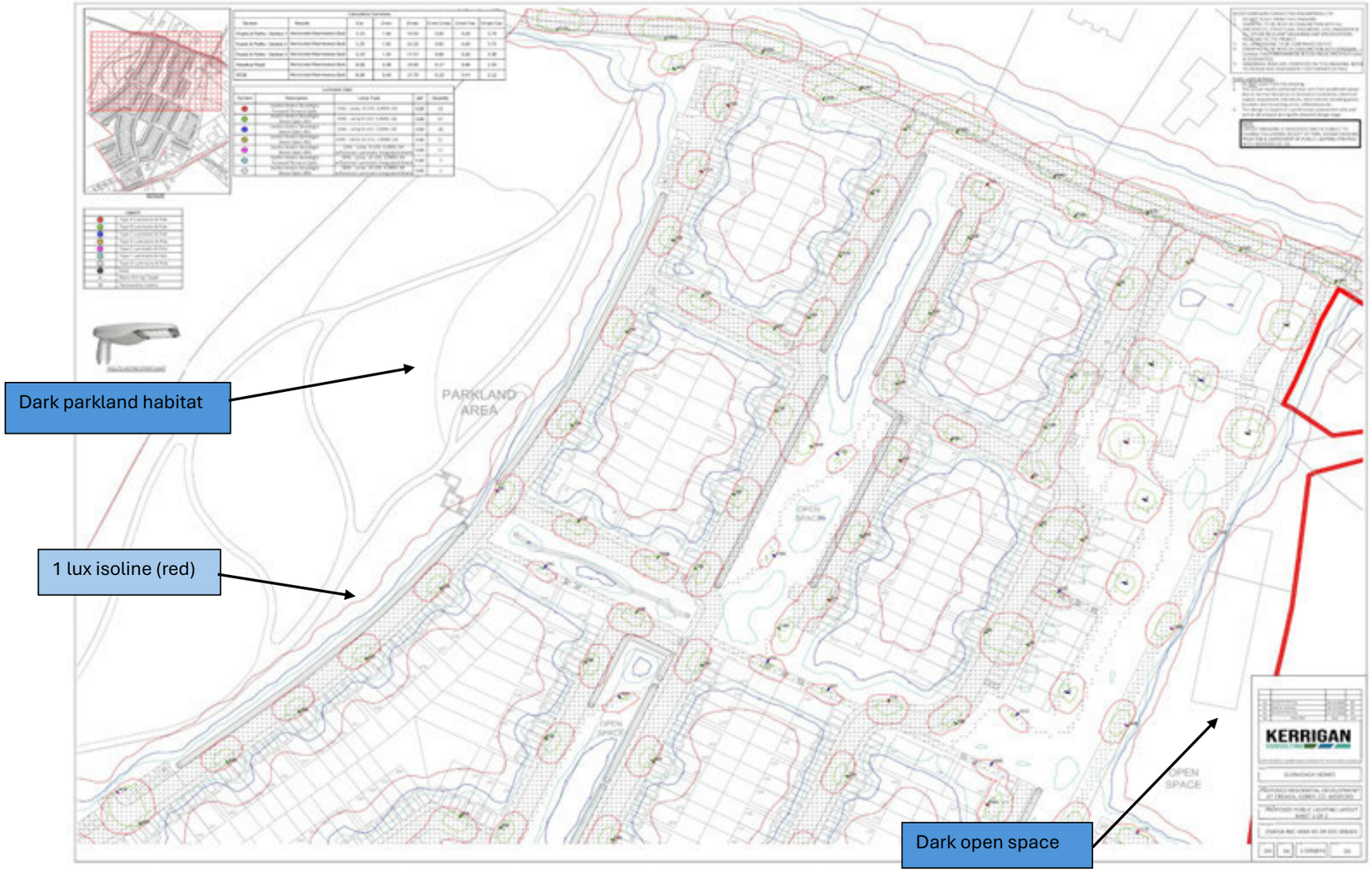


Figure 15. *Public Lighting Layout – sheet 01*

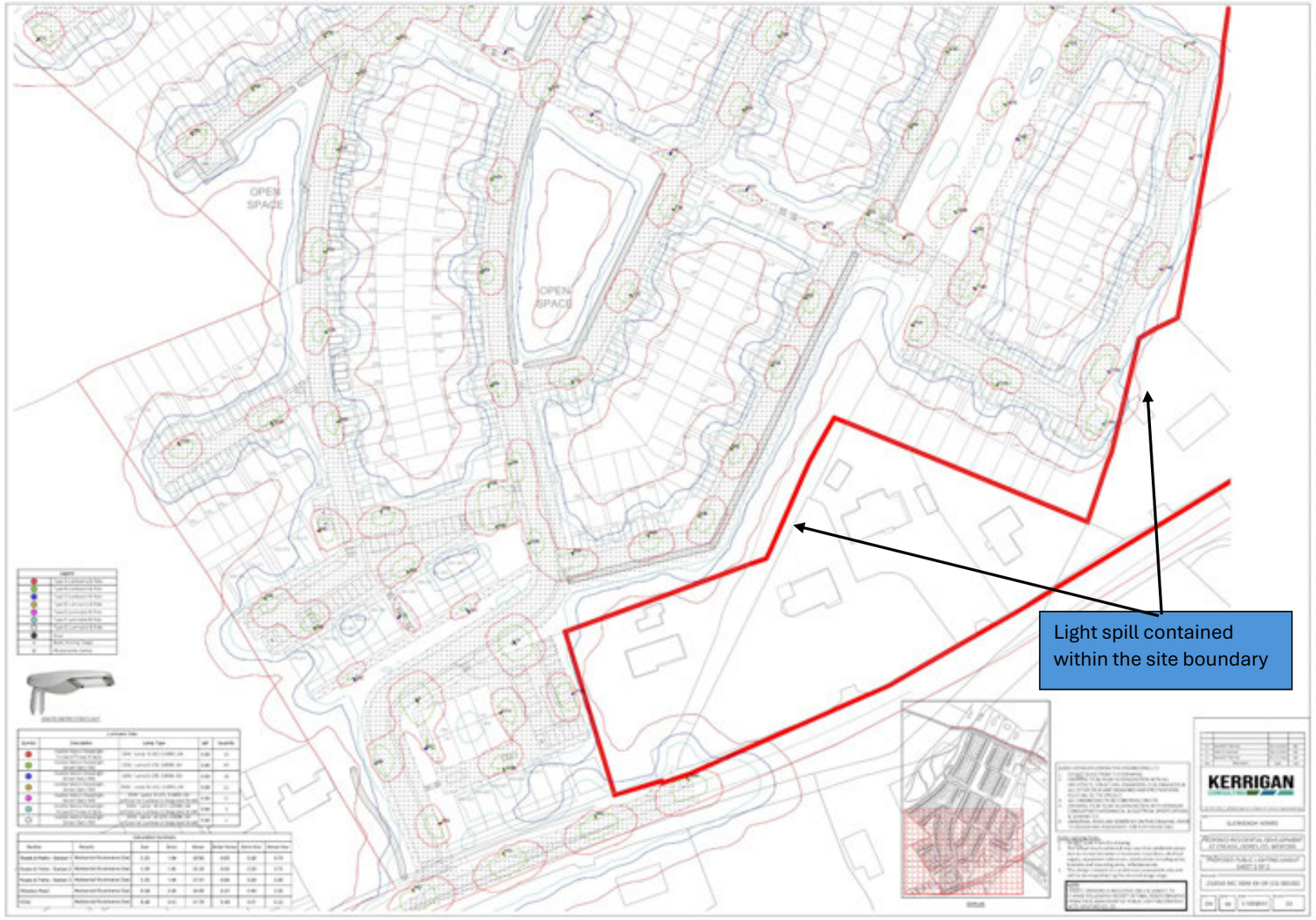


Figure 16. *Public Lighting Layout – sheet 02*

Bat Survey

This report presents the results of two site visits by Altemar on the 29th April 2025 and the 14th May 2025. A bat emergent and detector survey was carried out on both occasions. Trees and buildings on site were examined for bat roosting potential. In addition, a static detector survey was undertaken from the 14th of May 2025 to the 18th of June 2025.

Survey Methodology

As outlined in Marnell et al. 2022 '*The presence of a large maternity roost can normally be determined on a single visit at any time of year, provided that the entire structure is accessible and that any signs of bats have not been removed by others. However, most roosts are less obvious. A visit during the summer or autumn has the advantage that bats may be seen or heard. Buildings (which for this definition exclude cellars and other underground structures) are rarely used for hibernation alone, so droppings deposited by active bats provide the best clues. Roosts of species which habitually enter roof voids are probably the easiest to detect as the droppings will normally be readily visible. Roosts of crevice-dwelling species may require careful searching and, in some situations, the opening up of otherwise inaccessible areas. If this is not possible, best judgement might have to be used and a precautionary approach adopted. Roosts used by a small number of bats, as opposed to large maternity sites, can be particularly difficult to detect and may require extensive searching backed up by bat detector surveys (including static detectors) or emergence counts.'* In relation to the factors influencing survey results the guidelines outlines the following *'During the winter, bats will move around to find sites that present the optimum environmental conditions for their age, sex and bodyweight and some species will only be found in underground sites when the weather is particularly cold. During the summer, bats may be reluctant to leave their roost during heavy rain or when the temperature is unseasonably low, so exit counts should record the conditions under which they were made. Similarly, there may be times when females with young do not emerge at all or emerge only briefly and return while other bats are still emerging thus confusing the count. Within roosts, bats will move around according to the temperature and may or may not be visible on any particular visit. Bats also react to disturbance, so a survey the day after a disturbance event, may give a misleading picture of roost usage.'*

The survey involved the methodologies outlined in Collins (2016) which included the roost inspection methodologies i.e. external methodology outlined in section 5.2.4.1 and the internal survey outlines in section 5.2.4.2 of the guidelines. In addition, the methodologies for Presence absence surveys (Section 7) was carried out for dust emergent surveys.'

As outlined in Collins (2016) 'The bat active period is generally considered to be between April and October inclusive (although the season is likely to be shorter in northern latitudes). However, because bats wake up during mild conditions, bat activity can also be recorded during winter months.'

Tree Potential Bat Roost Inspection

A ground level roost assessment was carried out and used to examine the trees on/proximate to the site for features that could form bat roosts. Potential roosting features include heavy ivy growth, broken limbs, areas of decay, vertical or horizontal cracks, cracks in bark etc. All onsite trees were inspected for bat roosting potential during the daytime (29th April 2025 & 14th May 2025), where possible, for evidence of bat usage.

Buildings as potential bat roosts

All onsite buildings were inspected for evidence of bat activity (e.g. bat droppings, grease markings at potential access points). Accessible areas of these structures were inspected for bat roosts using a Petzl Tikkina 300 Lumens headtorch and a Magnusson IM18 Inspection Camera (Endoscope).

Emergent Surveys

An emergent survey was carried out on the 29th April 2025 & 14th May 2025. Bat activity was determined through visual observation and the use of an *Echo meter touch 2 Pro* handheld detector. Surveyors were positioned at areas containing features of bat roosting potential at dusk to determine evidence of bat roosting onsite.

Handheld Bat Detector Surveys

Following an emergent survey, a bat detector survey was carried out on the 29th April 2025 & 14th May 2025. Detector surveys were carried out onsite using an *Echo meter touch 2 Pro* handheld detector to determine bat activity. Bats are identified by their ultrasonic calls coupled with behavioural and flight observations. All areas of the site were surveyed for bat activity during the detector surveys.

Static Bat Detector Survey

A passive static bat detector survey was carried out from the 14th of May 2025 to the 18th of June 2025. This survey involved the placement of a static bat detector (specifically, a *Song Meter Mini Bat 2 Detector*) within a specific location set to record bat activity over a set period of time. This survey was undertaken in order to gather a wider dataset and determine prolonged usage of the site by bats. One *Song Meter Mini Bat 2 Detector* was positioned in the scrub area to the northeast corner of the site, where the old stone buildings are located (see Figure 18).

Desk Study

A pre-survey bat data search was carried out in April 2025 and revised in May 2025. This included examining records and data from the National Parks and Wildlife Service (NPWS), National Biological Data Centre (NBDC), Bat Conservation Ireland (BCI), in addition to aerial, 6-inch maps and satellite imagery. Additionally, records of previous bat surveys undertaken within / proximate to the subject site were examined.

Survey Constraints

All surveys were conducted within the active bat season and the transects covered the entire site multiple times during the night. Weather conditions were good with mild temperatures of 10°C after sunset. Winds were light and there was no rainfall. Insects were observed in flight during all surveys.

As outlined in Collins (2016) in relation to weather conditions '*The aim should be to carry out surveys in conditions that are close to optimal (sunset temperature 10°C or above, no rain or strong wind.), particularly when only one survey is planned…. Where surveys are carried out when the temperature at sunset is below 10°C should be justified by the ecologist and the effect on bat behaviour considered.*' There were no constraints in relation to the surveys carried out. All areas of the site were accessible, and weather conditions were optimal for bat assessments.

Survey Results

Trees as potential bat roosts.

All trees on site were assessed for bat roosting potential. A bat roost was recorded within an oak tree along the northern site boundary (Tree Number T191).

Buildings as potential bat roosts

The buildings on site were considered of high bat roosting potential, with multiple crevices noted in the stone walls. No bats were recorded roosting in any buildings on site.

Emergent/detector surveys.

A single Soprano Pipistrelle (*Pipistrellus pygmaeus)* was noted emerging from an oak tree along the northern site boundary. Foraging activity by the species Lesser Noctule (*Nyctalus leisleri*), Soprano Pipistrelle (*Pipistrellus pygmaeus)* and Common *Pipistrellus (pipistrellus sensu lato*), were detected along tree lines and hedgerows within the survey area (Figure 17 & 18).

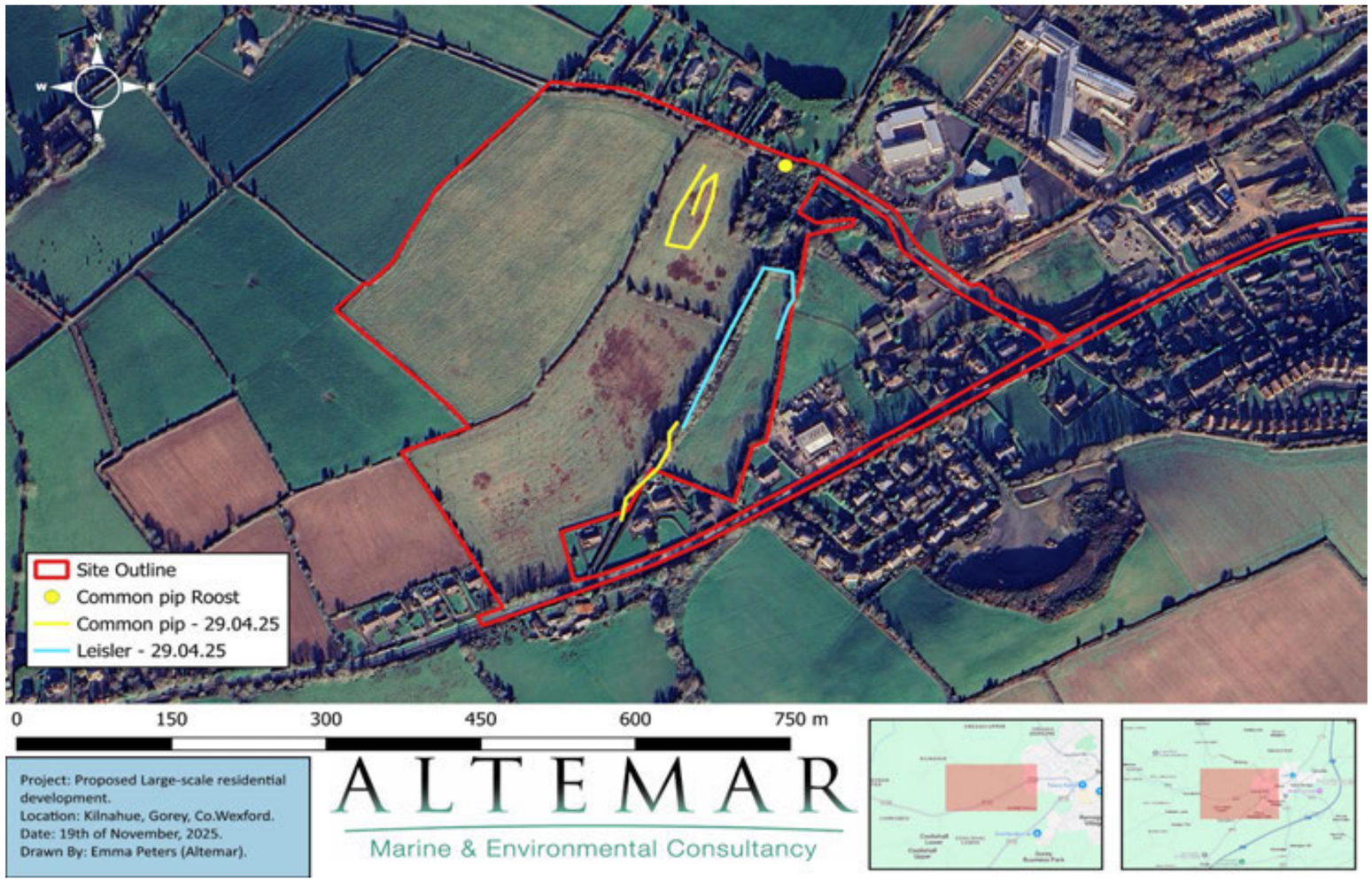


Figure 17. Bat activity recorded on site (April 2025)

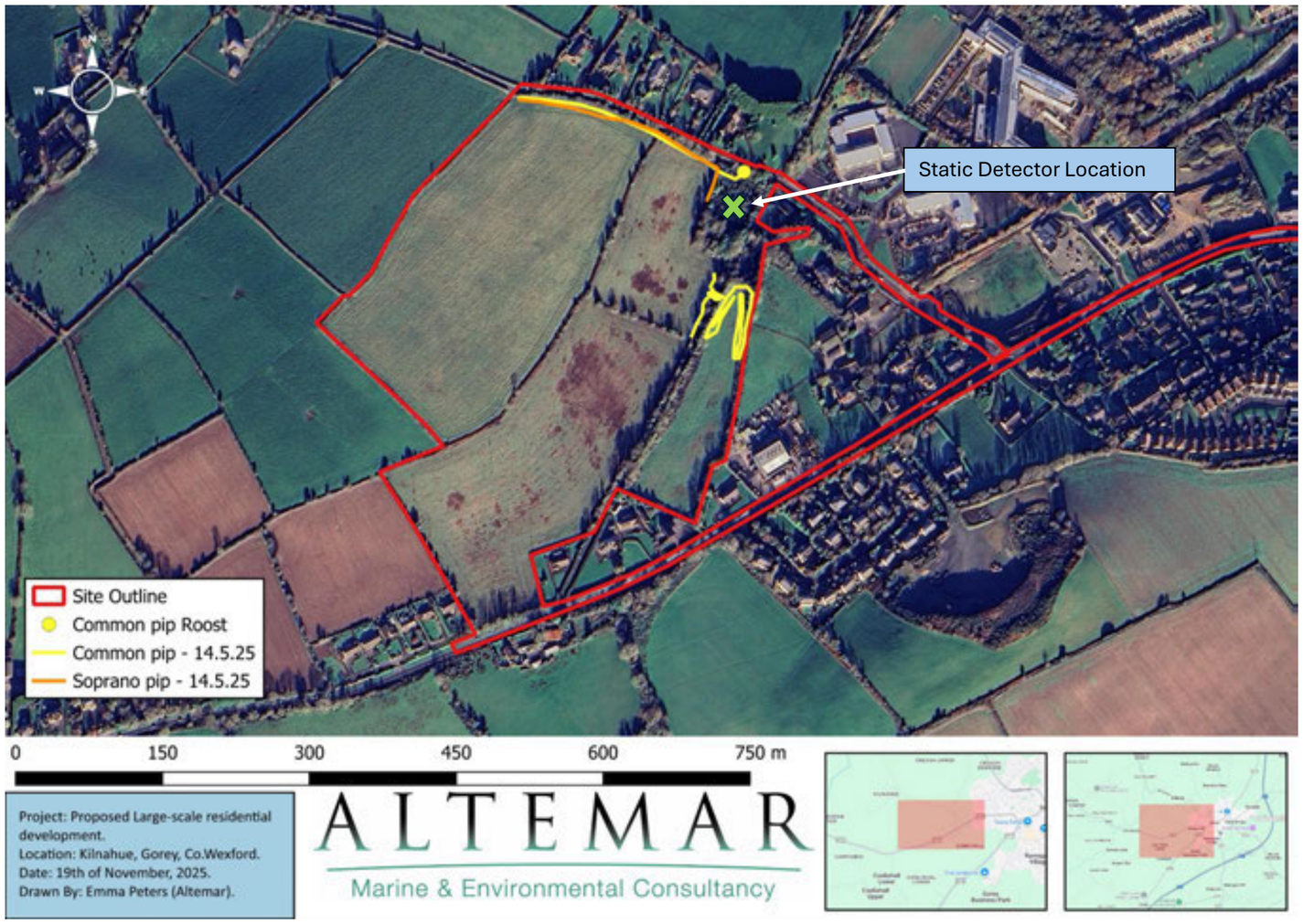


Figure 18. Bat activity recorded on site (May 2025)

Static Detector Survey

A static detector survey was carried out from the 14th of May to the 18th of June 2025. One *Song Meter Mini Bat 2 Detector* was positioned in the scrub area to the northeast corner of the site, where the old stone buildings are located. This location was chosen due to the high roosting potential locations in this area. The following six bat species were recorded during the static surveillance:

Table 1. *Summary of species and passes recorded from static surveillance between 14th May-18th June 2025.*

Leisler Bat (NYCLEI)	Nathusius' Pipistrelle (PIPNAT)	Common Pipistrelle (PIPPIP)	Soprano Pipistrelle (PIPPYG)	Whiskered Bat (MYOMYS)	Daubenton's bat (MYODAU)	Grand Total
292	2	59	92	2	44	491

Desk Study

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 2km^2 grid (Reference grid T15J) encompassing the study area reveals that none of the nine known Irish species have been observed locally. The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figure 19 & 20. The following species were noted: Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Brown Long-eared Bat *(Plecotus auritus)* and Soprano Pipistrelle (*Pipistrellus pygmaeus*).

Figure 19. Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow), and both Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (orange) (Source NBDC) (Approx. site area – red circle)

Figure 20. Daubenton's Bat (*Myotis daubentonii*) (yellow), Brown Long-eared Bat *(Plecotus auritus)* (purple) (Source NBDC) (Approx. site area – red circle)

Previous bat surveys

Dusk, dawn and walking transect bat surveys were carried out by Brian Keeley (Wildlife Surveys Ireland) on the 31st July & 1st August 2018, 27th & 28th September 2020. The survey involved four bat activity surveys and a winter visual inspection of the site for bat evidence.

A static detector survey was also carried out on the 27th-28th September 2020. As outlined in the bat assessment report (Appendix 11.3), '*No bats were noted to roost within the site during this assessment either in 2018 or in 2020 or in 2022 and no bats or bat signs were noted in March 2021 in any of the buildings examined. There are no known bat roosts within the site. There is roost potential provided by buildings and trees but no clear evidence that these are occupied by bats. There is an indication that a brown long-eared bat may roost in the ruins, but no bat was seen in the building or emerging from or returning to the building. This is despite several examinations of the building for bats, bat droppings or other evidence in 2018, 2020, 2021 and 2022.*

There are also highly suitable buildings neighbouring the site including stables and residences. There were bats noted to fly towards a neighbouring house prior to sunrise in 2020 but this house will not be affected by the proposal. Species of bat present within and around the site Soprano pipistrelle Pipistrellus pygmaeus Common pipistrelle Pipistrellus pipistrellus Leisler's bat Nyctalus leisleri Brown long-eared bat Plecotus auritus Myotis bat Myotis sp. Potentially whiskered bat (in September 2020 only and a single Myotis signal on 30th March 2022) The most commonly encountered species in and around the site was common pipistrelle. This species was present in all survey periods and throughout the more sheltered areas of the site (i.e., the western and southwestern areas are very exposed and less suited to foraging behaviour. There is poor to nil hedgerow cover in this section.).'

Previous bat surveys on site found similar results to the Altemar 2025 surveys.

Evaluation of Results

The bat surveys comply with bat survey guidance documentation including Marnell et al (2022) and Collins (2016). A confirmed Soprano Pipistrelle roost was recorded within the site boundary, with 1 no. individual bat observed emerging from an ivy-clad oak tree (Tree No. T191). A derogation licence is required for the proposed removal of this tree. Based on current survey guidance, this roost is assessed as a summer day roost used by a single individual. According to Table 3.1 Collins (2023), this roost would be unlikely to support wintering bats. During the handheld detector surveys, three bat species were recorded foraging onsite in the hours after dusk; Common pipistrelle, Soprano pipistrelle and Leisler bat. Daubenton's Bat (*Myotis daubentonii*), Whiskered Bat (*Myotis mystacinus*), Lesser Noctule (*Nyctalus leisleri*), Nathusius' pipistrelle (*Pipistrellus nathusii*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Common Pipistrelle (*Pipistrellus pipistrellus sensu lato*) bat activity was recorded onsite by static detectors positioned in the northeast corner of proposed development site. Multiple linear vegetative features (treelines and hedgerows) are located onsite that provide foraging / transiting corridors for bats and places for insects to swarm. The site is of moderate importance as foraging grounds for the local bat population.

Potential Impact of the Development on Bats

The proposed development will result in the removal of trees, including a confirmed Soprano Pipistrelle (*Pipistrellus pygmaeus*) bat roost (containing 1 no. individual) and several trees of moderate bat roosting potential. Survey results indicate that the confirmed roost is most likely a summer day roost used by a single individual and is unlikely to be suitable for larger roosting colonies or during winter this is also true for the rest of the trees of moderate roosting potential. As such, the loss of roosting habitat on site is not considered significant within the wider landscape, as abundant similar roosting opportunities exist in surrounding treelines, hedgerows, and mature trees that provide comparable features suitable for local bat species.

The removal of trees and the introduction of site lighting could locally reduce suitable foraging habitats for local bat populations and disrupt commuting corridors. The landscape design, however, incorporates bat-friendly lighting, retention of key hedgerows, native tree and shrub planting, and the establishment of a parkland habitat to the west of the development, which will maintain habitat connectivity and facilitate continued foraging across the site once landscaping matures.

Given the presence of a confirmed bat roost, a NPWS derogation licence is required. Mitigation measures, including pre-felling inspections, bat boxes, and sensitive lighting design, are proposed to minimise impacts and maintain favourable conservation status of local bat populations.

Mitigation Measures

As outlined in Marnell et al. (2022) "*Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected*." In addition, as outlined in Marnell et. al (2022) '*Mitigation for bats normally comprises the following elements:*

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*
- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.'*

As a bat roost has been identified within the site and is proposed to be removed, mitigation measures regarding these animals are needed during the construction works. There is also a requirement for a *National Parks and Wildlife Service* derogation licence application to allow for the removal of the tree containing the roost. Lighting during construction should only be used during working hours with no floodlighting of the site.

As such the following mitigation measures are to be implemented:

- Should any mature broadleaved tree be scheduled for removal, it will first be surveyed for roosting potential and bat presence. If bats are found, an application for a derogation licence will be made to the National Parks and Wildlife Service. Such trees will be felled in the period late August to late October, or early November, in order to avoid disturbance of any roosting bats as per National Roads Authority guidelines (NRA 2006a and 2006b) and also to avoid the bird breeding seasons. Any tree felling will be completed by mid-November at the latest as bats roosting in trees are very vulnerable to disturbance during their hibernation period (November – April). Trees may be removed at other times but the likelihood of encountering bats during works will be higher. Trees with ivy-cover, once felled, will be left intact onsite for 24 hours prior to disposal to allow any bats beneath foliage to escape overnight.
- Where possible, treelines and mature trees that are located immediately adjacent to planned construction areas, or are not directly impacted, will be avoided and retained intact. Retained trees will be protected from root damage by machinery by an exclusion zone of at least 5 metres or equivalent to canopy height. Such protected trees will be fenced off by adequate temporary fencing prior to other works commencing.
- Lighting during construction will be carried out in consultation with the project ecologist and treelines, boundary hedgerows or wooded areas will not be directly lit.
- In general, artificial light creates a barrier to bats so lighting will be avoided where possible. Where lighting is required, directional lighting (i.e. lighting which only shines on work areas and not nearby countryside) will be used to prevent overspill during construction. This can be achieved by bat-friendly luminaire design and the implementation of accessories such as hoods, cowls, louvers and shields to direct the light to the intended area only.
- The bat roost on site will be removed, subject to licence approval, using the methodology outlined below:
    - Felling of the bat roost tree will take place from November to February when bats are in hibernation.
    - A pre felling inspection of the trees will be carried out by a bat specialist. If no bats are present during the inspection the tree will be felled in sections and lowered to the ground, where the sections will remain for 24 hours. If a bat is, or bats are, found a specialist, licenced in manual handling of bats. will oversee the removal of the bat from the tree and the safe relocation of the bat to a suitable site within the site outline. This may include the placing or the bat in a cardboard box for release at night or placing the bat in a safe suitable temporary roosting location, depending on weather conditions.
- Any tree felling will be undertaken at an appropriate time of year, as deemed by the project ecologist.
- Pre-Construction inspection for bats in all buildings to be demolished and emergent survey will be carried out by a suitably qualified ecologists/bat worker, prior to the demolition of buildings.
- All trees with bat roosting potential that are scheduled for felling will undergo a pre-felling inspection by a suitably qualified ecologist or bat worker, using appropriate survey techniques such as endoscope inspection, thermal imaging, and, where suitable, emergence surveys.
- Lighting during construction should only be used during working hours with no floodlighting of the site.
- A post construction bat survey and light spill assessment will be carried out to ensure compliance with the lighting plan.
- A post construction bat survey will be carried out.

- A post construction light spill assessment will be carried out to ensure compliance with the lighting plan.
- A number of bat boxes will be placed in dark vegetated areas to mitigate the loss of the bat roost. The installation and number put in place will be determined by the project ecologist as deemed appropriate.
- Landscaping has been designed to include bat friendly plants including trees and native hedgerows to attract insects.
- Lighting will comply with Bat Lighting Guidelines and is set to 3000K.

Predicted Residual Impact of Planned Development on Bats

Consultation within the project team has taken place regarding the potential impact of artificial lighting on bat foraging activity. In response, the proposed lighting strategy has been revised to ensure that foraging opportunities are maintained across the site. This includes the establishment of a parkland habitat planted with native species where no lighting is proposed, thereby providing a naturally dark refuge and maintaining essential habitat structure, and further supported by the retention of the western boundary native hedgerow to reinforce linear features used by commuting and foraging bats

A derogation licence is required for the felling of one Oak tree (Tree Number T191) containing a confirmed soprano pipistrelle bat roost (1 no. individual bat). While the introduction of new buildings will alter the local environment, foraging activity is expected to continue on site. A pre-construction survey of all buildings and trees will be undertaken to confirm the status of roosting features immediately prior to works. With the implementation of the sensitive lighting strategy, habitat retention measures, and the enhancement provided by compensatory planting, the dark parkland habitat, the overall impact on bats is deemed to be minor adverse/negative/long term/not significant.

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RECEIVED: 22/12/2025

APPENDIX 11-2 Application for Derogation

RECEIVED: 22/12/2025

NPWS An tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra National Parks and Wildlife Service

Application for Derogation

Under Regulation 54 & 54A of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended

Revision 2.0 – July 2025

- This form can be used by any individual or Company applying for a derogation under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 ("the Regulations") **or** any individual applying on behalf of the Minister for Housing, Local Government and Heritage under Regulation 54(A) of the Regulations.
- Note this application form is not for Domestic Dwelling Derogations (bats within private homes) which can be found here > (3D Application Form)
- Please ensure that you answer questions fully in order to avoid delays and/or your application being rejected on the basis that it does not contain sufficient information and detail for the application to be considered further.
- Please read and familiarise yourself with the NPWS Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants
- Please read and familiarise yourself with the European Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive
- Please also note that the responses to these questions are supplementary to the documentation required for the NPWS to be in a position to consider your application. A complete application should include both the application form and an associated report. Failure to supply either will result in your application being returned and/or refused.
- In circumstances in which a derogation is given on foot of this application, the Applicant is responsible for ensuring compliance with the conditions of any such derogation, even though they may employ another person to act on their behalf. To carry out any activity without, or not in accordance with, a derogation granted under regulation 54 or 54A of the Regulations constitutes a criminal offence, subject to prosecution.
- If you experience any problems filling in this form, please contact the Wildlife Licensing Unit: reg54derogations@npws.gov.ie
- Please note – applications, associated reports and derogations will be published on the NPWS website and/or the Department's Open Data website.
- Where any applicant is applying for a derogation to carry out surveys, please ensure to list all qualified ecologists and trainees under their supervision. See section 1(c) of Part A.

Part A: The Applicant - Personal Details

These questions relate to the person responsible for any proposed works and who will be the **Applicant**.
If this application is being submitted on behalf of a third party, please also complete Part B below.
1. (a) Name of Applicant

Title (Mr/Mrs/Miss/Ms/Dr)	Forename(s)	Surname
Mr	Eoin	Deffely
(b) Company Name, if applicable	Glenveagh Homes	
(c) Address Line 1	, Block C, Maynooth Business Campus,	
Address Line 2	Straffan Road	
Town	Maynooth	
County	Co Kildare	
Eircode	W23 F854	
(d) Contact number	+353 (01) 903 7100	
(e) Email address	eoin.deffely@glenveagh.ie	
(f) Address where works are to be carried out if different from (b) above.		
Address Line 1	Kilnahue,	
Address Line 2		
Town	Gorey,	
County	Co. Wexford	
Eircode		

Details of Person Submitting Application on Behalf of Applicant/Derogation Holder

Information relating to the person (e.g. ecologist) responsible for submitting the application on behalf of the applicant should be entered below:

1. (b) Name of Person/Ecologist

Title (Mr/Mrs/Miss/Ms/Dr)	Forename(s)	Surname
Mr	Bryan	Deegan
(b) Company Name	Altemar	
Address Line 1	50 Templecarrig Upper	
Address Line 2		
Town	Delgany	
County	Wicklow	
Eircode		
(c) Contact number	00-353-86-8366641	
(d) Email address	bryan@altemar.ie	

(e) Relationship to Applicant	Project Ecologist

For Survey Derogations Only

1. (c) Please Indicate the Names to Appear on the Derogation Along with the Position Held e.g. Supervisor/Trainee

Forename(s)	Surname	Supervisor or Trainee

Part B: Species covered by the Derogation

1. **Species of Animal:** Please indicate which species is/are the subject of the application:

- Bat ☒
- Otter ☐
- Kerry Slug ☐
- Natterjack Toad ☐
- Dolphin ☐
- Whale ☐
- Turtle ☐
- Porpoise ☐

2. Please detail the exact species (scientific name): Pipistrellus pygmaeus

3. Please provide the maximum number of individuals affected* 1

4. Please provide the maximum number of breeding or resting sites affected* 1 x bat roosts

5. Please provide the maximum number of eggs to be taken* N/A

6. Please provide the maximum number of eggs to be destroyed* N/A

*If no figures can be provided for the maximum number of individuals, breeding sites, resting places and eggs to be covered by the derogation please provide reasons why.

7. **Species of Plant:** Please indicate which species is/are the subject of the application:

- Killarney Fern ☐
- Slender Naiad ☐
- Marsh Saxifrage ☐

8. If you previously received a derogation for any species of animal or plant, please state derogation number and confirm that you have made a return to NPWS on the numbers actually affected by that derogation.

Licence No. C 158/2021 translocation of frogs.

Licence No.: DER/BAT 2023 – 126- Removal of bats in Greenore Co. Co. Louth.

Licence No.: Der/Bat (151-2024)- Removal of bats from Central Mental Hospital.

Altemar have also been involved in the translocation of 7 badgers at the Glass Bottle site in Ringsend (Dr Chris Smal

9. **Proposed Dates for Activities:** Please indicate the timeframe that you propose to carry out the activities. Dates set by NPWS may differ from dates proposed here. *A derogation will only be issued with a start and end date within a calendar year.*

Start Date: Planning Dependant Q4-2025 (approx.)
End Date: Planning Dependant Q1-2027 (approx.)

Part C: Nature of the Derogation.

1. Please tick which prohibition(s) the application for a derogation relates to:

Regulation 51	
Deliberately capture or kill any specimen of the relevant species in the wild	☐
Deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration	☐
Deliberately take or destroy eggs of the relevant species in the wild	☐
Damage or destroy a breeding or resting place of such an animal, or	☒
Keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of the relevant species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive.	☐
Regulation 52	
Deliberately pick, collect, cut, uproot or destroy any specimen of these species in the wild, or	☐
Keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 13(1)(b) of the Habitats Directive.	☐

Further information should be provided in the format set out in Part E: Template for Supporting Information

Part D: Derogation Tests

Note: The following <u>summary</u> information must be provided by the applicant in all cases, and will be used to determine if a derogation can be provided. Further information must be provided in the format set out in Part E: Template for Supporting Information

Test 1: Reason for the Derogation

1. Please tick which reason(s) below explains how this application qualifies under Regulation 54(2)(a-e) or Regulation 54A(2)(a-e) of the European Communities (Birds and Natural Habitats)

Regulations: Please provide a summary of how the application meets the 3 conditions required to provide a derogation. Note that in all cases additional information must be provided (see Part E).

a.	In the interests of protecting wild flora and fauna and conserving natural habitats **(proceed to 2a)**	☐
b.	To prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property **(proceed to 2b)**	☐
c.	In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment **(proceed to 2c)**	☒
d.	For the purpose of research and education, of re-populating and re-introducing these species and for the breeding operations necessary for these purposes, including artificial propagation of plants **(proceed to 2d)**	☐
e.	To allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein, which are referred to in the First Schedule **(proceed to 2e)**	☐

2a. In the interests of protecting wild flora and fauna and conserving natural habitats:

i) Please state the wild flora, fauna or habitats that require protection and /or conservation.

[ ]

ii) Please summarise how the interests of protection and conservation of the species/habitat concerned justify affecting another species under strict protection.

[ ]

2b) To prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property:

i) Please summarise the nature of the potential damage, why it is considered “serious” and how this outweighs the conservation interest of the species under strict protection.

[ ]

2c) In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment:

i) Where the reason is for public health and public safety, summarise the evidence provided to support this reason (e.g. documentary evidence of the risk from a chartered structural engineer, tree surgeon, Garda Síochána, qualified health professional etc.)

[ ]

ii) Where the reason is for “other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”, summarise the nature of the public interest and how this outweighs the conservation interest of the species under strict protection.

The proposed works involve the redevelopment of lands at Kilnahue, Gorey, Co. Wexford, to deliver a high-quality Large-Scale Residential Development comprising 413 residential units (349 houses and 64 apartments/duplexes/maisonettes), a crèche, internal roads, pedestrian and cyclist facilities, parking, landscaped amenity areas, and associated infrastructural upgrades. The proposal includes essential road widening works along Kilnahue Lane and the Carnew Road to facilitate safe traffic movement, improve visibility, and provide appropriate access to the site, together with drainage upgrades and other supporting infrastructure.
The development will deliver substantial public benefits through the provision of a significant number of new homes at a time when Ireland continues to experience a severe housing shortage. By delivering residential units within an established and serviced urban area, the scheme will contribute meaningfully to meeting local and regional housing demand. Additional social benefits will arise from the provision of a crèche, high-quality public and communal open spaces, and improved pedestrian and cyclist infrastructure, enhancing safety, accessibility, and overall residential amenity. The development will also generate employment during the construction phase and in the longer term through ongoing site management and service provision, thereby contributing to the local economy.
To facilitate the proposed layout and, in particular, the required road widening works necessary to ensure safe vehicular access and traffic movement into and around the site, the removal of an oak tree confirmed to support a small Soprano Pipistrelle (Pipistrellus pygmaeus) roost is unavoidable. The roost is limited in scale and is located within a tree that lies directly within the footprint of the proposed road improvement works.
The proposed development represents an imperative reason of overriding public interest due to its contribution to urgently needed housing, enhanced social infrastructure, improved road safety, and economic activity. All works will be undertaken in full compliance with wildlife legislation, with appropriate mitigation measures implemented as outlined in the accompanying ecological report to ensure that potential impacts on bats are minimised and appropriately managed.

2d) For the purpose of research and education, of re-populating and re-introducing these species and for the breeding operations necessary for these purposes, including artificial propagation of plants:

i) Please summarise the objective(s) of the proposed activities making reference to those listed above and how the the purpose of such activities overrides the interests of strict protection of the species. [1]

2e) To allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein, which are referred to in the First Schedule

i) Please clearly state the objective of the activity and verify that this reason is being chosen as the objective of the activity does not match reasons a-d listed above.

ii) Please summarise how the activity will result in the taking or keeping of limited numbers of specimens of the species, how it will be applied on a selective basis and to a limited extent, and how it will be done under strictly supervised conditions.

Test 2: Absence of Alternative solutions

2. Please summarise the alternative solutions that have been considered and why these solutions are deemed unsatisfactory. This must include the option of the "do-nothing" alternative and evidence should be objective and robust. Note that in all cases further information must be provided in the format set out in Part E: Template for Supporting Information.

Alternative Solution	Reasons for "Unsatisfactory"
Do-Nothing	Under a "do nothing" scenario, the site would remain in its current condition and the proposed Large-Scale Residential Development comprising 413 residential units, a crèche, and associated infrastructure would not be delivered. This would fail to address identified local and regional housing needs and would not provide the necessary upgrades to the local road network to improve traffic safety and accessibility. As the site is zoned for residential development, it would be likely to remain undeveloped for a period until
	brought forward in a future proposal, delaying the delivery of housing and infrastructure benefits.
Avoiding the Affected Tree	Retention of the oak tree supporting the bat roost was examined; however, the tree is located directly within the alignment required for the proposed road widening works along Kilnahue Lane. These works are necessary to accommodate increased traffic volumes, provide safe pedestrian and cyclist facilities, and ensure compliant access to the site. Altering the road alignment or narrowing the carriageway to avoid the tree would result in substandard road geometry, compromised visibility, and unacceptable impacts on road safety. Accordingly, avoidance of the affected tree is not feasible.
Alternative Site Location	Reconfiguring the site layout to avoid the removal of the tree was considered but is not viable due to the fixed location of the site boundaries, access points, and the requirement to provide road widening works within the public road corridor. Relocating the development to an alternative site is not considered a satisfactory alternative, as the proposal relates specifically to the redevelopment of zoned lands at Kilnahue and the delivery of housing within an established and serviced settlement. An alternative site would not meet the same planning, access, and infrastructure objectives.
Conclusion	Given the location of the confirmed bat roost within an oak tree that must be removed to facilitate essential road widening works required for safe access to the development, there is no satisfactory alternative that would avoid impacts on the roost. The proposed derogation, together with the mitigation measures outlined in the accompanying ecological report, will ensure that impacts on bats are minimised and that the favourable conservation status of the species is maintained at a local and regional level.

* Please insert additional rows above if needed

[1] Note that this reason may be appropriate for when research involves surveys that may cause disturbance of species under strict protection. But the sole purpose of the surveys should be for research and education or the other reasons listed above under 1d.

Test 3: Impact of a Derogation on Conservation Status

3. Please summarise the possible impacts on the population of the species that is subject to this application, taking into account all the mitigation and/or compensation measures that are to be undertaken. Evidence that such mitigation has been successful elsewhere should be provided where relevant. Mitigation measures being relied upon must ensure that the derogation will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range. Note that in all cases further information must be provided in the format set out in Part E: Template for Supporting Information.

With the implementation of appropriate mitigation measures, the proposed works at Kilnahue, Gorey, Co. Wexford, comprising the construction of 413 residential units, a crèche, internal roads, access points, parking, landscaping, drainage upgrades, and road widening works along Kilnahue Lane and the Carnew Road, will have an overall minor impact on the local bat population of Soprano Pipistrelle (Pipistrellus pygmaeus). Surveys recorded the presence of a single Soprano Pipistrelle emerging from an oak tree within the development footprint. Alternative suitable roosting and foraging habitat is present in the wider area, and any loss of roosting habitat will be compensated through the provision of bat boxes installed in suitable locations within the site.

The presence of an individual Soprano Pipistrelle roost within a mature tree on site is not unexpected. This species is widespread throughout Ireland and is commonly encountered during bat surveys (NPWS, 2019). Soprano Pipistrelles are highly adaptable and forage across a wide range of habitats, including woodland, hedgerows, riparian corridors, farmland, and urban environments (NPWS, 2019). National populations are considered stable, with no significant pressures or threats identified that would adversely affect their conservation status. The species frequently utilises a variety of roost types, including small, temporary tree roosts and buildings.

The bat report submitted in support of this application sets out specific mitigation measures to avoid and minimise disturbance to bats during the proposed works, including supervised tree removal, seasonal and timing restrictions, and the provision of compensatory roosting features. Given the small scale of the roost, the necessity of the road widening works, the nature and location of the proposed development, and the proposed mitigation strategy, it is concluded that the works will not be detrimental to the maintenance of the favourable conservation status of the Soprano Pipistrelle at a local, regional, or national level.

Part E: Template for Supporting Information

This application form should provide a summary of the evidence that the applicant has provided. In all cases, it is necessary to provide separate supporting information so that the assessment of the application can be undertaken in a robust and comprehensive manner. Applicants should refer to guidance provided by the NPWS and the European Commission whilst preparing this application form and the supporting information.

It is essential that supporting information is prepared in a consistent manner using the template below so that NPWS officials assessing the application can locate the relevant evidence to determine if the three Tests can be met. Failure to provide sufficient evidence will result in the application being refused.

The structure of the Supporting Information should be as follows:

1) Table of Contents

2) Introduction
    a. Objective of the proposed works (for example, as part of construction of a national road, repair of roofing, undertaking surveys etc.)
    b. Name, qualifications and relevant experience of scientific staff, including trainees, (e.g. ecologist) involved in the preparation of the application and those responsible for carrying out the proposed activity.
    c. If this application is for the carrying out of surveys that may cause disturbance, qualifications of all involved must be provided and trainees must be clearly identified.

3) Background to proposed activity including location, ownership, type of and need for the proposed activity, planning history, policy context, zoning in relevant Development plan (or equivalent), etc.

4) Full details of proposed activity to be covered by the derogation (including a site plan). The site may be inspected by an NPWS representative, so the details given should clearly reflect the extent of the project. This information will be used to compare site conditions with the Method Statement.

5) Ecological Survey and site assessment (Not required for applications to carry out surveys)
    a. Pre-existing information on species at location and environs.
    b. Status of the species in the local/regional area (relevant to the consideration of the impact on the population at the relevant geographic scale (Test 3))
    c. Objective(s) of survey
    d. Description of Surveys Area
    e. Survey methodology (including evidence as to how the methodology represents best practice and is appropriate to the Objective). Methodology should include survey maps, details of timing, climate, equipment used and identify any uncertainties or difficulties encountered.
    f. Survey results including raw data, any processed or aggregated data, and negative results as appropriate. Photographs and maps must be provided where site-specific features are referred.
    g. Population size class assessment.

6) Evidence to support the Derogation Tests

a. Test 1 - Reason for Derogation:
   i. There should be a clear explanation as to why a specific reason(s) has been selected in the application form.

   ii. Applicants are advised to read the guidance published by the NPWS 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.1.

b. Test 2 - Absence of Alternative Solutions
   i. Applicants must list the alternatives to the proposed activity that have been considered, including the do-nothing alternatives in a clear and objective manner. A basic requirement is that these alternatives should be compared in terms of their impact on the species subject to strict protection. It should be clear to NPWS officials as to why the chosen approach has been selected.
   ii. Applicants are advised to read the guidance published by 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.2.

c. Test 3 - Impact of a derogation on Conservation Status
   i. Applicants should include details of the population at the appropriate geographic scale and an evaluation of how the proposed activity will affect the conservation status both before and after mitigation measures have been applied.
   ii. Full and detailed descriptions of proposed mitigation measures that are relevant to the potential impact on the target species. Evidence that such mitigation has been successful elsewhere should be provided, where available.
   iii. Applicants are advised to read the guidance published 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.3.

7) Monitoring the impacts of the derogations
   a. Applicants must include details of how they propose to verify whether the derogations have been implemented correctly and whether they achieved their objective, using scientifically based evidence, and, if necessary, how the applicant will take corrective measures where required.
   b. Applicants should provide details of proposed reports to be submitted to the NPWS including the results of monitoring.
   c. Applicants are advised to read the guidance published by the European Commission "Guidance document on the strict protection of animal species of Community interest under the Habitats Directive" with specific reference to Section 3.4.

Part F. Declaration

I declare that all of the foregoing particulars are, to the best of my knowledge and belief, true and correct. I understand that the deliberate killing, injuring, capturing or disturbing of protected species, or damage or destruction of their breeding sites or resting places or the deliberate taking or destroying of eggs is an offence without a derogation and that it is a legal requirement to comply with the conditions of any derogation I may be granted following this application. I understand that NPWS may visit to check compliance with a derogation.

Please note that under Regulation 5 of the European Communities (Birds and Natural Habitats) Regulations 2011-2021 an authorised officer may enter and inspect any land or premises for the purposes of performing any of their functions under these Regulations or for obtaining any information which they may require for such purposes.

Signature of the Applicant [signature] **Date** 18/12/2025

Name in BLOCK LETTERS BRYAN DEEGAN

PRIVACY STATEMENT

See Privacy Statement at www.npws.ie/licences

Department of Housing, Local Government and Heritage

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

APPENDIX 11-3 A Bat and Badger Assessment of Lands Proposed for Development at Kilnahue, Gorey, Co. Wexford

RECEIVED: 22/12/2025

A Bat and Badger Assessment of Lands Proposed for Development at Kilnahue, Gorey, Co. Wexford

Brian Keeley BSc. Hons in Zool.

March 2022

Introduction

Most of Ireland's mammals enjoy protection under the Wildlife Act (1976) and the more recent updating of this legislation (Wildlife (Amendment) Act 2000, S.I. No. 94 of 1997, S.I. No. 378 of 2005, European Communities (Natural Habitats) (Amendment) Regulations, 2005) and consolidated by S.I. No. 477 of 2011 European Communities (Birds and Natural Habitats) Regulations 2011. In conjunction with the enactment of the Habitats Directive into Irish legislation, all native mustelid species and bat species are protected with further protection given to otters and lesser horseshoe bats.

Determining the mammal fauna of an area may involve a high level of assessment if the aim of the survey is to catalogue all mammals but this is too detailed for the aim of creating mitigation for a proposed construction project. This assessment is specific to the presence of ground mammals and bats within lands proposed for the construction of a housing project along the and all associated structures and surfaces. The survey undertaken within the site allows a targeting of mitigation measures to the appropriate or most efficient sites to prevent accidental death or injury and to determine if it would be possible to provide safe passage across long-established routes through a new development.

Fieldwork for the current report on badger and bat distribution was carried out by Brian Keeley, an ecologist with over thirty years of fieldwork experience. The site was examined over two seasons in 2020 - 2021 (autumn and late winter) as well as summer 2018.

This report addresses the main issues that would affect the mammal fauna of the immediate area considered in this assessment and created by construction and the presence of new buildings and increased human activity.

Construction activities and subsequent occupancy of housing and the associated new lanes, tracks, or roads close to a riverbank may create a number of significant short-term and long-term risks for resident badger and bat populations, in addition to impacts upon other vertebrates and invertebrates. The construction of housing or other properties may involve the removal of key features of the surrounding environment and of the habitats of otters, badgers, bats, and other mammal species, such as trees, hedgerow lines and open spaces / pasture in which to feed.

The most damaging operation is the potential for the destruction of badger dwellings (setts) during the vegetation clearance and early earthworks and of the accidental injury to bats within trees or buildings upon the site, were they to be present.

In relation to badgers, the clearance of hedgerow and treelines poses the risk of the removal of the badgers' home burrow and the associated burrows (all of which are known as setts) that are used seasonally or occasionally throughout the year. In winter, this is especially risky if the sett is not identified before hedgerow removal operations, as this is the time when badger cubs are born. In the classification used in this report, setts are considered to fall into four categories, which are best elaborated by long-term studies but can be interpreted to a relatively good accuracy in terms of status based on basic observations.

Using the most traditional description of badger ecology, the basic sett type within which badgers are typically present throughout the year is the main sett. This is almost always the sett within which cubs are born. Bedding outside the entrance to these setts often identifies their use as such and paw prints and dung pits or latrines nearby also assist in their categorisation. There are typically several entrances to a main sett, some of which may be disused. Paths leading from the main sett are often very easy to trace for some distance.

Annexe setts are similar in construction to main setts and are typically accessed by several entrances. They are often discernibly connected to a main sett by well-worn paths, which is

within 150 metres of the annexe sett. Badgers do not necessarily use this type of sett throughout the year, and they may be inactive at the time of any short-term study.

Subsidiary setts are again not always active throughout the year. There may be several entrances to the sett and they are not clearly associated with any other sett.

The last type of sett, the outlier sett, may only have one entrance and has no path leading to it. This type of sett is only sporadically used and may even be in areas subject to flooding or seasonally unsuitable to badger use. These setts may be overlooked if they have remained inactive for several weeks and this may be true of such setts in early winter. This survey was undertaken in midwinter to avoid this possibility.

Setts may be under threat from construction if they lie directly in the line of a proposed building. Setts outside of this land take area may also be threatened with damage from the normal activities of the heavy plant equipment required to build the project. For example, if a badger sett entrance were located outside of the land take of a site but led to a system of tunnels that lay under the working area of the heavy plant, there is a clear risk that the tunnels would be crushed under the repeated movement of equipment.

These tunnels may occasionally go as deep as two metres underground but are also liable to surface to shallower depth to avoid rocky substrate or water. Thus, badger setts may be affected by the immediate impact upon them from the excavation and removal of the soil within which they are established or by the indirect destruction of tunnels that lie under the construction corridor of the road.

The population of badgers in Ireland has been revised downwards in recent years for several reasons. Areas where agriculture is of less intensity may provide safer conditions for badgers in terms of state control measures, but urban areas create a risk of interference that may be more persistent than in rural areas. Nonetheless, badgers survive in many areas close to human activities including farmland, gardens, along the rivers even in built-up areas or in the grounds of schools, colleges, convents etc.

Of bats known to breed in Ireland, the lesser horseshoe bat has the highest protection level (Annex II under the Habitats Directive). This species is not found in Wexford. However, there

is one record of the greater horseshoe bat from approximately 42 kilometres away from 2013) and a second record from 40 km away in Wicklow in 2020. This species is not a breeding species in Ireland but is clearly investigating suitable habitat probably from Wales.

In relation to bats, there is the potential of losses of commuting routes and feeding areas where construction greatly modifies the availability of insect prey, creates a barrier to movement or removes access to roost sites, rendering feeding sites too distant from any alternative roosts used.

In Wexford, the following bat species are commonly recorded: common and soprano pipistrelle, Leisler's bat, and brown long-eared bat. The following species are widespread but less common than the above: Daubenton's bat, Natterer's bat. The next species are uncommon; whiskered bat and Nathusius' pipistrelle but the species is known to roost annually in buildings close to Wexford town. As noted earlier, there is one record of greater horseshoe bat from County Wexford from February 2013 and one from Wicklow in 2020.

Methodology

Badgers

The survey for the presence of badgers within the site was undertaken on 3rd March 2021. The agricultural lands (showing evidence of potato harvesting), pasture, the scrubby field, open ground, and hedgerow were all examined for evidence of any suitably large burrows, paw prints, dung pits, latrines, or other evidence of badgers. The road passing the site was also examined for any evidence of regular badger movement by way of obvious tracks or holes in the vegetation.

Bats

Surveying for bats within the site has been undertaken on the following dates: 27th and 28th September 2020, 31st July and 1st August 2018, 3rd March 2021 and 29th to 30th March 2022. The survey involved three bat activity surveys and a winter visual inspection of the site for bat evidence.

Observations of the relative abundance of bats within the site was made visually with the assistance of the bat detector signals. Surveying involved the use of a handheld Echometer 3 broad spectrum monitor recording all ultrasonic signals on to a SD card and also displaying converted signals on a screen for instant identification.

In 2020, a static monitor (Songmeter Mini) was placed outside the ruined cottage and remained in place overnight.

The entire site was walked from sunset onwards with the main area of concentration of effort being at the cottage and sheds at sunset and examining the mature trees of the site prior to sunrise.

The site was again visited prior to sunrise in 2018 and 2020 from 04.00 hours to 05.00 hours (2018) and from 06.00 to 07.00 hours (2020) on the mornings following the dusk survey to assess for any evidence of bats returning to roosts within the trees or ruined buildings or immediately adjoining sites.

A final assessment of the site was undertaken on 29th and 30th March 2022. This involved a visual inspection in daylight of the buildings within the site followed by a bat activity survey commencing at 19.40 hours and continuing up to 21.40 hours (sunset at 19.54 hours) and recommencing at 05.35 hours up to sunrise at 07.04 hours. The active survey was undertaken with an Echometer Touch 2 Pro and analysed with Kaleidoscope Pro sound analysis software.

The ruined house was entering on 5 occasions throughout the survey period including shortly after sunset and prior to sunrise and all rooms were examined for any perched or flyimg bats.

Survey constraints

Surveys were undertaken at a time that was suitable for identifying the presence of bats in summer roosts in 2018 and supplemented with data on bat activity in autumn in 2020 and also included spring activity in 2022. As temperatures fell to 4°C overnight on 30th March 2022, there was no bat activity during the active survey (I.e., the walked survey as opposed to the survey undertaken with a static monitor and no human involvement in the recording process). Bat activity was noted up to 05.03 hours by the static monitor placed outside the ruined house. The badger survey was at a time when vegetation had not commenced vigorous

re-growth and there was easy access to most of the site. One area of dense bramble was present in the north-eastern section of the site and south of this area close to an overgrown track which may have served as a right of way historically. This track was examined from within, and it was possible to see through much but not all scrub. The combination of field signs and direct examination for setts was sufficient to allow an evaluation for the presence of setts.

Results of the assessment of the lands for badgers and bats

Badgers

There are no badger setts within the site. Most mammal evidence was of rabbit warrens. There was also widespread evidence of fox activity (paw prints, scats, scent). Rat prints were also noted. In all, there were only two clear badger law prints within the site. One of these was leading from the track (possible right of way) to the remnants of a good hedgerow in the central field and north of here on the same field edge leading towards a farm gate onto the northern road.

There were no signs of badger digging and no badger latrines within the site. The badger paw prints were very recent and undisturbed. Given that local dogs were seen within the field, it is probable that the prints were less than two to three days old, or they would have been partially obscured by dog paw prints or rain.

Bats

Species of bat present roosting within and around the site

None

No bats were noted to roost within the site during this assessment either in 2018 or in 2020 or in 2022 and no bats or bat signs were noted in March 2021 in any of the buildings examined. There are no known bat roosts within the site. There is roost potential provided by buildings and trees but no clear evidence that these are occupied by bats. There is an indication that a brown long-eared bat may roost in the ruins, but no bat was seen in the building or emerging

from or returning to the building. This is despite several examinations of the building for bats, bat droppings or other evidence in 2018, 2020, 2021 and 2022.

There are also highly suitable buildings neighbouring the site including stables and residences. There were bats noted to fly towards a neighbouring house prior to sunrise in 2020 but this house will not be affected by the proposal.

Species of bat present within and around the site

Soprano pipistrelle *Pipistrellus pygmaeus*
Common pipistrelle *Pipistrellus pipistrellus*
Leisler's bat *Nyctalus leisleri*
Brown long-eared bat *Plecotus auritus*
Myotis bat *Myotis sp. Potentially whiskered bat*
(in September 2020 only and a single *Myotis* signal on 30th March 2022)

The most commonly encountered species in and around the site was common pipistrelle. This species was present in all survey periods and throughout the more sheltered areas of the site (i.e., the western and southwestern areas are very exposed and less suited to foraging behaviour. There is poor to nil hedgerow cover in this section.).

Bat activity prior to sunrise in 2018 indicated the presence of a roost in the houses to the north of the site but the exact location could not be proven due to access. Bat activity within and around the site prior to sunrise in 2020 was much lower than in summer 2018. In 2020, soprano pipistrelles were noted along the northern road prior to sunrise indicating that there is a likelihood that this species was roosting in one of the houses to the north of the site.

Soprano pipistrelles were not commonly encountered during the survey in 2018 or 2020 but there was higher activity in 2022 during the walked transect. The static monitor recorded a high number of passes even in years when the walked transect yielded low soprano pipistrelle activity. Soprano pipistrelles may feed within a short stretch in a sustained manner and the high number of signals may often be attributable to the same bat or very small numbers of bat.

Soprano pipistrelle activity commenced later than common pipistrelle and it is predicted that this species roosts further from the site than common pipistrelles.

Leisler's bats were very much in evidence in a summer survey in 2018 close to the houses to the north indicating the potential that there is a roost within these houses or associated buildings or trees. Leisler's bat activity was much less in 2020 and was concentrated close to a car garage to the southeast of the site while there was also a Leisler's bat signal earlier in the night to the north-east of the site. No Leisler's bats were noted in March 2022. This species is the least tolerant of low ai temperatures. The temperature was 7°C by 20.50 hours during the March 2022 survey. Observations of the bat activity in March 2022 within the site indicated the presence of common and soprano pipistrelle and brown long-eared bat and a single *Myotis* bat signal which was most similar to Daubenton's bat in its structure.
In September 2020, *Myotis* bat signals were noted within the site and in a nearby garden . This was potentially a whiskered bat based on the spectrograms (graphs of the range of frequencies used against time). This bat was noted repeatedly feeding around the overgrown field area and neighbouring garden. It was present from 19.53 hours to 20.17 hours and again from 21.55 hours to 22.08 hours and occasionally throughout the rest of the night up to 05.48 hours. This bat was not seen to enter or emerge from any of the buildings within the site.

The first *Myotis* bat signal was noted along the hedgerow between the ruined cottage and the neighbouring garden at around 17.42 hours. The static monitor recorded the first *Myotis* signals close to the ruins at 17.53 hours. It is most probable that the bat was not emerging from the buildings and is roosting close-by in another location. The most likely roost site is the house and stables to the east of this field.

Potential Impacts from The Proposed Construction

Loss of bat roosts

While there were no bat roosts identified within the site, the presence of a number of old buildings and some mature trees creates some potential for roost sites. Overall, most trees within the site do not present high suitability as roost sites. There are larger trees separating two fields that more less form a continuous single field that covers the centre of the site. If roosts are present, they are likely to harbour very small numbers of bats. This is currently considered a moderate negative impact of long-term duration.

Loss of commuting corridor

There will be a loss of vegetation from the site including the removal of hedgerow. This may affect commuting bats by removing cover that allows commuting in an unlit area along the field edges These are also landmarks by which badgers commute, but they are very also capable of moving away from hedgerow into open lands. Some hedgerows have been replaced by a simple earthen bank around or between fields. Hedgerow is better towards the southeast including a possible former tree lined track or right of way.

This is a permanent moderate negative impact for the local bat fauna with greater significance for populations roosting close to the site. It is a permanent slight negative impact for badgers based on the level of activity noted.

Loss of feeding area

As above, there will be an impact upon the feeding activity of bats from the loss of the trees within and around the site. This will reduce feeding for bats by reducing the shelter and substrate for invertebrates. The most commonly encountered bat species are the two pipistrelle species. The presence of a *Myotis* species feeding within the site is uncommon and this species will lose some foraging areas.

There is potential for interruption to feeding for badgers as there is evidence of their presence within the site. This is a long-term to permanent moderate negative impact for bats. It is a permanent slight negative impact for badgers.

Disturbance from lighting

Lighting can affect different species to varying degrees and within species there is also a range of responses to introduced light ranging from minimal effects to complete avoidance. Badgers in urban areas can become very tolerant to light but in rural areas are typically in unlit areas. Bats may actively avoid lights especially if it is shining upon a roost site.

There is no evidence of sustained activity by badgers or widespread evidence of badger activity, but it is probable that badgers cover more of the site than noted in this evaluation at some point in the year to forage.

This is a long-term to permanent moderate negative impact for bats and a short-term to medium-term slight to negligible negative impact for otters.

Cumulative impacts of the above

There is a loss of green area and of tree cover that will affect bats by reducing feeding and commuting areas. This is unlikely to have a direct impact on the status of any of these species, but it is contributory in a minor way to an overall diminution in habitat availability.

Proposed Mitigation

Examination of all buildings prior to demolition

All buildings (the cottage, sheds, and other buildings) shall be examined by a bat specialist for the presence of bats prior to and during demolition. If bats are discovered, the structure is protected under the Wildlife Act as a bat roost and a derogation must be sought from NPWS for the exclusion of bats by a bat specialist and any additional required mitigation.

Checking of trees for bats

Following a tree assessment of the site, any trees with cavities shall be checked by a bat specialist prior to felling. If bats are present, a derogation shall be sought from NPWS and additional measures to mitigate the loss of a roost shall be implemented.

Examination of all lands for badgers prior to major clearance operations

The site shall be examined prior to clearance for the presence of badger setts.

Lighting control

Lighting around the buildings shall be tightly controlled and ornamental lighting shall be avoided entirely. Lighting should respond to a motion trigger or be switched off at night after typical active hours (e.g., 11 pm to 6 am). Spotlights must not be introduced as these are hugely disruptive to most wildlife and cannot be targeted to the required area but create light pollution over a huge radius.

Further recommendations on lighting are given below:

- Dark corridor for movement of bats through the site. Lighting shall be directed downwards away from the treetops.
- All luminaires shall lack UV elements when manufactured and shall be LED
- A warm white spectrum (ideally <2700 Kelvin) shall be adopted to reduce blue light component
- Luminaires shall feature peak wavelengths higher than 550 nm
- Planting shall provide areas of darkness suitable for bats and badgers to feed and commute through the site.
- Areas of retained vegetation in the northeast and the farmyard to the east as well as the green areas along the western perimeter shall not be illuminated.

Checking of lighting within the completed site by bat specialist

Lighting shall be checked following installation by a bat specialist to ensure that there are suitably dark areas for bats to feed and commute in areas proposed within this assessment. This shall include an evaluation of bat activity within the site following installation of lighting and construction of housing.

Planting of Insect Attracting Plants and Trees

Vegetation to provide food and shelter for wildlife should be encouraged. This may include the re-planting of some of the trees removed from hedgerow or trees such as alder, willow, birch which would tolerate wet conditions. Plants such as *Lonicera periclymenum* (honeysuckle) are beneficial to moths and other nocturnal insects while *Hebe* are beneficial to daytime Lepidoptera and some night insects. Bees would benefit from lavender, jasmine, rosemary, violets, thyme, blue bells, wisteria, cone flowers and sunflowers. The wider abundance of insects would benefit bats and badgers as well as improve biodiversity generally.

Retention of grassy areas and vegetation in preference to concrete pathways / stone gardens etc.

Consideration should be given to providing greater vegetation relative to paved or concreted areas wherever possible. This could include a system that allows grass paving, grass reinforcement or a grass grid. This allows rainwater to soak away as solid concrete can create greater run-off.

Provision of bat boxes

Bat boxes shall be provided to compensate for the potential loss of roost sites from building demolition and tree removal. 15 x 2F Schwegler bat boxes are proposed or alternatively the provision of access for bats to elements of buildings. All boxes shall be away from illumination.

IMPACTS AFTER MITIGATION

There is the potential for reduced feeding for bats within the proposed development due to a reduction in vegetation in the eastern area of the site. Light pollution control and planting will lessen the impact of this.

Bats will avail of bat boxes or other modifications within the site to roost over a period of time once the siting, lighting and absence of disturbance is observed.

Proposed development layout
Areas indicated red boxes must be managed for control of lighting to provide darker areas for bats

Buildings that will be removed within the site

Wall plaster, window frames, chimney and checked for bats in September and March

Lighting from the garage and house on the edge of the site in September 2020

House from top right image in daylight and good vegetation cover along the field leading towards this area.

Dense bramble near to the field with derelict buildings.

No setts were visible in this area and no fresh mammal tracks were noted.

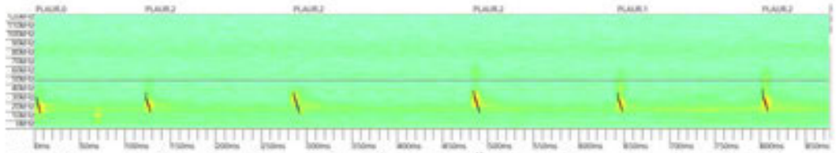
Badger paw prints noted in March 2021.

The top left and bottom left image are along the track with tree cover to each side (old right of way?). The top right and bottom right are heading north past the most overgrown field.

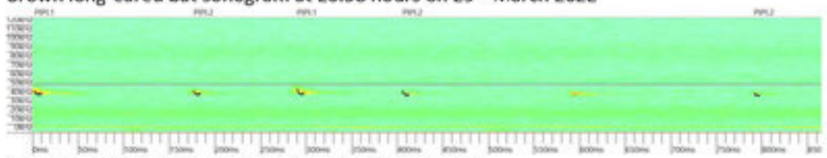
Bat activity within the site March 29th to 30th 2022 (Post dusk)

Legend

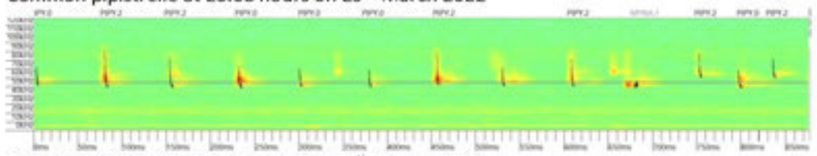
Green paddle *Common pipistrelle* *Blue paddle* *Soprano pipistrelle*
"B" paddle *Brown long-eared bat*



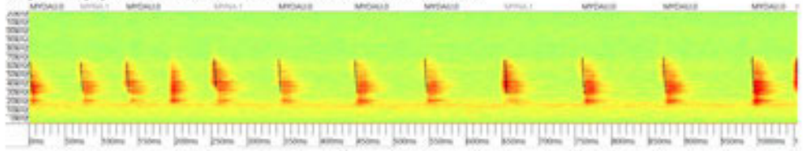
Brown long-eared bat sonogram at 20.38 hours on 29th March 2022



Common pipistrelle at 20.08 hours on 29th March 2022



Soprano pipistrelle at 21.10 hours on 29th March 2022



Myotis bat signal at 02.52 hours on 30th March 2022 at the ruins (DST)

Post dusk 31st July 2018

Combined 2018 and post dusk 27th September 2020

Pre-dawn 1st August 2018

Combined 2018 Predawn 28th September 2020

Legend

mmon pipistrelle 2018
Blue paddle *Soprano pipistrelle 2018*
Yellow paddle *Leisler's bat 2018*

Green square *Common pipistrelle 2020*
Blue square *Soprano pipistrelle 2020*
Yellow square *Leisler's bat 2020*
White square Myotis bat 2020

Bat activity from sunset 27th September 2020 to sunrise 28th September 2020 (static monitor)

DATE	TIME	AUTO ID	PULSES	MATCHING	MANUAL ID
27/09/2020	19:29:14	PIPI	22	13	PIPI PIPY
27/09/2020	19:29:19	PIPI	14	13	PIPI PIPY
27/09/2020	19:29:53	NoID	11	0	PIPY
27/09/2020	19:30:02	PIPY	12	12	PIPY
27/09/2020	19:30:14	PIPY	34	26	PIPI PIPY
27/09/2020	19:30:19	PIPY	21	21	PIPY
27/09/2020	19:30:24	PIPY	19	19	PIPY
27/09/2020	19:30:37	PIPY	26	26	PIPY
27/09/2020	19:30:42	PIPY	14	14	PIPY
27/09/2020	19:30:47	PIPY	18	18	PIPY
27/09/2020	19:30:52	PIPY	6	5	PIPY
27/09/2020	19:31:16	NYLE	3	3	NYLE
27/09/2020	19:33:50	PIPI	26	18	PIPI
27/09/2020	19:33:55	PIPI	15	14	PIPI
27/09/2020	19:34:00	PIPI	3	3	PIPI
27/09/2020	19:36:46	PIPI	26	23	PIPI
27/09/2020	19:42:28	NYLE	3	3	NYLE
27/09/2020	19:45:25	PIPI	7	7	PIPI
27/09/2020	19:47:11	PIPI	12	11	PIPI
27/09/2020	19:47:24	PIPI	16	16	PIPI
27/09/2020	19:48:57	PIPY	10	8	PIPY
27/09/2020	19:51:15	PIPI	15	13	PIPI
27/09/2020	19:53:43	MYBR	3	2	MYOTIS
27/09/2020	19:54:31	MYBR	4	2	MYOTIS
27/09/2020	19:54:51	MYBR	2	2	MYOTIS
27/09/2020	19:55:03	NoID	1	0	MYOTIS
27/09/2020	19:55:23	PIPI	3	2	MYOTIS
27/09/2020	19:55:33	MYBR	4	3	MYOTIS
27/09/2020	19:56:27	MYBR	3	3	MYOTIS
27/09/2020	19:56:40	NoID	2	0	MYOTIS
27/09/2020	19:56:45	NoID	2	0	MYOTIS
27/09/2020	19:57:04	NoID	2	0	MYOTIS
27/09/2020	19:57:36	NoID	2	0	MYOTIS
27/09/2020	19:58:31	NoID	1	0	MYOTIS
27/09/2020	19:58:36	NoID	1	0	MYOTIS
27/09/2020	19:59:11	NoID	2	0	MYOTIS
27/09/2020	19:59:58	MYBR	2	2	MYOTIS
27/09/2020	20:00:45	MYBR	2	2	MYOTIS
27/09/2020	20:00:58	PIPI	4	2	MYOTIS
27/09/2020	20:01:03	PIPI	19	17	PIPI Myotis
27/09/2020	20:01:22	PIPI	3	2	MYOTIS
27/09/2020	20:01:27	MYBR	4	2	MYOTIS
27/09/2020	20:01:44	NoID	1	0	MYOTIS

27/09/2020	20:03:35	PIPI	2	2	MYOTIS
27/09/2020	20:04:15	MYBR	3	3	MYOTIS
27/09/2020	20:04:20	NoID	4	0	MYOTIS
27/09/2020	20:04:53	MYBR	4	3	MYOTIS
27/09/2020	20:05:02	MYBR	3	3	MYOTIS
27/09/2020	20:05:45	MYBR	3	2	MYOTIS
27/09/2020	20:06:00	PIPI	3	2	MYOTIS
27/09/2020	20:06:10	MYBR	2	2	MYOTIS
27/09/2020	20:06:19	NoID	2	0	MYOTIS
27/09/2020	20:06:26	MYBR	2	2	MYOTIS
27/09/2020	20:06:37	MYBR	2	2	MYOTIS
27/09/2020	20:07:33	PIPY	16	14	PIPY MYOTIS
27/09/2020	20:08:02	NoID	2	0	MYOTIS
27/09/2020	20:08:07	MYBR	2	2	MYOTIS
27/09/2020	20:08:39	NoID	2	0	MYOTIS
27/09/2020	20:08:44	MYBR	3	2	MYOTIS
27/09/2020	20:09:08	MYNA	3	2	MYOTIS
27/09/2020	20:09:13	MYBR	5	4	MYOTIS
27/09/2020	20:09:18	MYBR	3	2	MYOTIS
27/09/2020	20:09:28	MYBR	5	5	MYOTIS
27/09/2020	20:09:33	MYBR	3	3	MYOTIS
27/09/2020	20:09:45	MYBR	3	2	MYOTIS
27/09/2020	20:09:50	MYBR	4	3	MYOTIS
27/09/2020	20:10:05	MYBR	2	2	MYOTIS
27/09/2020	20:10:10	MYBR	5	3	MYOTIS
27/09/2020	20:10:24	NoID	2	0	MYOTIS
27/09/2020	20:10:46	NoID	2	0	MYOTIS
27/09/2020	20:10:51	NoID	2	0	MYOTIS
27/09/2020	20:10:56	NoID	1	0	MYOTIS
27/09/2020	20:11:12	MYBR	3	3	MYOTIS
27/09/2020	20:11:38	NoID	2	0	MYOTIS
27/09/2020	20:11:43	MYBR	3	3	MYOTIS
27/09/2020	20:12:09	PIPI	2	2	MYOTIS
27/09/2020	20:12:14	MYBR	3	2	MYOTIS
27/09/2020	20:12:35	NoID	3	0	MYOTIS
27/09/2020	20:12:45	NoID	3	0	MYOTIS
27/09/2020	20:13:03	NoID	2	0	MYOTIS
27/09/2020	20:13:15	NoID	1	0	MYOTIS
27/09/2020	20:13:22	NoID	2	0	MYOTIS
27/09/2020	20:13:27	NoID	0	0	MYOTIS
27/09/2020	20:13:32	NoID	2	0	MYOTIS
27/09/2020	20:13:37	PIPY	6	5	MYOTIS
27/09/2020	20:13:42	NoID	1	0	MYOTIS
27/09/2020	20:13:47	NoID	1	0	MYOTIS
27/09/2020	20:13:59	MYBR	3	3	MYOTIS
27/09/2020	20:14:27	MYBR	7	3	MYOTIS
27/09/2020	20:14:32	MYBR	3	2	MYOTIS

27/09/2020	20:14:43	NoID	3	0	PIPY MYOTIS
27/09/2020	20:14:55	MYBR	3	3	MYOTIS
27/09/2020	20:15:10	NoID	9	0	PIPY
27/09/2020	20:15:25	NoID	2	0	MYOTIS
27/09/2020	20:15:35	MYBR	4	2	MYOTIS
27/09/2020	20:15:49	MYBR	5	4	MYOTIS
27/09/2020	20:15:59	MYBR	2	2	MYOTIS
27/09/2020	20:16:06	MYBR	4	3	MYOTIS
27/09/2020	20:16:23	MYBR	4	3	MYOTIS
27/09/2020	20:16:36	MYBR	3	2	MYOTIS
27/09/2020	20:16:41	NoID	2	0	MYOTIS
27/09/2020	20:16:46	PIPY	2	2	PIPY
27/09/2020	20:16:52	NoID	1	0	PIPY MYOTIS
27/09/2020	20:16:59	NoID	2	0	MYOTIS
27/09/2020	20:24:17	PIPI	12	12	PIPI
27/09/2020	20:24:22	PIPI	12	10	PIPI
27/09/2020	20:24:27	PIPI	16	13	PIPI
27/09/2020	20:27:46	NYLE	7	4	NYLE
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27/09/2020	20:35:23	PIPY	18	18	PIPY
27/09/2020	20:35:28	PIPY	5	5	PIPY
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27/09/2020	20:35:45	PIPY	23	23	PIPY
27/09/2020	20:35:50	PIPY	16	16	PIPY
27/09/2020	20:35:56	PIPY	19	19	PIPY
27/09/2020	20:36:01	PIPY	21	20	PIPY
27/09/2020	20:36:06	PIPY	17	17	PIPY
27/09/2020	20:36:11	PIPY	18	17	PIPY
27/09/2020	20:36:16	PIPY	8	8	PIPY
27/09/2020	20:36:22	PIPY	16	16	PIPY
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27/09/2020	20:36:43	PIPY	15	14	PIPY
27/09/2020	20:36:48	PIPY	17	16	PIPY
27/09/2020	20:36:53	PIPY	11	11	PIPY
27/09/2020	20:36:58	PIPY	12	12	PIPY
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27/09/2020	20:37:19	PIPY	20	20	PIPY
27/09/2020	20:37:24	PIPY	11	11	PIPY
27/09/2020	20:37:29	PIPY	20	19	PIPY
27/09/2020	20:37:34	PIPY	10	10	PIPY
27/09/2020	20:37:39	PIPY	12	10	PIPY

27/09/2020	20:37:44	PIPY	17	17	PIPY
27/09/2020	20:37:49	PIPY	23	23	PIPY
27/09/2020	20:37:56	PIPY	16	16	PIPY
27/09/2020	20:38:01	PIPY	16	16	PIPY
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27/09/2020	20:38:21	PIPY	12	12	PIPY
27/09/2020	20:38:26	PIPY	22	22	PIPY
27/09/2020	20:38:31	PIPY	25	25	PIPY
27/09/2020	20:38:36	PIPY	22	22	PIPY
27/09/2020	20:38:42	PIPY	12	12	PIPY
27/09/2020	20:38:47	PIPY	13	13	PIPY
27/09/2020	20:38:52	PIPY	27	27	PIPY
27/09/2020	20:38:57	PIPY	12	12	PIPY
27/09/2020	20:39:02	PIPY	14	14	PIPY
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27/09/2020	20:39:18	PIPY	18	18	PIPY
27/09/2020	20:39:23	PIPY	14	13	PIPY
27/09/2020	20:39:28	PIPY	17	17	PIPY
27/09/2020	20:39:33	PIPY	14	14	PIPY
27/09/2020	20:39:38	PIPY	12	12	PIPY
27/09/2020	20:39:44	PIPY	14	14	PIPY
27/09/2020	20:39:49	PIPY	17	17	PIPY
27/09/2020	20:39:54	PIPY	13	12	PIPY
27/09/2020	20:39:59	PIPY	18	18	PIPY
27/09/2020	20:40:04	PIPY	18	18	PIPY
27/09/2020	20:40:09	PIPY	17	17	PIPY
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27/09/2020	20:40:19	PIPY	23	23	PIPY
27/09/2020	20:40:24	PIPY	16	16	PIPY
27/09/2020	20:40:30	PIPY	10	10	PIPY
27/09/2020	20:40:35	PIPY	13	13	PIPY
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27/09/2020	20:40:55	PIPY	26	26	PIPY
27/09/2020	20:41:00	NoID	1	0	PIPY
27/09/2020	20:41:07	PIPY	17	17	PIPY
27/09/2020	20:41:12	PIPY	10	9	PIPY
27/09/2020	20:41:17	PIPY	3	3	PIPY
27/09/2020	20:41:26	PIPY	15	15	PIPY
27/09/2020	20:41:36	PIPY	13	13	PIPY
27/09/2020	20:41:41	PIPY	10	10	PIPY
27/09/2020	20:41:47	NoID	15	0	PIPY
27/09/2020	20:41:52	PIPY	19	19	PIPY
27/09/2020	20:41:57	PIPY	19	17	PIPY
27/09/2020	20:42:03	PIPY	11	11	PIPY

27/09/2020	20:42:08	PIPY	16	15	PIPY
27/09/2020	20:42:13	PIPY	21	21	PIPY
27/09/2020	20:42:18	PIPY	12	12	PIPY
27/09/2020	20:42:23	PIPY	20	20	PIPY
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27/09/2020	20:42:34	PIPY	21	21	PIPY
27/09/2020	20:42:39	PIPY	6	6	PIPY
27/09/2020	20:42:44	NoID	3	0	PIPY
27/09/2020	20:42:50	PIPY	15	12	PIPY
27/09/2020	20:43:03	PIPY	9	6	PIPY
27/09/2020	20:43:45	NYLE	4	4	PIPY
27/09/2020	20:43:52	NYLE	3	2	PIPY
27/09/2020	20:48:02	PIPY	5	5	PIPY
27/09/2020	20:48:34	PIPY	7	6	PIPY
27/09/2020	20:48:39	PIPY	4	4	PIPY
27/09/2020	20:49:36	PIPY	11	10	PIPY
27/09/2020	20:49:41	PIPY	13	11	PIPY
27/09/2020	20:49:46	PIPY	13	11	PIPY
27/09/2020	20:50:04	PIPY	5	3	PIPY
27/09/2020	20:50:09	PIPY	15	12	PIPY
27/09/2020	20:50:14	PIPY	17	17	PIPY
27/09/2020	20:50:25	PIPY	7	5	PIPY
27/09/2020	20:50:30	PIPY	11	10	PIPY
27/09/2020	20:51:13	PIPY	9	6	PIPY
27/09/2020	20:51:18	PIPY	17	16	PIPY
27/09/2020	20:51:36	PIPY	12	9	PIPY
27/09/2020	20:51:41	PIPY	20	18	PIPY
27/09/2020	20:51:46	PIPY	16	12	PIPY
27/09/2020	20:52:07	PIPY	14	13	PIPY
27/09/2020	20:52:12	PIPY	6	6	PIPY
27/09/2020	20:52:44	PIPY	16	13	PIPY
27/09/2020	20:52:49	PIPY	10	8	PIPY
27/09/2020	20:53:24	PIPY	7	5	PIPY
27/09/2020	20:53:29	PIPY	9	9	PIPY
27/09/2020	21:00:42	PIPY	7	5	PIPY
27/09/2020	21:00:53	PIPY	17	14	PIPY
27/09/2020	21:00:58	PIPY	19	17	PIPY
27/09/2020	21:01:03	PIPY	7	7	PIPY
27/09/2020	21:01:09	PIPY	15	14	PIPY
09/2020	21:01:14	PIPY	21	19	PIPY
27/09/2020	21:01:19	PIPY	16	15	PIPY
27/09/2020	21:01:24	PIPY	16	14	PIPY
27/09/2020	21:01:29	PIPY	19	17	PIPY
27/09/2020	21:01:34	PIPY	25	22	PIPY
27/09/2020	21:01:40	PIPY	18	16	PIPY
27/09/2020	21:01:45	PIPY	18	18	PIPY
27/09/2020	21:01:50	PIPY	6	4	PIPY

27/09/2020	21:01:58	PIPY	10	7	PIPY
27/09/2020	21:02:03	PIPY	18	10	PIPY
27/09/2020	21:02:08	PIPY	20	17	PIPY
27/09/2020	21:02:14	PIPY	28	26	PIPY
27/09/2020	21:02:19	PIPY	18	17	PIPY
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27/09/2020	21:02:33	PIPY	27	25	PIPY
27/09/2020	21:02:38	PIPY	19	16	PIPY
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27/09/2020	21:02:54	PIPY	16	14	PIPY
27/09/2020	21:02:59	PIPY	30	25	PIPY
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27/09/2020	21:03:15	PIPY	9	8	PIPY
27/09/2020	21:05:08	PIPY	16	12	PIPY
27/09/2020	21:05:13	PIPY	17	14	PIPY
27/09/2020	21:05:18	PIPY	11	9	PIPY
27/09/2020	21:05:24	PIPY	23	19	PIPY
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27/09/2020	21:09:27	PIPY	19	16	PIPY
27/09/2020	21:09:32	PIPY	18	17	PIPY
27/09/2020	21:09:44	PIPY	13	12	PIPY

27/09/2020	21:09:49	PIPY	24	23	PIPY
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27/09/2020	21:09:59	PIPY	17	15	PIPY
27/09/2020	21:10:04	NoID	1	0	PIPY
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27/09/2020	21:14:50	PIPY	14	13	PIPY
27/09/2020	21:14:55	PIPY	21	17	PIPY
27/09/2020	21:15:00	PIPY	17	16	PIPY

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27/09/2020	21:15:16	PIPY	8	6	PIPY
27/09/2020	21:15:25	PIPY	15	13	PIPY
27/09/2020	21:15:30	PIPY	23	18	PIPY
27/09/2020	21:15:35	PIPY	7	7	PIPY
27/09/2020	21:16:12	PIPY	6	6	PIPY
27/09/2020	21:16:17	PIPY	21	19	PIPY
27/09/2020	21:16:22	PIPY	22	21	PIPY
27/09/2020	21:16:28	PIPY	22	21	PIPY
27/09/2020	21:16:33	PIPY	13	12	PIPY
27/09/2020	21:16:38	PIPY	8	6	PIPY
27/09/2020	21:16:43	PIPY	18	14	PIPY
27/09/2020	21:16:48	PIPY	14	13	PIPY
27/09/2020	21:16:53	PIPY	16	14	PIPY
27/09/2020	21:16:58	PIPY	17	15	PIPY
27/09/2020	21:17:03	PIPY	12	11	PIPY
27/09/2020	21:17:12	PIPY	10	9	PIPY
27/09/2020	21:17:17	PIPY	5	4	PIPY
27/09/2020	21:18:33	PIPI	13	13	PIPI
27/09/2020	21:18:38	PIPI	8	8	PIPI
27/09/2020	21:19:05	PIPY	7	7	PIPY
27/09/2020	21:19:10	PIPY	17	15	PIPY
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27/09/2020	21:19:37	PIPY	20	19	PIPY
27/09/2020	21:19:42	PIPY	15	13	PIPY
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27/09/2020	21:21:21	PIPY	18	15	PIPY
27/09/2020	21:21:26	PIPY	16	12	PIPY
27/09/2020	21:21:32	PIPY	13	11	PIPY
27/09/2020	21:21:37	PIPY	16	16	PIPY
27/09/2020	21:21:42	PIPY	6	6	PIPY
27/09/2020	21:21:50	PIPY	10	7	PIPY
27/09/2020	21:21:55	PIPY	26	24	PIPY
27/09/2020	21:22:00	PIPY	11	10	PIPY
27/09/2020	21:22:06	PIPY	3	2	PIPY
27/09/2020	21:25:23	PIPY	10	9	PIPY
27/09/2020	21:25:28	PIPY	25	23	PIPY
27/09/2020	21:25:33	PIPY	22	18	PIPY
27/09/2020	21:25:38	PIPY	15	13	PIPY
27/09/2020	21:25:43	PIPY	3	2	PIPY

27/09/2020	21:27:52	PIPY	9	9	PIPY
27/09/2020	21:27:57	PIPY	26	23	PIPY
27/09/2020	21:28:02	PIPY	18	16	PIPY
27/09/2020	21:35:03	PIPY	8	8	PIPY
27/09/2020	21:35:26	PIPY	13	12	PIPY
27/09/2020	21:35:31	PIPY	19	17	PIPY
27/09/2020	21:35:36	PIPY	15	15	PIPY
27/09/2020	21:35:41	PIPY	19	16	PIPY
27/09/2020	21:35:46	PIPY	19	16	PIPY
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27/09/2020	21:39:57	PIPY	5	5	PIPY
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27/09/2020	21:40:38	PIPY	2	2	PIPY
27/09/2020	21:41:52	PIPI	17	17	PIPI
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27/09/2020	21:45:08	MYBR	3	2	MYOTIS
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27/09/2020	21:49:09	NoID	1	0	MYOTIS
27/09/2020	21:51:34	PIPI	4	4	PIPI
27/09/2020	21:55:04	NoID	3	0	MYOTIS
27/09/2020	21:56:21	MYBR	2	2	MYOTIS
27/09/2020	21:56:26	MYBR	2	2	MYOTIS
27/09/2020	21:57:14	MYBR	4	4	MYOTIS
27/09/2020	21:58:20	MYBR	2	2	MYOTIS
27/09/2020	21:59:35	MYBR	3	2	MYOTIS
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27/09/2020	22:01:39	NoID	1	0	MYOTIS
27/09/2020	22:06:53	NoID	3	0	MYOTIS
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27/09/2020	22:10:25	PIPY	13	11	PIPY
27/09/2020	22:10:30	PIPY	17	13	PIPY
27/09/2020	22:10:35	PIPY	10	7	PIPY

27/09/2020	22:10:41	PIPY	11	9	PIPY
27/09/2020	22:10:46	PIPY	23	18	PIPY
27/09/2020	22:10:51	PIPY	9	9	PIPY
27/09/2020	22:10:56	PIPY	23	20	PIPY
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27/09/2020	22:16:48	PIPY	12	11	PIPY
27/09/2020	22:16:53	PIPY	15	9	PIPY
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27/09/2020	22:20:20	PIPY	14	13	PIPY
27/09/2020	22:20:25	PIPY	22	20	PIPY
27/09/2020	22:20:30	PIPY	16	12	PIPY

27/09/2020	22:20:35	PIPY	15	12	PIPY
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27/09/2020	22:21:34	PIPY	7	5	PIPY
27/09/2020	22:21:39	PIPY	16	13	PIPY
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27/09/2020	22:33:45	PIPY	23	22	PIPY
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27/09/2020	22:37:27	PIPY	18	18	PIPY
27/09/2020	22:37:32	PIPY	16	14	PIPY
27/09/2020	22:37:37	PIPY	8	8	PIPY
27/09/2020	22:38:15	PIPY	15	14	PIPY
27/09/2020	22:38:31	PIPY	8	7	PIPY
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27/09/2020	22:48:35	PIPY	9	7	PIPY
27/09/2020	22:48:48	PIPY	4	4	PIPY
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27/09/2020	22:53:57	PIPY	14	13	PIPY
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27/09/2020	22:54:38	PIPY	7	7	PIPY
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27/09/2020	22:59:42	PIPY	17	15	PIPY
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27/09/2020	22:59:52	PIPY	8	6	PIPY
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27/09/2020	23:05:15	PIPY	15	15	PIPY
27/09/2020	23:05:20	PIPY	16	15	PIPY
27/09/2020	23:05:25	PIPY	17	17	PIPY

27/09/2020	23:05:31	PIPY	25	25	PIPY
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27/09/2020	23:35:55	PIPI	16	15	PIPI
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27/09/2020	23:36:05	PIPI	5	5	PIPI
27/09/2020	23:36:20	PIPI	21	20	PIPI
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27/09/2020	23:47:05	PIPI	12	12	PIPI
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27/09/2020	23:47:43	PIPY	20	20	PIPY
27/09/2020	23:47:48	PIPY	16	16	PIPY
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27/09/2020	23:56:38	PIPY	13	13	PIPY
27/09/2020	23:56:43	PIPY	10	9	PIPY
27/09/2020	23:57:15	PIPY	12	10	PIPY
27/09/2020	23:57:20	PIPY	21	20	PIPY
27/09/2020	23:57:25	PIPY	17	16	PIPY
27/09/2020	23:57:31	PIPY	20	18	PIPY
27/09/2020	23:57:36	PIPY	16	16	PIPY
27/09/2020	23:57:41	PIPY	5	5	PIPY
27/09/2020	23:58:13	PIPY	15	12	PIPY
27/09/2020	23:58:18	PIPY	14	12	PIPY
27/09/2020	23:59:55	PIPY	9	8	PIPY
28/09/2020	00:00:00	PIPY	15	14	PIPY

28/09/2020	00:00:05	PIPY	10	8	PIPY
28/09/2020	00:00:11	PIPY	17	17	PIPY
28/09/2020	00:00:16	PIPY	8	7	PIPY
28/09/2020	00:00:36	PIPY	11	11	PIPY
28/09/2020	00:00:41	PIPY	15	13	PIPY
28/09/2020	00:00:46	NoID	3	0	MYOTIS
28/09/2020	00:01:01	MYBR	2	2	MYOTIS
28/09/2020	00:01:11	NoID	0	0	MYOTIS
28/09/2020	00:01:19	PIPY	13	11	PIPY
28/09/2020	00:01:50	PIPY	16	16	PIPY
28/09/2020	00:01:55	PIPY	16	13	PIPY
28/09/2020	00:02:00	PIPY	11	10	PIPY
28/09/2020	00:02:05	PIPY	14	13	PIPY
28/09/2020	00:02:10	PIPY	10	9	PIPY
28/09/2020	00:02:15	MYBR	3	2	PIPY MYOTIS
28/09/2020	00:02:21	PIPI	5	3	MYOTIS
28/09/2020	00:27:26	PIPY	19	17	PIPY
28/09/2020	00:27:31	PIPY	13	13	PIPY
28/09/2020	00:27:59	PIPY	9	8	PIPY
28/09/2020	00:28:04	PIPY	5	4	PIPY
28/09/2020	00:28:45	PIPY	18	18	PIPY
28/09/2020	00:28:50	PIPY	29	27	PIPY
28/09/2020	00:28:55	PIPY	27	24	PIPY
28/09/2020	00:29:00	PIPY	15	14	PIPY
28/09/2020	00:29:05	PIPY	18	18	PIPY
28/09/2020	00:29:10	PIPY	16	15	PIPY
28/09/2020	00:29:16	PIPY	8	8	PIPY
28/09/2020	00:29:33	PIPY	14	14	PIPY
28/09/2020	00:29:38	PIPY	22	21	PIPY
28/09/2020	00:29:43	PIPY	6	5	PIPY
28/09/2020	00:30:22	NoID	0	0	NoID
28/09/2020	00:31:29	PIPY	8	8	PIPY
28/09/2020	00:31:34	PIPY	7	5	PIPY
28/09/2020	00:32:00	PIPY	18	17	PIPY
28/09/2020	00:32:05	PIPY	23	21	PIPY
28/09/2020	00:32:10	PIPY	17	16	PIPY
28/09/2020	00:32:16	PIPY	14	14	PIPY
28/09/2020	00:32:21	PIPY	12	12	PIPY
28/09/2020	00:42:33	PIPY	8	7	PIPY
28/09/2020	00:42:38	PIPY	19	18	PIPY
28/09/2020	00:42:43	PIPY	14	13	PIPY
28/09/2020	00:43:04	PIPY	16	12	PIPY
28/09/2020	00:43:09	PIPY	10	9	PIPY
28/09/2020	00:43:14	PIPY	6	6	PIPY
28/09/2020	00:43:20	PIPY	7	6	PIPY
28/09/2020	00:43:25	PIPY	16	16	PIPY
28/09/2020	00:43:30	PIPY	12	12	PIPY

28/09/2020	00:43:36	PIPY	14	12	PIPY
28/09/2020	00:43:41	PIPY	16	16	PIPY
28/09/2020	00:43:46	PIPY	18	17	PIPY
28/09/2020	00:43:51	PIPY	33	32	PIPY
28/09/2020	00:43:56	PIPY	14	13	PIPY
28/09/2020	00:44:01	PIPY	12	10	PIPY
28/09/2020	00:44:06	PIPY	12	10	PIPY
28/09/2020	00:46:34	PIPY	17	17	PIPY
28/09/2020	00:46:39	PIPY	11	10	PIPY
28/09/2020	00:46:44	PIPY	16	15	PIPY
28/09/2020	00:46:50	PIPY	13	13	PIPY
28/09/2020	00:46:55	PIPY	22	22	PIPY
28/09/2020	00:47:00	PIPY	14	14	PIPY
28/09/2020	00:47:06	PIPY	11	10	PIPY
28/09/2020	00:47:11	PIPY	13	12	PIPY
28/09/2020	00:47:16	PIPY	13	12	PIPY
28/09/2020	00:47:21	PIPY	20	20	PIPY
28/09/2020	00:47:26	PIPY	27	26	PIPY
28/09/2020	00:47:31	PIPY	15	15	PIPY
28/09/2020	00:47:36	PIPY	14	13	PIPY
28/09/2020	00:47:41	PIPY	16	14	PIPY
28/09/2020	00:47:46	PIPY	2	2	PIPY
28/09/2020	01:00:05	PIPY	15	14	PIPY
28/09/2020	01:00:10	PIPY	12	12	PIPY
28/09/2020	01:00:15	PIPY	16	16	PIPY
28/09/2020	01:00:21	PIPY	5	5	PIPY
28/09/2020	01:11:32	PIPY	9	7	PIPY
28/09/2020	01:27:54	MYBR	4	2	
28/09/2020	01:39:49	PIPY	22	22	
28/09/2020	01:39:58	PIPY	17	17	
28/09/2020	01:40:03	PIPY	9	7	
28/09/2020	01:53:37	PIPI	14	14	
28/09/2020	01:58:07	MYBR	2	2	MYOTIS
28/09/2020	02:27:07	MYBR	2	2	MYOTIS
28/09/2020	02:27:12	PINA	3	2	MYOTIS
28/09/2020	02:27:24	NoID	3	0	MYOTIS
28/09/2020	02:35:18	NoID	1	0	MYOTIS
28/09/2020	03:54:48	MYBR	5	4	MYOTIS
28/09/2020	03:56:33	NoID	1	0	MYOTIS
28/09/2020	03:56:38	PIPI	3	2	MYOTIS
28/09/2020	03:56:54	NoID	1	0	MYOTIS
28/09/2020	04:39:10	PIPI	25	25	PIPI
28/09/2020	04:39:15	PIPI	10	10	PIPI
28/09/2020	04:57:53	PIPY	11	10	PIPY
28/09/2020	04:57:58	PIPY	2	2	PIPY
28/09/2020	04:58:09	PIPY	15	15	PIPY

28/09/2020	04:58:14	PIPY	16	16	PIPY
28/09/2020	04:58:19	PIPY	3	3	PIPY
28/09/2020	04:58:28	PIPY	5	5	PIPY
28/09/2020	04:58:34	PIPY	20	17	PIPY
28/09/2020	04:58:39	PIPY	24	24	PIPY
28/09/2020	04:58:44	PIPY	4	4	PIPY
28/09/2020	05:04:55	PIPI	16	16	PIPI
28/09/2020	05:05:00	PIPI	6	6	PIPI
28/09/2020	05:18:32	PIPY	13	13	PIPY
28/09/2020	05:18:37	PIPY	17	16	PIPY
28/09/2020	05:18:42	PIPY	17	15	PIPY
28/09/2020	05:18:48	PIPY	33	32	PIPY
28/09/2020	05:18:53	PIPY	13	12	PIPY
28/09/2020	05:18:58	PIPY	9	8	PIPY
28/09/2020	05:19:39	PIPY	13	11	PIPY
28/09/2020	05:24:37	PIPY	15	15	PIPY
28/09/2020	05:24:42	PIPY	11	11	PIPY
28/09/2020	05:24:47	PIPY	26	26	PIPY
28/09/2020	05:24:52	PIPY	12	12	PIPY
28/09/2020	05:24:57	PIPY	13	12	PIPY
28/09/2020	05:25:02	PIPY	9	9	PIPY
28/09/2020	05:25:08	PIPY	18	16	PIPY
28/09/2020	05:25:13	PIPY	8	8	PIPY
28/09/2020	05:25:18	PIPY	19	16	PIPY
28/09/2020	05:25:25	PIPY	3	3	PIPY
28/09/2020	05:29:19	PIPY	12	12	PIPY
28/09/2020	05:32:55	PIPY	12	10	PIPY
28/09/2020	05:42:34	PIPY	10	7	PIPY
28/09/2020	05:47:45	NoID	2	0	
28/09/2020	05:48:17	MYBR	5	5	MYOTIS
28/09/2020	05:48:56	PIPY	9	8	PIPY
28/09/2020	06:11:13	PIPY	12	12	PIPY
28/09/2020	06:23:06	PIPI	20	20	PIPI
28/09/2020	06:23:11	PIPI	17	14	PIPI
28/09/2020	06:23:16	PIPI	17	15	PIPI
28/09/2020	06:23:23	PIPI	17	14	PIPI
28/09/2020	06:23:30	PIPI	5	5	PIPI
28/09/2020	06:23:38	PIPI	24	20	PIPI
28/09/2020	06:33:07	PIPI	30	26	PIPI
28/09/2020	06:33:12	PIPI	7	7	PIPI
28/09/2020	06:33:25	PIPI	14	13	PIPI
28/09/2020	06:33:31	PIPI	37	33	PIPI
28/09/2020	06:33:36	PIPI	23	21	PIPI
8/09/2020	06:33:41	PIPI	24	22	PIPI
28/09/2020	06:33:46	PIPI	7	7	PIPI
28/09/2020	06:33:53	PIPI	29	24	PIPI

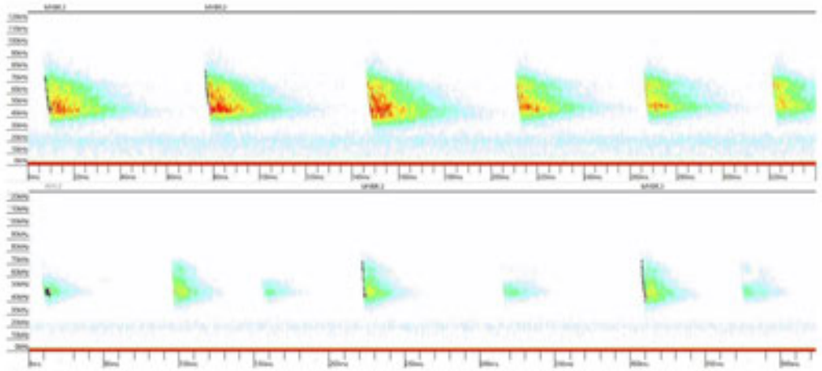
28/09/2020	06:33:58	PIPI	9	9	PIPI
28/09/2020	06:34:07	PIPI	30	26	PIPI
28/09/2020	06:34:12	PIPI	35	32	PIPI
28/09/2020	06:34:17	PIPI	17	13	PIPI
28/09/2020	06:34:25	PIPI	24	21	PIPI
28/09/2020	06:34:30	PIPI	24	20	PIPI
28/09/2020	06:34:39	PIPI	32	31	PIPI
28/09/2020	06:37:54	PIPY	19	19	PIPY
28/09/2020	06:40:10	NoID	2	0	NYLE
28/09/2020	06:40:48	PIPI	37	32	PIPI
28/09/2020	06:40:53	PIPI	38	33	PIPI
28/09/2020	06:40:58	PIPI	37	30	PIPI
28/09/2020	06:41:03	PIPI	35	32	PIPI
28/09/2020	06:41:08	PIPI	22	19	PIPI
28/09/2020	06:46:50	PIPI	18	18	PIPI
28/09/2020	06:49:34	MYBR	3	2	Noise
28/09/2020	06:49:43	MYBR	4	2	Noise
28/09/2020	06:50:30	PIPI	13	9	PIPI
28/09/2020	06:50:45	PIPI	17	15	PIPI
28/09/2020	06:50:54	PIPI	26	20	PIPI
28/09/2020	06:50:59	PIPI	11	10	PIPI
28/09/2020	06:53:08	PIPI	25	21	PIPI
28/09/2020	06:53:13	PIPY	18	10	PIPY
28/09/2020	06:53:18	PIPY	19	16	PIPY
28/09/2020	06:53:24	PIPY	13	12	PIPY
28/09/2020	06:53:29	PIPY	7	7	PIPY
28/09/2020	06:54:15	PIPI	30	28	PIPI
28/09/2020	06:54:20	PIPI	29	25	PIPI
28/09/2020	06:54:31	PIPI	38	38	PIPI
28/09/2020	06:54:36	PIPI	25	24	PIPI
28/09/2020	06:54:41	PIPI	6	6	PIPI
28/09/2020	06:55:03	PIPI	34	33	PIPI
28/09/2020	06:55:08	PIPI	2	2	PIPI
28/09/2020	06:55:20	PIPI	28	27	PIPI
28/09/2020	06:55:25	PIPI	25	23	PIPI
28/09/2020	06:55:30	PIPI	15	14	PIPI
28/09/2020	06:55:35	PIPI	26	24	PIPI
28/09/2020	06:55:40	PIPI	36	34	PIPI
28/09/2020	06:55:45	PIPI	20	17	PIPI
28/09/2020	06:55:58	PIPI	34	32	PIPI
28/09/2020	06:56:03	PIPI	25	25	PIPI
28/09/2020	06:56:08	PIPI	20	17	PIPI
28/09/2020	06:56:13	PIPI	34	27	PIPI
28/09/2020	06:56:18	PIPI	9	9	PIPI
28/09/2020	06:56:28	PIPI	17	16	PIPI
28/09/2020	06:56:33	PIPI	34	34	PIPI

28/09/2020	06:56:38	PIPI	17	15	PIPI
28/09/2020	06:56:43	PIPI	22	19	PIPI
28/09/2020	06:56:48	PIPI	16	14	PIPI
28/09/2020	06:56:53	NoID	2	0	PIPI
28/09/2020	06:56:58	PIPI	11	10	PIPI
28/09/2020	06:57:08	PIPI	2	2	PIPI
28/09/2020	06:57:15	PIPI	24	23	PIPI
28/09/2020	06:57:46	PIPI	10	10	PIPI
28/09/2020	06:57:52	PIPI	31	30	PIPI
28/09/2020	06:57:57	PIPI	30	19	PIPI
28/09/2020	06:58:02	PIPY	19	15	PIPY
28/09/2020	06:58:07	PIPI	4	4	PIPI
28/09/2020	06:58:25	PIPI	23	20	PIPI
28/09/2020	06:58:30	PIPI	16	13	PIPI
28/09/2020	06:58:35	PIPI	22	20	PIPI
28/09/2020	06:58:41	PIPI	23	21	PIPI
28/09/2020	06:58:46	PIPI	7	7	PIPI
28/09/2020	06:58:53	PIPI	26	21	PIPI
28/09/2020	06:58:58	PIPI	20	16	PIPI
28/09/2020	06:59:06	PIPI	21	20	PIPI
28/09/2020	06:59:11	PIPI	22	20	PIPI
28/09/2020	06:59:16	PIPI	15	13	PIPI
28/09/2020	06:59:22	PIPI	30	25	PIPI
28/09/2020	06:59:27	PIPI	4	4	PIPI
28/09/2020	06:59:33	PIPY	18	16	PIPY
28/09/2020	06:59:38	PIPY	24	15	PIPI PIPY
28/09/2020	06:59:43	PIPY	8	7	PIPY
28/09/2020	06:59:49	PIPY	10	10	PIPY
28/09/2020	06:59:54	PIPY	12	11	PIPY
28/09/2020	06:59:59	PIPY	12	10	PIPY
28/09/2020	07:00:04	PIPI	21	9	PIPI PIPY
28/09/2020	07:00:09	PIPY	16	16	PIPY
28/09/2020	07:00:14	PIPY	11	9	PIPY
28/09/2020	07:00:20	PIPY	20	20	PIPY
28/09/2020	07:00:25	PIPY	8	8	PIPY
28/09/2020	07:00:34	PIPY	21	21	PIPY
28/09/2020	07:01:03	PIPY	14	14	PIPY
28/09/2020	07:01:08	PIPY	25	25	PIPY
28/09/2020	07:01:13	PIPY	12	11	PIPY
28/09/2020	07:01:19	PIPY	15	15	PIPY
28/09/2020	07:01:24	PIPY	21	20	PIPY
28/09/2020	07:01:29	PIPY	18	18	PIPY
28/09/2020	07:01:34	PIPY	26	26	PIPY
28/09/2020	07:01:39	PIPY	19	19	PIPY
28/09/2020	07:01:44	PIPY	20	19	PIPY
28/09/2020	07:01:50	PIPY	18	18	PIPY
28/09/2020	07:01:55	PIPY	17	17	PIPY

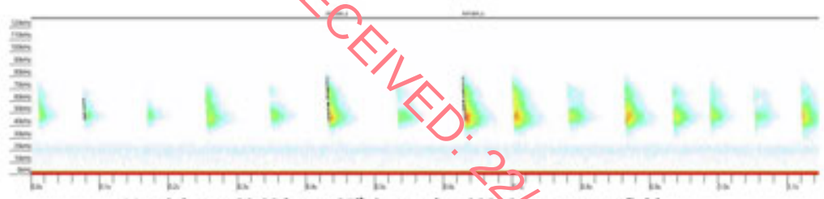
28/09/2020	07:02:00	PIPY	10	10	PIPY
28/09/2020	07:02:05	PIPY	10	10	PIPY
28/09/2020	07:02:22	PIPY	19	19	PIPY
28/09/2020	07:02:33	PIPY	8	8	PIPY

Bat activity prior to sunrise 28th September 2020 (handheld EM3 results)

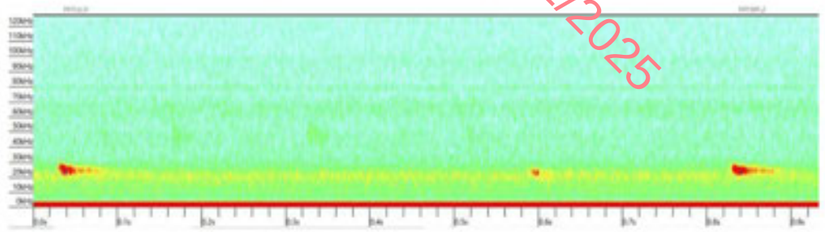
DATE	TIME	AUTO ID	PULSES	MATCHING	MANUAL ID	
28/09/2020	06:23:12	PIPY	3	3	PIPY	
28/09/2020	06:23:17	PIPY	4	4	PIPY	
8/09/2020	06:23:22	PIPY	8	8	PIPY	
28/09/2020	06:23:27	PIPY	2	2	PIPY	
28/09/2020	06:23:37	PIPY	12	12	PIPY	
28/09/2020	06:24:48	PIPI	26	17	PIPI	
28/09/2020	06:58:45	PIPY	8	8	PIPY	



Myotis **bat at 19.53 hours (first signal recorded by static monitor) 20.05 hours 27th September 2020 in overgrown field.**

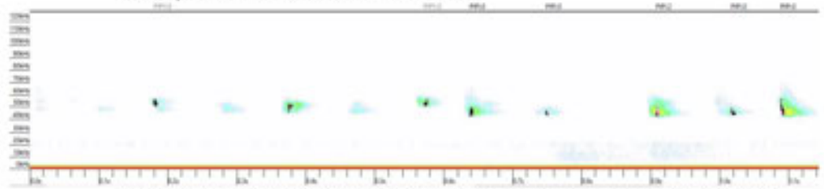


Myotis **bat at 20.09 hours 27th September 2020 in overgrown field**



Leisler's bat at 06.40 hours on 28th September 2020

This species was much less in evidence in 2020 than in 2018. This suggests that there was a Leisler's bat roost to the north of the site in July 2018. Most Leisler's bat activity in 2020 was towards the southeast



Common and soprano pipistrelle at 19.29 hours close to the overgrown field 27th September 2020

Summary of results from 2018

Existing Environment
Bat fauna roosting within the site
None

At the time of survey in July 2018, no bats were seen to enter or emerge from a tree or building within the site. There was bat activity late into the morning around the buildings within the site, but bats were noted to slowly drift away from the buildings while feeding towards houses along the road including the nearest occupied house.

The last bats noted; Leisler's bats (see below) were noted to fly towards houses to the north of the site and it is possible that one of the houses directly north of the site is a roost site to this species.

Both pipistrelle species were present late into the morning but with common pipistrelle present up to 05.23 hours and the last soprano pipistrelle signal at 04.45 hours. Clearly common pipistrelles are roosting very close to the site and most probably closer than soprano pipistrelles.

Bat fauna feeding and commuting within and through the site - Common
Pipistrelle *Pipistrellus pipistrellus*
Soprano Pipistrelle *Pipistrellus pygmaeus*
Leisler's bat *Nyctalus leisleri*

The vast majority of bat activity was of common pipistrelle. This species fed along the public road, around the buildings, along hedgerow and mature trees. The only areas where activity was absent was where hedgerow was absent or very poorly developed. Bats were present from before 21.50 hours and were present up to 05.23 hours. There was near-constant activity along the public road over most of the survey period.

Soprano pipistrelles were present to a much lesser extent but were present in several locations within the fields including a moderate hedge, a double-tree line, and the overgrown field in which the buildings are.

Leisler's bat activity was noted right up to 05.32 hours as bats were occasionally observed flying closer and closer to houses north of the site.

Leisler's bats were not noted within the fields early in the night and it is possible that much of the feeding is done over a distance of several kilometres. Most activity recorded was associated with bats returning to the roost, but it is possible that earlier activity was missed if the bats flew away quickly after emerging.

Bat Conservation Ireland data: search results 6 Oct 2018
Search parameters: Roosts Transects Ad-hoc observation sites with observations of all bats within 10000m of T1374959426.

Roosts

Name	Grid reference	Address	Species observed
Ballinclare House; Ballinclare;	T095542	Ballinclare House; Ballinclare; Camolin;	Myotis spp.; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus; Plecotus auritus
Ballinclay House; Ballinclay; Camolin	T101543	Ballinclay House; Ballinclay; Camolin;	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Building at Ballyeden	T065527	Camolin;	Plecotus auritus
D'Arcy Residence; Moneycross Upper; Clogh;	T128558	D'Arcy Residence; Moneycross Upper; Clogh;	Pipistrellus pygmaeus; Plecotus auritus
Hilton Cottage; Raheenagurren East; Gorey;	T177593	Hilton Cottage; Raheenagurren East; Gorey;	Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus; Plecotus auritus
Inch Church; Inch;	T191668	Inch Church; Inch;	Myotis nattereri; Myotis spp.; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus; Plecotus auritus
Leskinfrere Church	T122560	Leskinfrere Church; Gorey	Myotis nattereri; Nyctalus leisleri; Pipistrellus Clogh; pipistrellus (45kHz); Pipistrellus pygmaeus
Leskinfrere Church	T1223156070	Gorey	Myotis nattereri of Ireland
Lorcan Allen; Raheenagurren East; Gorey;	T176587	Lorcan Allen; Raheenagurren East; Gorey;	Pipistrellus pygmaeus
Marlfield House; Gorey.	T167588	Marlfield House; Gorey	Myotis daubentonii; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Summerville House	T121558	Clogh;	Unidentified bat
Tinnock Upper	T16976418	Tinnock Upper;rGorey;	Pipistrellus pipistrellus (45kHz)

Transects

Name	Grid reference start	Species
Laraheen Transect	T133642	Myotis daubentonii; Pipistrellus spp. (45kHz/55kHz);Unidentified bat
Margerry's Bridge Transect	T1112159219	Myotis daubentonii; Unidentified bat

T05 (12) 2003-		T072598 Myotis spp.; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus spp. (45kHz/55kHz)
T05 (13) 2003-	T061572	Nyctalus leisleri; Pipistrellus nathusii; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz);Plecotus auritus; Unidentified bat
T05 (16) 2003-2008	T069520	Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus
T05 (17) 2003-2008		T111532 Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz);Plecotus auritus
T05 (18) 2003-2008		T136557 Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz)
T05 (19) 2003-2008		T148541 Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz)
T05 (20) 2003-2008		T184544 Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz)
T05 (5) 2003-		T111687 Myotis spp.; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz);Unidentified bat
T05 (6) 2003-		T153661 Myotis spp. ;Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz);Unidentified bat
T05 (7) 2003-	T112643	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz);Plecotus auritus; Unidentified bat
T05 (8) 2003-	T076664	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz);Pipistrellus pygmaeus; Pipistrellus spp. (45kHz/55kHz)

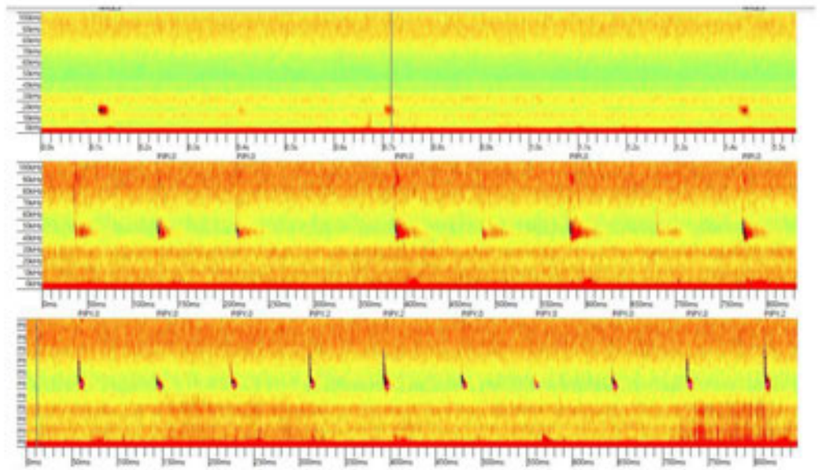
Ad-hoc observations

Survey	Grid reference	Date	Species
BATLAS 2010	T1217064143	01/09/2008	Myotis daubentonii
BATLAS 2010	T0540867382	01/09/2008	Pipistrellus pipistrellus (45kHz)
BATLAS 2010	T0946957670	06/08/2008	Myotis daubentonii; Pipistrellus pygmaeus; Plecotus auritus
BATLAS 2010	T170560	01/06/2009	Myotis daubentonii; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
BATLAS 2010	T1672966957	01/09/2008	Pipistrellus pygmaeus
BATLAS 2010	T1521266059	01/09/2008	Myotis nattereri; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
BATLAS 2010			T0856764571 01/09/2008 Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
BATLAS 2010	T0931657772	06/08/2008	Pipistrellus pipistrellus (45kHz)
BATLAS 2010	T1617649809	03/06/2009	Myotis daubentonii; Myotis nattereri; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
BATLAS 2010	T2251964363	06/08/2008	Myotis daubentonii; Pipistrellus pipistrellus (45kHz)
BATLAS 2010	T1639466730	01/09/2008	Pipistrellus pipistrellus (45kHz); Plecotus auritus
EIA survey- Paul Scott (Scott Cawley)	T074494	07/07/2008	Myotis spp.; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
EIA survey- Paul Scott (Scott Cawley)	T074494	10/07/2008	
EIA survey- Paul Scott (Scott Cawley)	T074494	07/07/2008	Myotis spp.; Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
EIA survey- Paul Scott (Scott Cawley)	T112531	09/07/2008	Pipistrellus spp. (45kHz/55kHz)

EIA survey- Paul Scott (Scott Cawley)	T074494	10/07/2008	Pipistrellus pipistrellus (45kHz)
EIS Surveys - Niamh Roche	T103548	09/07/2003	Myotis nattereri; Nyctalus leisleri; Pipistrellus pygmaeus
Faith Wilson			T178593 25/07/2005 Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson			T216680 02/03/2006 Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson	T157579	15/07/2005	Myotis daubentonii; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson	T201676	13/07/2005	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson	T122557	13/07/2005	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson			T179594 25/07/2005 Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson			T135572 14/07/2005 Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson	T202664	12/07/2005	Myotis daubentonii; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus
Faith Wilson			T102547 13/07/2005 Myotis nattereri; Nyctalus leisleri; Pipistrellus pygmaeus
Faith Wilson	T1463	01/09/2008	Nyctalus leisleri; Pipistrellus pipistrellus (45kHz); Pipistrellus pygmaeus

Bat fauna recorded with the EchoMeter3+ detector on 1st August 2018 prior to dawn

Time	Auto ID	Manual ID
04:30:24 – 04:50:03	Common pipistrelle	Common pipistrelle
04:43:41	Soprano pipistrelle	Soprano pipistrelle
04:50:33	Leisler's bat	Leisler's bat
04:50:37	Soprano pipistrelle	Soprano pipistrelle
05:01:02 – 05:17:06	Common pipistrelle	Common pipistrelle
05:17:40	Soprano pipistrelle	Soprano pipistrelle
05:18:10 – 05:22:48	Common pipistrelle	Common pipistrelle
05:29:07 – 05:32:35	Leisler's bat	Leisler's bat



The three bat species within the site in 2018: (top) Leisler's bat, (middle) Common pipistrelle and (bottom) Soprano pipistrelle

Data recorded from analysis of bat signals recorded by handheld monitor March 29 to 30 2022

Time	Auto Id	Pulses	Matching	Manual Id
20:08:52	Common Pipistrelle	27	26	Common Pipistrelle
20:08:57	Common Pipistrelle	23	23	Common Pipistrelle
20:09:02	Leisler's Bat	18	11	Common Pipistrelle
20:09:09	Common Pipistrelle	20	20	Common Pipistrelle
20:09:14	Common Pipistrelle	36	36	Common Pipistrelle
20:09:19	Common Pipistrelle	25	25	Common Pipistrelle
20:09:25	Common Pipistrelle	6	6	Common Pipistrelle
20:15:38	Common Pipistrelle	4	4	Common Pipistrelle
20:15:52	Common Pipistrelle	21	21	Common Pipistrelle
20:15:57	Common Pipistrelle	16	15	Common Pipistrelle
20:16:02	Common Pipistrelle	13	13	Common Pipistrelle
20:16:08	Common Pipistrelle	21	21	Common Pipistrelle
20:16:13	Common Pipistrelle	27	27	Common Pipistrelle
20:16:18	Common Pipistrelle	19	19	Common Pipistrelle
20:16:25	Common Pipistrelle	24	24	Common Pipistrelle
20:16:30	Common Pipistrelle	3	3	Common Pipistrelle
20:16:35	Common Pipistrelle	20	19	Common Pipistrelle
20:16:40	Common Pipistrelle	28	28	Common Pipistrelle
20:16:45	Common Pipistrelle	30	29	Common Pipistrelle
20:16:51	Common Pipistrelle	25	25	Common Pipistrelle
20:16:56	Common Pipistrelle	9	9	Common Pipistrelle
20:17:01	Common Pipistrelle	13	13	Common Pipistrelle
20:17:15	Common Pipistrelle	9	9	Common Pipistrelle
20:23:23	Noise	0	0	Common Pipistrelle
20:23:33	Common Pipistrelle	5	5	Common Pipistrelle
20:23:38	Common Pipistrelle	4	4	Common Pipistrelle
20:23:43	Common Pipistrelle	5	5	Common Pipistrelle
20:34:41	Common Pipistrelle	22	22	Common Pipistrelle
20:34:46	Noise	0	0	Common Pipistrelle
20:34:53	Common Pipistrelle	2	2	Common Pipistrelle
20:35:04	Common Pipistrelle	34	33	Common Pipistrelle
20:35:09	Pina	32	33	Common Pipistrelle
20:35:14	Noise	0	0	Common Pipistrelle
20:38:52	Brown Long-Eared Bat	19	19	Brown Long-Eared Bat
20:38:57	Brown Long-Eared Bat	13	12	Brown Long-Eared Bat
20:39:02	Noise	0	0	Brown Long-Eared Bat
20:43:02	Soprano Pipistrelle	2	2	Soprano Pipistrelle
20:43:07	Noise	0	0	Soprano Pipistrelle
20:43:19	Soprano Pipistrelle	4	4	Soprano Pipistrelle
20:43:25	Soprano Pipistrelle	4	4	Soprano Pipistrelle
20:43:36	Soprano Pipistrelle	13	13	Soprano Pipistrelle
20:43:54	Soprano Pipistrelle	7	7	Soprano Pipistrelle
20:42:16	Soprano Pipistrelle	15	15	Soprano Pipistrelle
20:42:21	Noise	0	0	Soprano Pipistrelle
20:42:25	Soprano Pipistrelle	9	9	Soprano Pipistrelle
20:42:30	Noise	0	0	Soprano Pipistrelle
20:42:32	Soprano Pipistrelle	3	3	Soprano Pipistrelle
20:42:39	Soprano Pipistrelle	8	8	Soprano Pipistrelle
20:42:44	Noise	0	0	Soprano Pipistrelle
20:43:00	Soprano Pipistrelle	14	14	Soprano Pipistrelle
20:43:05	Soprano Pipistrelle	13	13	Soprano Pipistrelle
20:43:11	Noise	0	0	Soprano Pipistrelle
20:43:11	Soprano Pipistrelle	13	13	Soprano Pipistrelle
20:43:16	Soprano Pipistrelle	7	7	Soprano Pipistrelle
20:43:24	Soprano Pipistrelle	4	4	Soprano Pipistrelle
20:43:29	Noise	1	0	Soprano Pipistrelle
20:43:32	Soprano Pipistrelle	2	2	Soprano Pipistrelle
20:43:37	Noise	0	0	Soprano Pipistrelle
20:44:23	Noise	0	0	Soprano Pipistrelle
20:44:28	Soprano Pipistrelle	2	2	Soprano Pipistrelle
20:44:33	Noise	0	0	Soprano Pipistrelle
21:04:43	Soprano Pipistrelle	26	26	Soprano Pipistrelle
21:04:48	Soprano Pipistrelle	15	15	Soprano Pipistrelle
21:04:53	Soprano Pipistrelle	11	11	Soprano Pipistrelle
21:04:57	Soprano Pipistrelle	18	17	Soprano Pipistrelle
21:05:06	Soprano Pipistrelle	11	11	Soprano Pipistrelle
21:05:11	Soprano Pipistrelle	9	9	Soprano Pipistrelle
21:05:16	Noise	0	0	Soprano Pipistrelle
21:05:20	Soprano Pipistrelle	8	8	Soprano Pipistrelle
21:05:25	Soprano Pipistrelle	8	8	Soprano Pipistrelle
21:05:34	Soprano Pipistrelle	5	4	Soprano Pipistrelle
21:05:39	Soprano Pipistrelle	13	8	Soprano Pipistrelle
21:05:44	Soprano Pipistrelle	16	16	Soprano Pipistrelle
21:05:52	Soprano Pipistrelle	4	4	Soprano Pipistrelle
21:05:57	Soprano Pipistrelle	6	5	Soprano Pipistrelle
21:06:02	Soprano Pipistrelle	8	8	Soprano Pipistrelle
21:06:16	Soprano Pipistrelle	17	16	Soprano Pipistrelle
21:06:22	Soprano Pipistrelle	7	7	Soprano Pipistrelle
21:06:27	Soprano Pipistrelle	3	3	Soprano Pipistrelle
21:06:43	Soprano Pipistrelle	10	10	Soprano Pipistrelle
21:06:52	Soprano Pipistrelle	2	2	Soprano Pipistrelle
21:07:16	Soprano Pipistrelle	7	7	Soprano Pipistrelle
21:07:21	Soprano Pipistrelle	2	2	Soprano Pipistrelle
21:07:27	Soprano Pipistrelle	4	4	Soprano Pipistrelle
21:07:36	Soprano Pipistrelle	10	10	Soprano Pipistrelle
21:08:19	Soprano Pipistrelle	7	7	Soprano Pipistrelle
21:08:26	Soprano Pipistrelle	8	8	Soprano Pipistrelle
21:09:08	Soprano Pipistrelle	8	8	Soprano Pipistrelle
21:09:34	Soprano Pipistrelle	12	12	Soprano Pipistrelle
21:09:53	Soprano Pipistrelle	14	13	Soprano Pipistrelle
21:09:58	Noise	0	0	Soprano Pipistrelle
21:10:13	Soprano Pipistrelle	3	3	Soprano Pipistrelle
21:10:25	Soprano Pipistrelle	19	18	Soprano Pipistrelle
21:10:30	Noise	0	0	Soprano Pipistrelle
21:10:40	Soprano Pipistrelle	9	9	Soprano Pipistrelle
21:10:48	Soprano Pipistrelle	6	5	Soprano Pipistrelle
21:10:53	Soprano Pipistrelle	4	4	Soprano Pipistrelle
21:10:58	Soprano Pipistrelle	3	3	Soprano Pipistrelle
21:11:33	Soprano Pipistrelle	2	2	Soprano Pipistrelle
21:14:26	Common Pipistrelle	15	15	Common Pipistrelle
21:14:31	Noise	0	0	Common Pipistrelle
21:14:40	Soprano Pipistrelle	6	6	Soprano Pipistrelle
21:14:44	Soprano Pipistrelle	4	4	Soprano Pipistrelle
21:14:49	Soprano Pipistrelle	2	2	Soprano Pipistrelle
21:14:54	Soprano Pipistrelle	18	18	Soprano Pipistrelle
21:14:59	Noise	0	0	Soprano Pipistrelle
21:15:00	Noise	0	0	Soprano Pipistrelle
21:15:05	Noise	0	0	Soprano Pipistrelle
21:20:54	Noise	0	0	Brown Long-Eared Bat
21:20:59	Brown Long-Eared Bat	8	8	Brown Long-Eared Bat
21:21:04	Noise	0	0	Brown Long-Eared Bat
21:23:48	Brown Long-Eared Bat	17	16	Brown Long-Eared Bat
21:23:53	Noise	0	0	Brown Long-Eared Bat

Data from static monitor at ruined house 29th to 30th March 2022 (times are not adjusted for DST i.e., add 1 hour to the time shown)

TIME	AUTO ID	PULSES	MATCHING	MANUAL ID
19:05:16	common pipistrelle	30	30	common pipistrelle
19:05:21	common pipistrelle	25	19	common pipistrelle
19:05:26	common pipistrelle	25	23	common pipistrelle
19:05:36	common pipistrelle	12	12	common pipistrelle
19:05:41	common pipistrelle	19	16	common pipistrelle
19:05:31	common pipistrelle	24	20	common pipistrelle
19:05:46	common pipistrelle	11	9	common pipistrelle
19:05:51	common pipistrelle	16	15	common pipistrelle
19:05:56	Noise	0	0	common pipistrelle
19:06:02	common pipistrelle	29	29	common pipistrelle
19:06:07	common pipistrelle	19	19	common pipistrelle
19:05:57	common pipistrelle	28	28	common pipistrelle
19:06:18	common pipistrelle	18	17	common pipistrelle
19:06:23	common pipistrelle	16	16	common pipistrelle
19:06:13	common pipistrelle	30	30	common pipistrelle
19:06:28	common pipistrelle	29	28	common pipistrelle
19:06:33	common pipistrelle	29	29	common pipistrelle
19:06:38	common pipistrelle	28	28	common pipistrelle
19:06:48	common pipistrelle	20	20	common pipistrelle
19:06:53	common pipistrelle	24	24	common pipistrelle
19:06:43	common pipistrelle	18	18	common pipistrelle
19:06:58	common pipistrelle	30	29	common pipistrelle
19:07:03	common pipistrelle	13	13	common pipistrelle
19:07:08	common pipistrelle	23	23	common pipistrelle
19:07:19	common pipistrelle	13	12	common pipistrelle
19:07:24	common pipistrelle	29	28	common pipistrelle
19:07:14	common pipistrelle	32	31	common pipistrelle
19:07:29	common pipistrelle	26	25	common pipistrelle
19:07:39	common pipistrelle	30	30	common pipistrelle
19:07:34	common pipistrelle	20	20	common pipistrelle
19:07:54	common pipistrelle	24	21	common pipistrelle
19:07:44	common pipistrelle	29	29	common pipistrelle
19:07:49	common pipistrelle	28	28	common pipistrelle
19:07:59	common pipistrelle	18	18	common pipistrelle
19:08:04	common pipistrelle	11	11	common pipistrelle
19:08:09	common pipistrelle	27	27	common pipistrelle
19:08:15	common pipistrelle	6	6	common pipistrelle
19:08:21	common pipistrelle	22	17	common pipistrelle
19:08:26	common pipistrelle	22	22	common pipistrelle
19:08:31	common pipistrelle	19	18	common pipistrelle
19:08:41	common pipistrelle	23	22	common pipistrelle
19:08:46	common pipistrelle	13	13	common pipistrelle
19:08:36	common pipistrelle	19	19	common pipistrelle
19:09:02	common pipistrelle	22	22	common pipistrelle
19:08:52	common pipistrelle	28	28	common pipistrelle
19:08:57	common pipistrelle	19	19	common pipistrelle
19:09:07	common pipistrelle	16	16	common pipistrelle
19:22:16	soprano pipistrelle	13	13	soprano pipistrelle
19:22:21	soprano pipistrelle	13	13	soprano pipistrelle
19:22:11	soprano pipistrelle	5	5	soprano pipistrelle
19:22:33	soprano pipistrelle	17	17	soprano pipistrelle
19:22:28	soprano pipistrelle	18	18	soprano pipistrelle
19:22:38	soprano pipistrelle	4	4	soprano pipistrelle
19:22:53	soprano pipistrelle	3	3	soprano pipistrelle
19:22:43	soprano pipistrelle	9	9	soprano pipistrelle
19:23:09	soprano pipistrelle	6	6	soprano pipistrelle
19:23:04	soprano pipistrelle	4	4	soprano pipistrelle
19:22:59	MYNA	3	2	soprano pipistrelle
19:23:20	soprano pipistrelle	7	7	soprano pipistrelle
19:23:15	soprano pipistrelle	6	6	soprano pipistrelle
19:23:30	soprano pipistrelle	6	6	soprano pipistrelle
19:23:35	Leisler's bat	4	3	soprano pipistrelle
19:23:40	soprano pipistrelle	4	4	soprano pipistrelle
19:25:33	soprano pipistrelle	24	24	soprano pipistrelle
19:27:07	common pipistrelle	15	12	common pipistrelle
19:27:34	common pipistrelle	13	13	common pipistrelle
19:30:37	soprano pipistrelle	8	8	soprano pipistrelle
19:40:07	soprano pipistrelle	22	22	soprano pipistrelle
19:40:42	soprano pipistrelle	3	3	soprano pipistrelle
19:40:47	soprano pipistrelle	2	2	soprano pipistrelle
19:41:05	soprano pipistrelle	2	2	soprano pipistrelle
19:41:00	soprano pipistrelle	10	10	soprano pipistrelle
19:41:11	soprano pipistrelle	2	2	soprano pipistrelle
19:41:31	soprano pipistrelle	7	7	soprano pipistrelle
19:41:21	soprano pipistrelle	21	21	soprano pipistrelle
19:41:26	soprano pipistrelle	8	8	soprano pipistrelle
19:41:58	soprano pipistrelle	10	10	soprano pipistrelle
19:42:15	soprano pipistrelle	5	4	soprano pipistrelle
19:42:10	soprano pipistrelle	3	3	soprano pipistrelle
19:42:48	soprano pipistrelle	9	9	soprano pipistrelle
19:43:31	soprano pipistrelle	9	9	soprano pipistrelle
19:44:08	soprano pipistrelle	7	7	soprano pipistrelle
19:46:26	soprano pipistrelle	8	8	soprano pipistrelle
20:40:29	common pipistrelle	11	11	common pipistrelle
00:06:47	common pipistrelle	13	13	common pipistrelle
00:09:12	brown long-eared	2	2	brown long-eared bat
00:59:42	brown long-eared	3	3	brown long-eared bat
01:52:14	Daubenton's bat	16	12	MYOTIS
01:56:40	brown long-eared	3	2	brown long-eared bat
04:03:33	brown long-eared	8	8	brown long-eared bat

Bat activity recorded by static monitor at ruined shed in the overgrown field 29th to 30th March 2022

TIME	AUTO ID	PULSES	MATCHING	MANUAL ID
19:05:41	common pipistrelle	11	10	common pipistrelle
19:05:36	common pipistrelle	21	19	common pipistrelle
19:05:51	common pipistrelle	31	31	common pipistrelle
19:05:56	common pipistrelle	35	35	common pipistrelle
19:06:01	common pipistrelle	37	37	common pipistrelle

RECEIVED: 22/12/2025

APPENDIX 11-4 Breeding Bird Assessment for a proposed Large-scale Residential Development (LRD) at Kilnahue, Gorey, Co. Wexford

RECEIVED: 22/12/2025

ALTEMAR
Marine & Environmental Consultancy

Appendix 11.4 Breeding Bird Assessment for a proposed Large-scale Residential Development (LRD) at Kilnahue, Gorey, Co.Wexford.

19th of November 2025

Prepared by: Emma Peters of Altemar Ltd.
On behalf of: Glenveagh Homes Limited

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Summary

Structure/features: The site is comprised largely of open fields with treeline, hedgerow and earthen bank boundaries. To the east of the site is a small area of mixed woodland which contains a series of old stone buildings. A lane extended along the eastern boundary, characterized by dense thickets of brambles (*Rubus fruticosus agg*).

Location: Kilnahue, Gorey, Co. Wexford.

Bird species breeding (survey area): Blackbird, Blackcap, Chiffchaff, Dunnock, Goldcrest, Greenfinch, House Sparrow, Linnet, Magpie, Rook, Song Thrush, Starling, Stonechat, Wren, Yellowhammer

Proposed work: Large-Scale Residential Development (LRD)

Impact on breeding birds: The proposed development will result in a short-medium-term moderate adverse effect on breeding birds due to habitat during clearance and construction, and a long-term neutral/low positive effect as landscaping within the site matures. Mitigation measures are proposed.

Surveys by: Emma Peters of Altemar Ltd.

Survey dates: 29th of April, 7th and 21st May 2025.

Receiving environment

Description of the Proposed Project

Glenveagh Homes Ltd are applying for permission for a Large-Scale Residential Development consisting of the construction of:
413 no. residential units **(comprising 349 no. houses and 64 no. apartment/duplex/maisonettes)**; 1 no. creche; and all associated site development works including the provision of road widening works, pedestrian/cyclist facilities and a raised pedestrian crossing along Kilnahue Lane, a right hand turning lane on Carnew Road, drainage upgrade works, 4 no. ESB substations, footpaths, lighting, parking, bicycle and bin stores and landscaping/amenity areas located at Kilnahue, Gorey, Co. Wexford. Access will be provided via 2 no. new entrances onto Killnahue Land and 1 no. new entrance onto the Carnew Road. The proposed drainage upgrade works **will consist of works along Carnew Road, Grattan Row, McCurtain Street, Charlotte Row, Main Street, and Esmonde Street and extend into the townlands** of Gorey Hill, Coolishal Lower, Creagh Demesne, Gorey Corporation Lands, Goreybridge, & Milllands.

The survey area, location, and layout plan are demonstrated in figures 1-3.

Landscape

The landscape strategy for the proposed development has been prepared by Simon Ronan Landscape Architects to accompany this planning application. The proposed landscape plan is demonstrated in figure 4. In relation to net biodiversity gain, the report outlines the following:

'The project prioritizes net biodiversity gain through carefully designed planting schemes that support native pollinators and strengthen local ecosystems. A diverse mix of native species ensures year-round habitat availability, enhances ecological resilience, and contributes to a thriving natural environment'

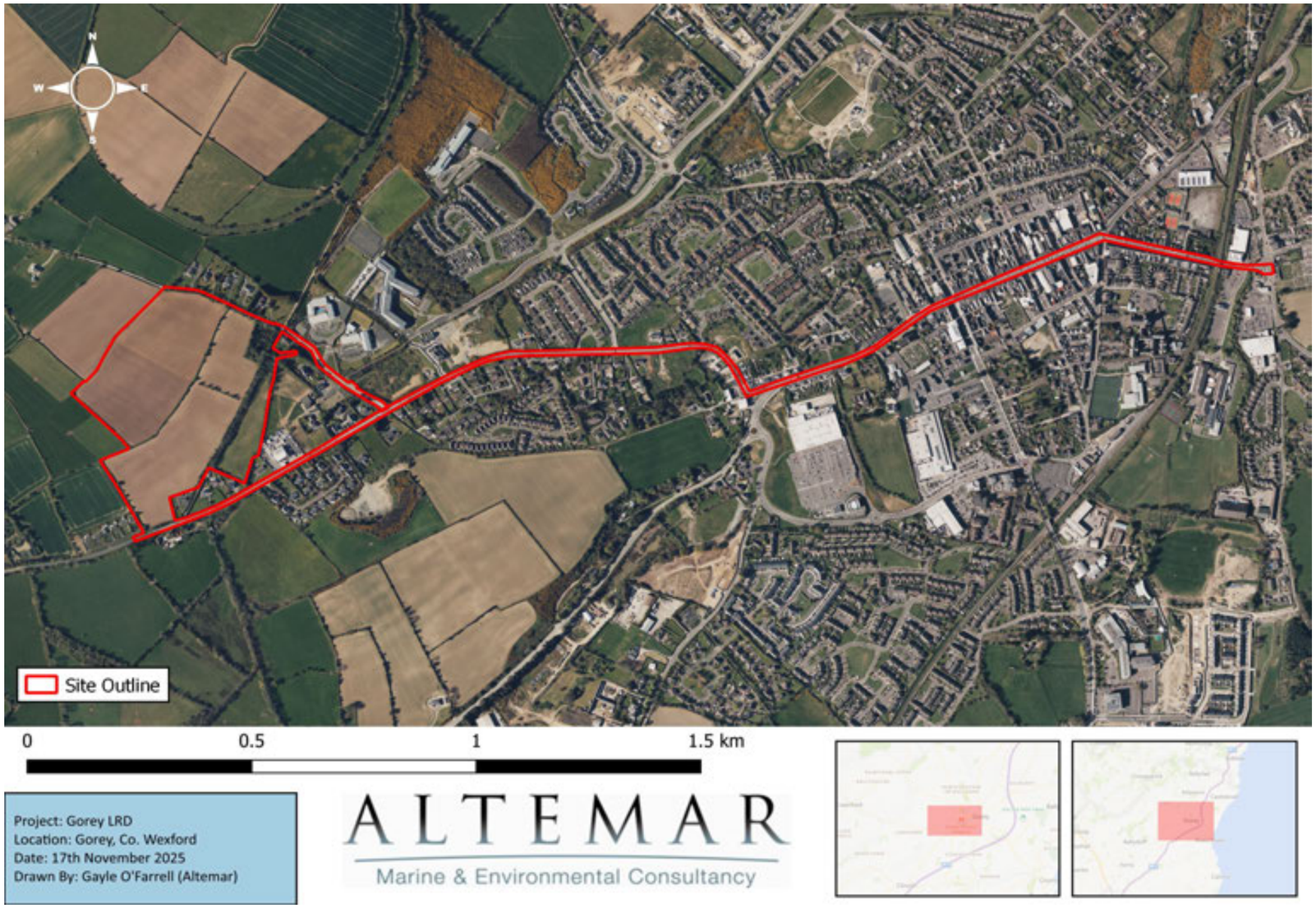

Figure 1. *Proposed Site Outline*

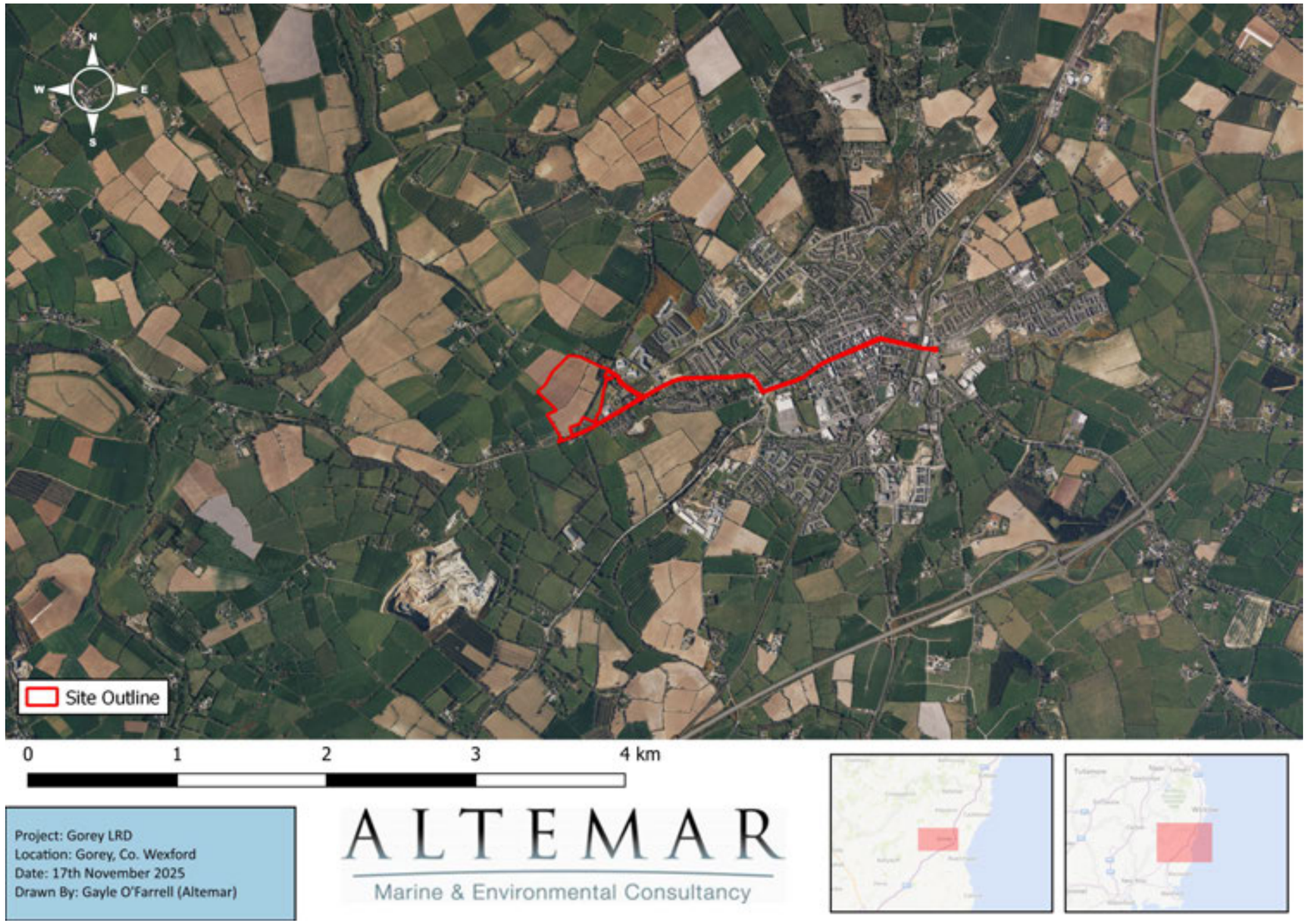

Figure 2. *Proposed Site Location*

Figure 3. *Proposed Site Plan*

Figure 4. *Proposed landscape plan*

Competency of assessor

Since its inception in 2001, Altemar has been delivering ecological and environmental services to a broad range of clients. Operational areas include: residential; infrastructural; renewable; oil & gas; private industry; Local Authorities; EC projects; and, State/semi-State Departments.

Emma Peters (BSc Environmental Science)

This report has been prepared by Emma Peters. Emma has carried out a range of wintering and breeding ornithological surveys in Ireland. Emma has experience in bat detection through static detector surveys, dusk emergence, and down re-entry surveys and is a member of Bat Conservation Ireland. She is also skilled in habitat identification, native and non-native species identification and terrestrial mammal surveys.

Legislative context

The Wildlife Act 1976 protects wild birds in Ireland. Based on this legislation it is an offence to wilfully interfere with or destroy wild birds and their nests and eggs (other than the wild species mentioned in the Third Schedule of this Act). Under this legislation it is an offence for any person who "*wilfully takes or removes the eggs or nest of a protected wild bird otherwise than under and in accordance with such a licence, wilfully destroys, injures or mutilates the eggs or nest of a protected wild bird, wilfully disturbs a protected wild bird on or near a nest containing eggs or unflown young.*"

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora has been transposed into Irish Law, including, via, *inter alia*, the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

Council Directive 2009/147/EC 2010 on the conservation of wild birds provides for the conservation of wild birds by, among other things, classifying important ornithological sites as Special Protection Areas. The Directive relates to the conservation of all species of naturally occurring birds in the wild state, their eggs, nests and habitats in the European territory of the Member States. The Directive prohibits in particular:

- deliberate killing or capture by any method;
- deliberate destruction of, or damage to, their nests and eggs or removal of their nests;
- taking their eggs in the wild and keeping these eggs even if empty;
- deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of this Directive;
- keeping birds of species the hunting and capture of which is prohibited.

Under the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), notwithstanding any consent, statutory or otherwise, given to a person by a public authority or held by a person, except in accordance with a licence granted by the Minister under Regulation 54, a person who in respect of the species referred to in Part 1 of the First Schedule:

- deliberately captures or kills any specimen of these species in the wild,
- deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration,
- deliberately takes or destroys eggs of those species from the wild,
- damages or destroys a breeding site or resting place of such an animal, or
- keeps, transports, sells, exchanges, offers for sale or offers for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive, shall be guilty of an offence.

Breeding bird survey

This report presents the results of three site visits by Emma Peters on the 29th of April, 7th and 21st May 2025. A breeding bird transect survey was carried out on each occasion.

Survey methodology

This Breeding bird survey was carried out based on the BTO Common Bird Census (Bibby *et al.*, 2000 and Gilbert *et al.*, 1998) and following CIEEM guidelines.

A 15-minute settlement period was given following arrival to allow resumption of bird activity after any possible disturbance caused by arrival to the site. Various features and habitats such as scrub, treelines, mature trees, hedgerows, arable crop fields and grassland were present within the survey area. A single transects following the full perimeter of the survey area was carried out on each occasion, covering all areas and features available for breeding activity within and immediately adjacent to the survey area. General transect direction was alternated between surveys to account for potential activity level variations throughout morning hours. Each survey was carried out by a single surveyor.

The survey was carried out over 3 hours on 3 occasions, beginning at dawn and ending once all areas/features had been surveyed. The survey carried out on the 29th of April 2025 commenced at two hours before dusk. Care was taken not to double count any observations. Weather conditions were optimal on each occasion.

Survey results

Habitats of breeding bird potential

A desk and ground level breeding habitat assessment was carried and used to examine the structures and vegetation on site for features that could provide breeding habitat. Potential nesting features include scrub, treelines, mature conifer/deciduous canopies, ivy, grassland, reeds, artificial structures etc. All features on site were assessed for breeding bird potential.

Areas of high breeding bird potential included hedgerows, treelines, mature trees, and scrub throughout the survey area and its boundaries. The subject site was used by locals/dog-walkers.

A total of 32 species were recorded within the survey area across three surveys. Of these species, goldcrest, greenfinch, house sparrow, linnet, starling, swallow, willow warbler and whooper swan are considered amber-listed Bird of Conservation Concern in Ireland (BoCCI). Yellowhammer and meadow pipit were also recorded on site which are red-listed BoCCI. The remaining species are green-listed BoCCI.

A total of 15 species were recorded breeding or displaying behaviour indicative of breeding within the survey area (table 1). Four breeding species are amber-listed BoCCI. One breeding species (yellowhammer) is a red-listed BoCCI. The remainder of breeding species are green-listed BoCCI. Locations of breeding evidence recorded are demonstrated in figure 5.

Breeding activity was found throughout the survey area. A number of areas held higher concentration of breeding activity. Hotspots for breeding included hedgerows/treelines in the north and east of the survey area. A section of hedgerow/treeline along the northern boundary was being used by breeding yellowhammer (red-listed BoCCI). Breeding hotspots are demonstrated in figure 6.

Table 1. Species confirmed breeding within the survey

Common name	Latin name	BoCCI
Blackbird	*Turdus merula*	Green
Blackcap	*Sylvia atricapilla*	Green
Chiffchaff	*Phylloscopus collybita*	Green
Dunnock	*Prunella modularis*	Green
Goldcrest	*Regulus regulus*	Amber
Greenfinch	*Chloris chloris*	Amber
House Sparrow	*Passer domesticus*	Amber
Linnet	*Carduelis cannabina*	Amber
Magpie	*Pica pica*	Green
Rook	*Corvus frugilegus*	Green
Song Thrush	*Turdus philomelos*	Green
Starling	*Sturnus vulgaris*	Amber
Stonechat	*Saxicola rubicola*	Green
Wren	*Troglodytes troglodytes*	Green
Yellowhammer	*Emberiza citrinella*	Red

Table 2. Total species recorded within the survey area.

Common Name	Scientific name	Conservation status
Blackbird	*Turdus merula*	Green
Blackcap	*Sylvia atricapilla*	Green
Blue Tit	*Cyanistes caeruleus*	Green
Bullfinch	*Pyrrhula pyrrhula*	Green
Buzzard	*Buteo buteo*	Green
Coal Tit	*Periparus ater*	Green
Collared Dove	*Streptopelia decaocto*	Green
Chaffinch	*Fringilla coelebs*	Green
Chiffchaff	*Phylloscopus collybita*	Green
Dunnock	*Prunella modularis*	Green
Goldcrest	*Regulus regulus*	Amber
Goldfinch	*Carduelis carduelis*	Green
Great Tit	*Parus major*	Green
Greenfinch	*Chloris chloris*	Amber
Hooded Crow	*Corvus cornix*	Green
House Sparrow	*Passer domesticus*	Amber
Jackdaw	*Corvus monedula*	Green
Linnet	*Carduelis cannabina*	Amber
Magpie	*Pica pica*	Green
Meadow Pipit	*Anthus pratensis*	Red
Pheasant	*Phasianus colchicus*	Green
Robin	*Erithacus rubecula*	Green
Rook	*Corvus frugilegus*	Green
Song Thrush	*Turdus philomelos*	Green
Starling	*Sturnus vulgaris*	Amber
Stonechat	*Saxicola rubicola*	Green
Swallow	*Hirundo rustica*	Amber
Willow Warbler	*Phylloscopus trochilus*	Amber
Woodpigeon	*Columba palumbus*	Green
Wren	*Troglodytes troglodytes*	Green
Whooper Swan	*Cygnus cygnus*	Amber
Yellowhammer	*Emberiza citrinella*	Red

Figure 5. Breeding locations.

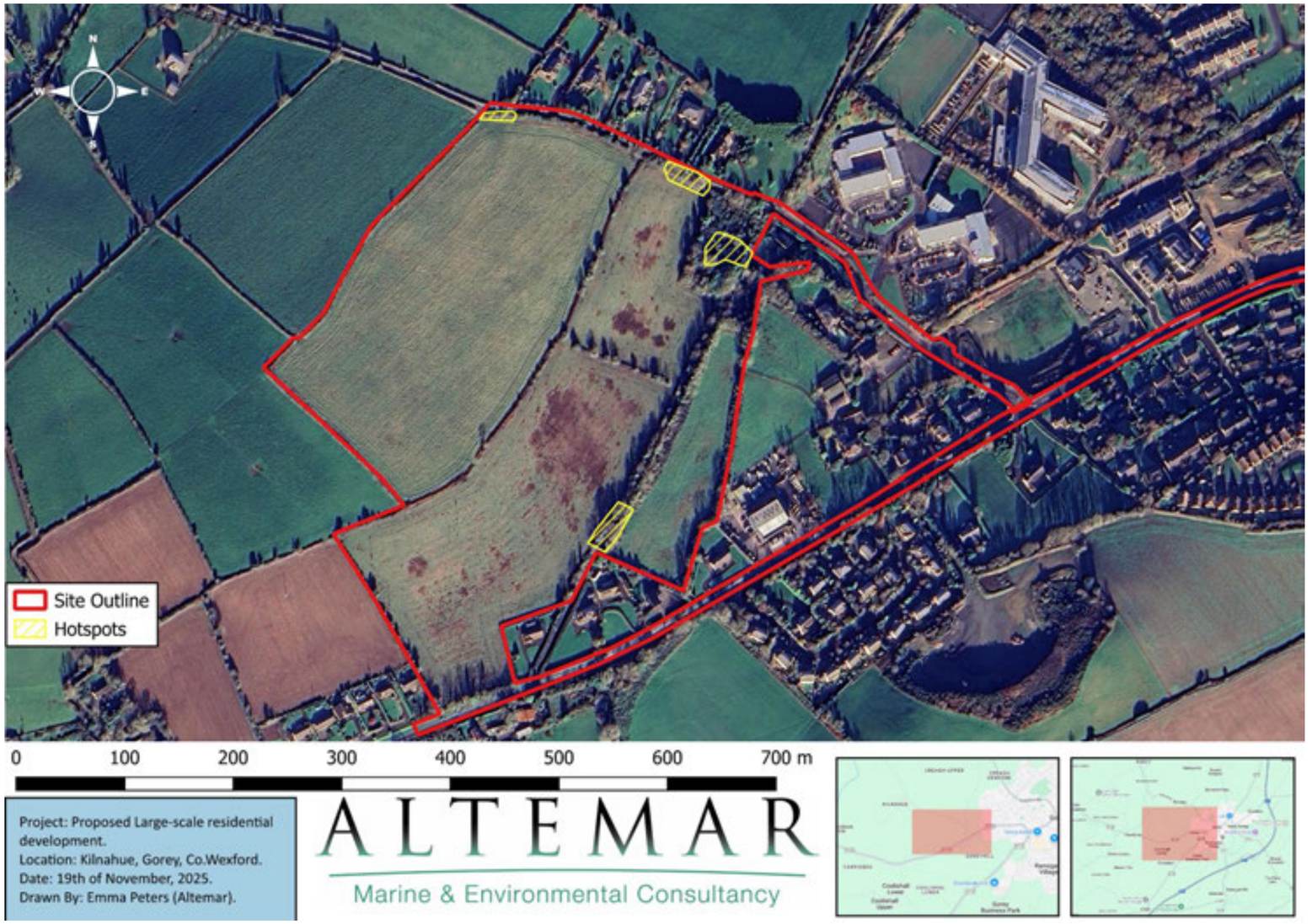

Figure 6. Breeding hotspots.

Breeding bird assessment findings

Review of local bird records

The review of existing bird records (sourced from NBDC Database) within a 2 km^2 grid (Reference grid T15J) encompassing the study area reveals that 17 known bird species have previously been observed and recorded locally (*Table 3)*.

Table 3: Status of bird species within 2 km^2 (grid T15J)

Species name	Record count	Date of last record	Title of dataset	Designation
Goldcrest (*Regulus regulus*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Greenfinch (*Chloris chloris*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
House Sparrow (*Passer domesticus*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Linnet (*Linaria cannabina*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Mistle Thrush (*Turdus viscivorus*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts
Pheasant (*Phasianus colchicus*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species
Robin (*Erithacus rubecula*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts
Rock Dove (*Columba livia*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species
Skylark (*Alauda arvensis*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Spotted Flycatcher (*Muscicapa striata*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Swallow (*Hirundo rustica*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List
Willow Warbler (*Phylloscopus trochilus*)	1	31/07/1991	The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List

Mitigation

The survey area is not considered of significant importance to the local breeding bird population. However, the impact of the development during construction phase will be a loss of existing habitats and species. The following mitigation measures relevant to birds, as well as those outlined within the accompanying EIAR, shall be implemented to minimise any potential negative impact on biodiversity:

- An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas including birds will not be impacted.
- All mitigation measures outlined in the EIAR Chapters that pertain to the construction stage of the proposed development will be implemented by the Contractor.
- The effectiveness of the proposed mitigation will be monitored throughout the construction period.
- The construction corridor will be marked out prior to the commencement of construction.
- All construction work will be confined strictly to the construction corridor. Any construction works required outside the construction corridor will require prior approval from the ER.
- Lighting during construction should not spill outside the proposed development.
- Relevant guidelines and legislation (Section 40 of the Wildlife Acts, 1976 to 2012) in relation to the removal of trees and timing of nesting birds will need be followed e.g. do not remove trees or shrubs during the nesting season (1st March to 31st August). Should this not be possible a pre-clearance inspection will be carried out by an ecologist and clearance will not take place if nests are present.
- Compensatory planting across the site including establishment of open parkland habitat, incorporating trees, wildflower meadow and retention of boundary hedgerow. A total of 1734 trees to be planted across the site.

Conclusion

This report presents the results of three site visits by Emma Peters on the 29th of April, 7th and 21st May 2025. A breeding bird transect survey was carried out on each occasion. The surveys comply with bird survey guidance documentation including BTO Common Bird Census (Bibby *et al.*, 2000 and Gilbert *et al.*, 1998) following CIEEM guidelines. Weather conditions were favourable on each occasion.

A total of 32 bird species were recorded within the survey area during three survey visits, of which 15 species were confirmed or considered likely to be breeding within the site. These comprised eleven green-listed, five amber-listed and one red-listed species of conservation concern. Breeding activity was associated primarily with hedgerows, treelines, woodland and dense scrub habitats within the site, with four discrete breeding hotspots identified.

The proposed development would result in the partial loss of hedgerows, mature trees and scrub, leading to the removal of three breeding hotspots. Consequently, the development is predicted to give rise to a short- to medium-term low adverse effect on breeding birds within the site, due to temporary reductions in nesting habitat availability and local displacement of breeding territories.

The proposed landscape strategy seeks to minimise impacts through the retention of key linear features and abundant tree planting, in addition to the establishment of a large parkland area. These measures are expected to maintain suitable breeding habitat for species currently present within the site. Over time, as the proposed planting establishes and matures, habitat connectivity and nesting opportunities are anticipated to increase beyond baseline levels. As a result, the development is predicted to result in a long-term neutral to low positive effect on breeding bird populations within the site, subject to the implementation of the proposed mitigation measures and good practice during construction.

Post-mitigation, residual effects on breeding birds are expected to be neutral, with potential for minor long-term enhancement as habitats mature.

References

1. **Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. (2000)** Bird Census Techniques. Academic Press, London
2. **Bird Survey & Assessment Steering Group. (2022)**. Bird Survey Guidelines for assessing ecological impacts, v.1.0.0. https://birdsurveyguidelines.org [15/05/2023]
3. **Chartered Institute of Ecology and Environmental Management (2018).** *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal, and Marine.* Chartered Institute of Ecology and Environmental Management, Winchester.
4. **Collated by the National Biodiversity Data Centre from different sources, General Biodiversity Records from Ireland**, National Biodiversity Data Centre, Ireland, accessed 17 October 2023, <https://maps.biodiversityireland.ie/Dataset/7>
5. **Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1982**
6. **Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979**
7. **Department of Housing, Planning and Local Government (December, 2018).** *Urban Development and Building Heights Guidelines for Planning Authorities***.**
8. **EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive) 1992**
9. **EU Directive on the Conservation of Wild Birds 2009**
10. **Gilbert, G., Gibbons, D.W., & Evans, J. (1998)** Bird Monitoring Methods: A Manual of Techniques for UK Key Species. The Royal Society for the protection of Birds, Sandy, Bedfordshire, England.
11. **Gilbert G, Stanbury A and Lewis L (2021)**, "Birds of Conservation Concern in Ireland 2020 –2026". Irish Birds 9: 523—544
12. **Wildlife Act 1976 and Wildlife [Amendment] Act 2000**. Government of Ireland.

CHAPTER FIFTEEN

ARCHAEOLOGY AND CULTURAL HERITAGE

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APPENDIX 15-1 Photographic Record

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Appendix 15.1: Photographic record

Plate 1: *View of southern field within main portion of site, facing southeast*

Plate 2: *View of eastern portion of proposed main site, historic laneway to right, facing south*

Plate 3: *View towards farmyard in northeast corner of proposed main site, facing northeast*

Plate 4: *View towards Kilnahue Church from northwest corner of proposed main site, facing west-northwest*

Plate 5: *View towards designed landscape feature WX006-090---- from main site, facing north*

Plate 6: *View towards holy well WX006-062---- from northeast corner of main site, facing north*

Plate 7: *View of Kilnahue Lane within northern portion of site, facing southeast*

Plate 8: *View of Carnew Road R725 from junction with proposed pedestrian/cycle path, facing northeast*

Plate 9: *View of Carnew Road R725 and Kilnahue Lane junction facing southwest*

Plate 10: *View of McCurtain Street, facing east*

Plate 11: *View of Main Street within Gorey Zone of Archaeological Potential, facing southwest*

Plate 12: *View from Courtown Road towards Esmonde Street, facing west*

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APPENDIX 15-2 Archaeological Survey of Ireland Inventory Descriptions

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Appendix 15.2: Archaeological Survey of Ireland Inventory Descriptions

Monument no.	Class	ASI Description
WX006-060----	Enclosure	Marked only on the 1940 ed. of the OS 6-inch map where it is described as 'Tumulus', and situated towards the bottom of a N-facing slope in the valley of a SE-NW stream that joins the N-S River Lask c. 750m to the NW, and close to its source. It is also in full view of Kilnahue House, c. 70m to the W. This is a circular overgrown area (diam. 8m) with some trees defined by a low earthen bank (Wth 1.5-1.6m; int. H 0.6m; ext. H 0.7m) with an external stone facing. There is an entrance (Wth 1.5m) at S. Kilnahue church (WX007-061001-) is c. 100m to the SE. It may be a landscape feature. The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research.
WX006-061001	Church	Situated towards the bottom of a N-facing slope in the valley of a SE-NW stream that joins the N-S River Lask c. 750m to the NW, and close to its source. This is the parish church of Kilnahue within an oval graveyard (dims. 50m E-W; 44m N-S) defined by stone-revetted earthen bank. The overgrown remains of a stone building oriented E-W (dims. 20m E-W; 6.5m N-S) but with no architectural features are at the centre of the graveyard. There is a cross-base lying loose just N of the church. This is an irregularly-shaped, flat-topped stone (dims. 0.8m x 0.4m; H 0.4m) with a rectangular mortice (dims. 0.26m; x 0.1m; D 0.1m). Souterrain (WX006-061004-) is outside the graveyard, c. 25m N of the church, and enclosure (WX006-060----) is c. 100m to the W. The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research.
WX006-061002	Graveyard	Situated towards the bottom of a N-facing slope in the valley of a SE-NW stream that joins the N-S River Lask c. 750m to the NW, and close to its source. The parish church of Kilnahue (WX006-061001-) is within an oval graveyard (dims 50m E-W; 44m N-S) defined by a stone-revetted earthen bank. There is a cross-base (WX006-061003-), lying loose just N of the church. Souterrain (WX006-061004-) is outside the graveyard, c. 25m N of the church.
WX006-061003	Cross	Situated towards the bottom of a N-facing slope in the valley of a SE-NW stream that joins the N-S River Lask c. 750m to the NW, and close to its source. The parish church of Kilnahue (WX006-061001-) is within an oval graveyard (WX007-061002-) defined by stone-revetted earthen bank. There is a cross-base, an irregularly-shaped, flat-topped stone (dims. 0.8m x 0.4m; H 0.4m) with a rectangular mortice (dims. 0.26m; x 0.1m; D 0.1m) lying loose just N of the church, and souterrain (WX006-061004-) is outside the graveyard, c. 25m N of the church.
WX006-061004	Souterrain	Situated towards the bottom of a N-facing slope in the valley of a SE-NW stream that joins the N-S River Lask c. 750m to the NW, and close to its source. The collapsed chamber of a souterrain with drystone walling is c. 10m ouside the graveyard (WX006-061002-) of Kilnahue parish church (WX006-061001-) at N. Corbelling was visible in an opening (diam. 1m). The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research.

Monument no.	Class	ASI Description
WX006-062----	Ritual site - holy well	Located in a natural hollow towards the bottom of a SE-facing slope, with a slight hill rising c. 400m to the SE. The holy well known as Toberchríost - Christ's Well - had a pattern on St. John's Eve, the 28th June, until c. 1820, according to John O'Donovan writing c. 1840 (O'Flanagan 1933, 13). This is a natural spring and the source of a stream that runs off to the S, but there is no evidence of veneration. Archaeological testing (18E0522) of an extensive area of about 14 ha (c. 35 acres) immediately to the W and SW produced potential archaeological material in five of 23 trenches. (Hickey 2018; excavations.ie 2018:253) References: O'Flanagan, Rev. M. (Compiler) 1933 Letters containing information relative to the antiquities of County Wexford, collected during progress of the Ordnance Survey in 1838. Typescript in 2 vols. Bray. Hickey, S. 2018 Archaeological Testing Report, Kilnahue, Gorey, Co. Wexford. Licence No. 18
WX006-090----	Designed landscape feature	Located on the summit of Creagh Hill, which is a designed landscape. A small copse (diam. c. 60m) is depicted on the 1839 and later eds of the OS 6-inch map. This is separated by a berm (Wth c. 15m) from a surrounding field bank that connects to a NNE-SSW passage spanning the hill. This in turn connets to a path between field banks (Wth c. 20-30m) call ed 'The Sweep Walk' around the base of the hill. At the summit of the hill a chord (C 80m) of the outer bank survives as a field bank (Wth c. 1m; H c. 1.5m) and hedge WSW-NNE.
WX006-093----	Burnt mound	Situated towards the head of a SW-NE valley. Archaeological testing (08E0415) uncovered two small areas of burnt mound material (dims 1m x 1.15m; T 0.05m; 0.4m x 0.5m; T 0.08m) located 2m apart, which were completely excavated. (O'Hara 2008; 20011) References: O'Hara, R. 2008 Archaeological assessment. Gorey Hill, Gorey. Unpublished report. Archaeoological Consultancy Services. O'Hara, R. 2011 Gorey Hill. Burnt mound spreads. In I. Bennett. Excavations 2008: summary accounts of archaeological excavations in Ireland, P 373, No. 1283. Wordwell, Dublin.
WX006-098----	Enclosure	Located just off the crest of the E-facing slope of Gorey Hill. The cropmark of a circular enclosure (diam. c. 39mk E-W; c. 35m N-S) defined by a single fosse SW-N-SE is visible only on Apple Maps (2018) but the perimeter is incorporated into a field bank SE-SW where there is a slight kink in a NE-SW field bank. Enclosure (WX006-099----) is c. 110m to the NE, and it was first reported by Jean Charles Caillere.
WX006-099-----	Enclosure	Located on the SE-facing slope of Gorey Hill. The cropmark of a subcircular enclosure (dims c. 44m E-W; c. 35m N-S) defined by a slight fosse is visible only on Apple Maps (c. 2018). Enclosure (WX006-098----) is c. 110m to the SW, and it was first reported by Jean Charles Caillere.
WX007-033-----	Historic town	There may have been a settlement at Gorey in the thirteenth century as a payment of 13 shillings was made by 'the communityh of the town (ville) of Gorey' in 1296, but nothing further is known until the 17th century when Gorey emerges a planned town, part of the early 17-century plantation of north county Wexford. It received its first charter in 1619 as Newtown or Newborough. Bishop Ram, the Protestant bishop of Ferns lived at Gorey. The town was captured by Rebels in 1641. The town was laid out on a grid pattern covering c. 14 acres (c. 5.5 ha), and it might never have been defended with a wall, although there are passing references to ramparts in the early 18th century. Main Street runs ENE-WSW

Monument no.	Class	ASI Description
		through the centre of the original town area, which extends from Pearse St. at N to Church Lane at S, The Avenue at W to Church St. at E. The graveyard and church site (WX007-033001-) with the Ram tomb (WX007-03303-) are within the town. Archaeological testing within the town has yet to produce any related material. (Bradley and King 1990, 88-91; Hore 1900-11, vol. 6, 609-34)
WX011-082----	Kiln	Situated at the N end of a NE-SW ridge. Archaeological testing (21E0025) by C. McLoughlin in April 2021 identified a kiln as an oval feature (dims 2.5m x 1-1.2m; max. D 0.4m) with a fill of dark brown silty clay with charcoal inclusions over a charcoal-rich seam. (McLoughlin 2021, 14,15) References: McLoughlin, C. 2021 Archaeological Assessment Report, Ramstown Lower, Gorey, Co. Wexford. Licence: 21E0025, Unpublished report. Stafford McLoughlin: Archaeology / Heritage / Conservation.

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APPENDIX 15-3 Excavation Database Descriptions

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Appendix 15.3: Excavation Database Descriptions

Licence Number	Excavator	Database Description
18E0522	Hickey, S.	In September 2018, test trenching was carried out on a proposed 15.3ha residential development. The site is located within open undulating fields in the townland of Kilnahue. The works were carried out as part of a Strategic Housing Development (SHD) application. The site is bounded to the south by the regional road R725 and some residential development, to the east by pasture fields behind residential and commercial development, to the north and north-east by a local road linking Ballyrahan and Gorey town, and to the west by open crop fields and beyond that some modern farmsteads and dwellings. The assessment comprised the excavation of 23 test trenches throughout the site. Utilising geophysical survey results (carried out by Jo Leigh Surveys; Licence No. 18R0031) the testing programme was able to extensively cover the site as well as target the majority of archaeological anomalies. The test trenches were 1.8m in width and ranged between 30m and 80m in length, totaling 1458m of trenching. Testing uncovered a number of archaeological/potential archaeological features in 5 of the 23 test trenches. These trenches, T2 (in field M1), T15, T17, and T18 (all in field M3), and T20 (in field M4), are not focused in one particular part of the site but spread across the application area. Other than T15 which contained a concentration of features possibly relating to kiln activity, the other 4 trenches contained a single isolated archaeological feature. Trench T2 contained an oval pit (dimensions: 3m north-north-east/south-south-west x 1m north-west/south-east x 0.12m depth) with inclusions of charcoal and burnt clay (this feature extends into the baulk). Trench 17 contained a pit , (dimensions: 2m north-south x 0.4m x 0.15m max depth) containing small flecks of charcoal (this feature extends into the baulk). Testing works in Trench 18 uncovered an arc of 9 stake-holes (diameter 60-100mm), and, a larger stake-hole 5m to the north. The arc of stake-holes extends into the baulk and there is a likelihood of further features. The final trench to reveal any archaeological features was T20, which contained a north-east/south-west running linear feature, dimensions: 0.6m width, 1.4m length; this feature extends into the baulk and corresponds with a 7m east-west running feature identified on the geophysical survey. There is a likelihood that additional archaeological features are present in the immediate proximity of all of these identified features. All identified features were covered with plastic and back-filled.
08E0415	O'Hara, R.	An assessment was carried out on the site of a development at Gorey Hill, Gorey. A total of eleven test-trenches were excavated in the areas proposed for development. Two archaeological features (burnt-mound spreads) were discovered towards the western extent of the site during the assessment. No other archaeological remains were discovered.
07E0766	Shine, D.	Monitoring took place of ground investigations in advance of the Gorey main drainage scheme. These works were undertaken intermittently from 17 July to 13 September 2007 across thirteen townlands. Works consisted of the excavation of 25 slit-trenches, 25 trial pits and 3 boreholes to characterise the stratigraphy and locate services around the town. No archaeological remains were encountered during groundworks; however, the purpose of archaeological monitoring of site investigations was to aid assessment of the archaeological potential of the area impacted upon by the scheme. While

Licence Number	Excavator	Database Description
		no archaeological features were identified during site investigations, the limited nature of the current phase of works means that the presence of archaeological features within the development impact area cannot be discounted. Full archaeological monitoring will be required for subsequent stages of the development.

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