



Ecological Report

EcIA in relation to planning application by Pavement Homes Ltd. for the construction of 6 three-bedroom dwelling houses and all ancillary site works at St. Finian's Way, Main Street, Newcastle, Co. Dublin.

Greentrack Environmental Consultants

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1 INTRODUCTION

Greentrack Consultants have been instructed by Pavement Homes Ltd., c/o William Donoghue & Associates Main Street, Mountcharles, Co. Donegal to undertake this Ecological Impact Assessment Report in response to point 3 requested by the Consent Authority by way of additional information on foot of Chief Executive's order number PR/0454/22 dated 07/04/2022.

The planning proposal is for the construction of 6 three-bedroom dwelling houses and ancillary site works at St. Finian's Way, Main Street, Newcastle, Co. Dublin. The purpose of this ecological assessment report is to establish an ecological baseline to identify and assess potential impacts to ecological features of significance. Where impacts are identified mitigation or avoidance strategies may be proposed.

1.1 Background and Requirement Ecological Report

1.1.1 Project Description

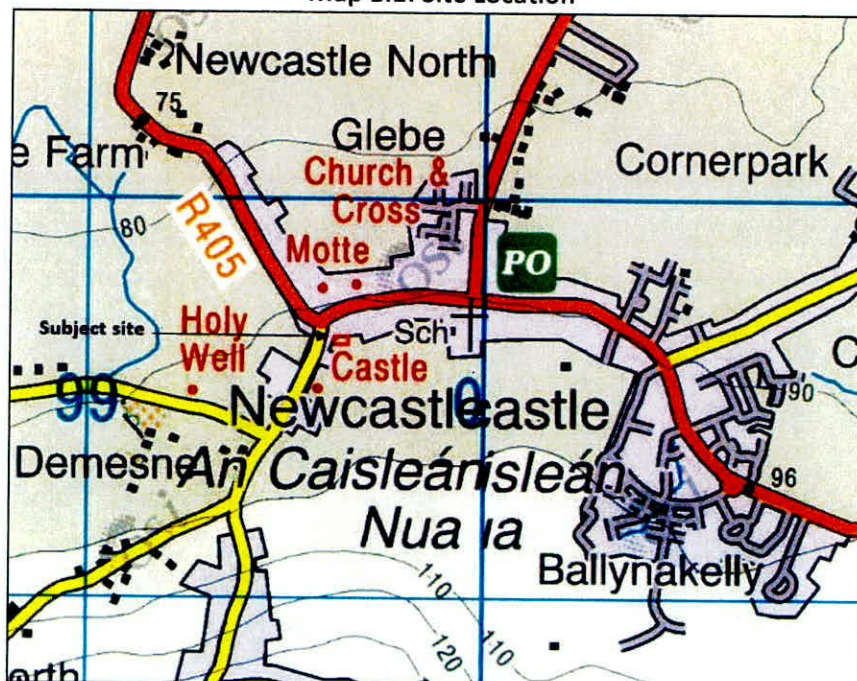
The proposal is for the construction of 6 three bedroom dwelling houses; construction of proposed access road and footpaths; provision of car parking facilities to serve the proposed development which shall connect into existing adjoining foul sewer network; construction of a water surface sewer network to serve the proposed development including the connections/amendments to the existing adjoining surface water network; the provision of watermain to serve the proposed development and connection to existing adjoining water main; the provision of all necessary utility services and all ancillary site works at St. Finians Way, Main Street, Newcastle, Co. Dublin.

The consent authority, South Dublin County Council, served notice on the applicant in April 2022 seeking:

- (i) An up-to-date ecological assessment/screening report clearly outlining if there is biodiversity value present on the proposed site, including hedgerows, trees and grassland types and presence of protected species such as badger. This should include an invasive species assessment and should be conducted by a suitably qualified ecologist.
- (ii) an up-to-date bat survey, undertaken by a suitably qualified person.

This report has now been produced in response to Schedule 3 of this notice. The subject site as detailed by the red line map measures 0.19Ha. Map 1.1 shows the site location.

Map 1.1: Site Location



CYAL50244901 © Ordnance Survey Ireland/Government of Ireland.

1.2 Statement of Authority

This Ecological Report has been compiled by Shannen McEwen, Ecologist with Greentrack. Shannen holds a B.Sc. (Hons) Environmental Science with a Diploma in Professional Practice from the University of Ulster. She has been involved in all aspects of Appropriate Assessment, Natura Impact Statement and Environmental Impact Assessment preparation since 2017. Shannen is an Associate Member of the Institution of Environmental Sciences.

2 APPROACH AND METHODOLOGY

2.1 Approach

A combination of desk-based research and field study work was employed to gather baseline ecological data and identify important features.

2.2 Methodology

The EclA comprised the following:

- A desktop assessment was taken to determine existing records of habitats/species and designated sites in the vicinity of the survey area
- A multi-disciplinary site visit which involved a phase 1 habitat survey and mammal surveys was conducted.
- Ecological features were assigned importance based on existing frameworks (CIEEM 2018, NRA 2009).
- An assessment of the impacts of the proposed development on ecological features identified was conducted. Where impacts are identified, measures to avoid or reduce impacts are proposed. An examination of residual impacts is conducted.

2.2.1 Desk-Based Study

A desk-based assessment of the study area was conducted to scope the EclA exercise. This involved a desk-based analysis of the survey area using the OSI Map viewer and NPWS metadata to identify the subject site and surrounding environs. Designated Sites were identified within the zone of influence of the proposed development.

2.2.2 Field Study

The second phase of the assessment involved multi-disciplinary site visits to the subject site to gather data on ecological features present.

Phase 1 Habitat Survey

A phase 1 habitat survey was conducted on 30/07/22 using the JNCC (2010) 'Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit' and 'A Guide to Habitats in Ireland' by Fossitt. (2000).

The weather conditions during the time of the surveys were dry and overcast. There were no difficulties encountered during the site assessment. The resultant Habitat classification data was used to produce the Habitat Map (Figure 6). The guidelines 'Best Practice and Guidance for Habitat Surveying and Mapping' produced in 2011 by the Heritage Council were used to form the basis of the mapping exercise. A survey area was delineated in the immediate vicinity of the subject site with a view to representing adjacent or proximal habitats. Data gathered was used to produce a thematic habitat illustrating the relative position and scale of habitats in the study area. However, position and scale of habitats shown are approximate only and should be considered only as a broad representation of the study area.

Invasive Alien Species

During the site visit, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) was undertaken. This included the area within the red line boundary as detailed in Figure 1.1 and in the immediate surrounding area.

Birds

The presence of trees and mature hedgerow around the subject site provides potential for bird habitats. During site walkovers any observation of birds and signs of bird presence were recorded

Badger Survey

A dedicated preliminary badger survey was undertaken on 30/07/22. The badger survey covered the entire footprint of the development. The survey was conducted with respect to NRA guidelines (2009). This involved a thorough inspection of the subject site for signs of badger presence and activity such as:

- Active badger sets with spoil heaps
- Signs of tunnelling
- Clearly defined paths
- Discarded bedding
- Latrines and droppings
- Signs of feeding e.g. snuffle holes
- Badger hair caught on fences or bramble
- Scratch marks on trees
- Footprints on bare soil
- Push throughs on areas of scrub etc.

If badger presence was identified/ or the site was deemed likely to contain badger, during preliminary investigation, further investigation using motion activated cameras would have been pursued.

Bat Survey

A survey for the presence of bats was undertaken on 30/07/22. The assessment involved a pre-dawn survey and an early morning assessment on the trees/hedgerows throughout the site for potential roosting features and signs of bat activity. The pre-dawn survey was undertaken using an Echo Meter Touch 2 PRO device. Bats use echolocation calls which are high frequency sounds that bounce off a surface to determine where objects are located around them to aid their navigation. The Echo Meter is used to record the bat calls and based on the sound frequency documented can determine what species of bats are present. The survey was carried out within the subject site focusing on the trees/hedgerows along the site boundary. The pre-dawn survey began at 03:40 and was carried out for a duration of for 2 hours and 15 mins. 2 hours of the survey occurred in darkness as bats are nocturnal creatures, meaning they emerge from their roosts between the hours of dusk to dawn in search for food and water. The survey continued for 15 minutes after sunrise. No bat calls were recorded on the Echo Meter nor did the ecologist observe any bat activity. The Echo Meter readings are shown in Appendix 1.

An assessment on the trees/hedgerows throughout the site for potential roosting features and signs of bat activity was carried out. This involved a detailed inspection of the exterior of the trees from ground level to compile information about the trees and to look for Potential Roosting Features (PRFs). PRFs that may be used by bats include the following (Collins, 2016):

- Woodpecker holes
- Rot holes
- Hazard beams
- Other vertical or horizontal splits (such as frost-cracks) in stems or branches
- Partially detached bark

- Knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar
- Man-made holes or cavities created by branches tearing out from parent stems
- Cankers (caused by localised bark death) in which cavities have developed
- Other hollows or cavities, including butt-rots
- Gaps between overlapping stems or branches
- Partially detached ivy with stem diameters in excess of 50 mm
- Bat, bird or Dormouse boxes.

Signs of bat roosts include the following (Collins, 2016):

- Presence of actual bats
- Bat droppings in, around or below a PRF
- Odour emanating from a PRF (may also be from other animals)
- Audible squeaking at dusk or in warm weather (may also be from other animals)
- Staining below the PRF (may also be the result of wet rot).

2.2.3 Assessment Methodology

Ecological evaluation and impact assessment methodologies in the following sections have implemented guidance from the NRA. An outline for this methodology is provided in 'Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009)'. This methodology follows the same modality as the assessment criteria described by CIEEM (2018).

This guidance provides a scale of importance for features in a geographical context. Importance ranges from:

- International/European
- National
- Regional (County)
- Local (High Value)
- Local (Low Value)

Once the Baseline has been established, impact on the important ecological receptors can be assessed and mitigation/compensation or enhancement measures can be put in place to negate any negative effect. The EPA, 2017 draft document 'Guidelines on the information to be contained in environmental impact assessment reports' contain useful guidance on key considerations when assessing effects on key ecological receptors.

- **Magnitude** relates to the quantum of effect, for example the number of individuals affected by an activity. Described in Table 2.1
- **Extent** should also be predicted in a quantified manner and relates to the area over which the effect occurs.
- **Duration** is intended to refer to the time during which the effect is predicted to continue, until recovery or re-instatement.
- **Reversibility** should be addressed by identifying whether an effect is ecologically reversible either spontaneously or through specific action; and,
- **Timing/frequency** of effects in relation to important seasonal and/or life-cycle constraints should be evaluated. Similarly, the frequency with which activities (and associated effects) would take place can be an important determinant of the effect on receptors.

Any assessment of effect should take account of:

- construction and operational phases.
- direct, indirect, and synergistic effects.
- and those that are temporary, reversible, and irreversible.

The EPA provides the following terminology to describe duration of effects:

- Momentary effects - Effects lasting from seconds to minutes
- Brief effects - Effects lasting less than a day
- Temporary effects - Effects lasting less than a year
- Short-term – 1 to 7 years
- Medium term – 7 to 15 years
- Long term – 15 to 60 years
- Permanent – over 60 years
- Reversible effects - Effects that can be undone, for example through remediation or restoration.

Table 2.1: Magnitude of Impacts

Magnitude	Description
<i>No change</i>	No discernible change in the ecology of the affected feature.
<i>Imperceptible effect</i>	An effect capable of measurement but without noticeable consequences.
<i>Not Significant</i>	An effect which causes noticeable changes in the character of the environment but without significant consequences.
<i>Slight effect</i>	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
<i>Moderate effect</i>	An effect that alters the character of the environment that is consistent with existing and emerging trends.
<i>Significant effect</i>	An effect which, by its character, its magnitude, duration or intensity alters a sensitive aspect of the environment.
<i>Very Significant</i>	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
<i>Profound effect</i>	An effect which obliterates sensitive characteristics.

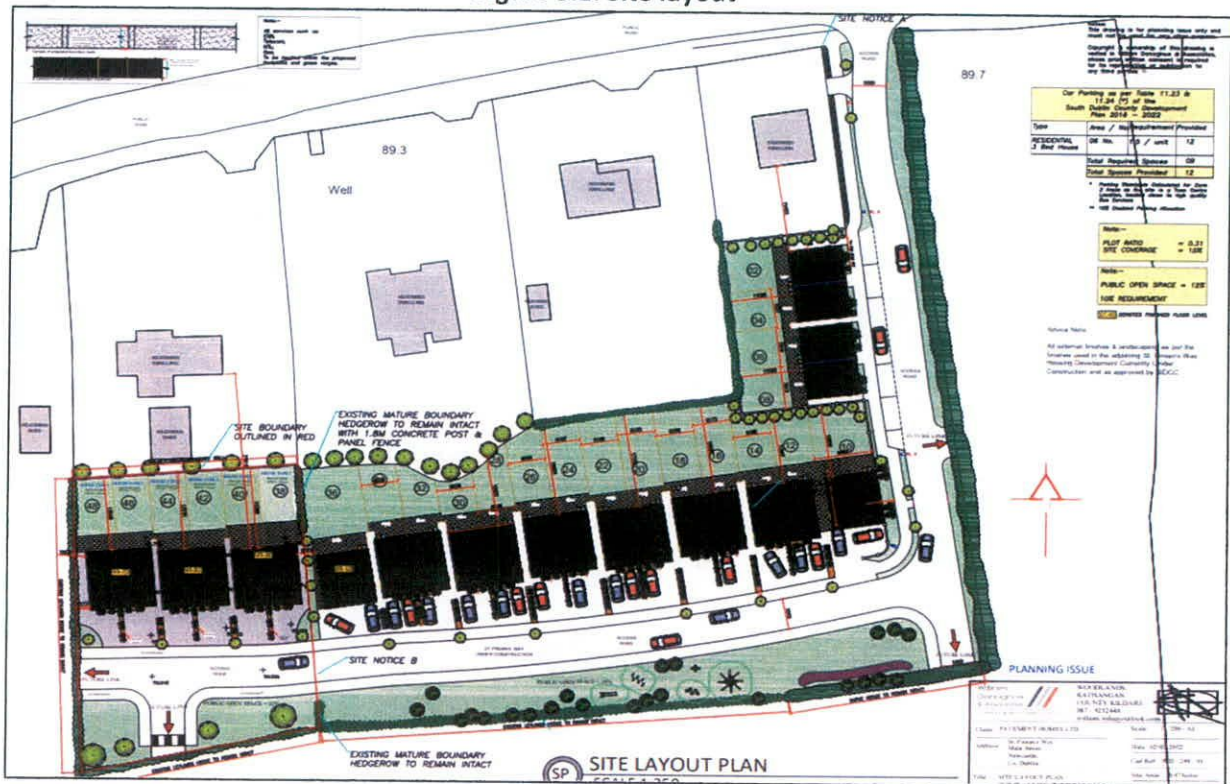
Effects on Key ecological receptors can be of varying quality as described by the EPA (2017) they can be one of the following:

- **Negative** - A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
- **Neutral** - No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error
- **Positive** - A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).

3 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposal is for the construction of 6 three bedroom dwelling houses; construction of proposed access road and footpaths; provision of car parking facilities to serve the proposed development which shall connect into existing adjoining foul sewer network; construction of a water surface sewer network to serve the proposed development including the connections/amendments to the existing adjoining surface water network; the provision of watermain to serve the proposed development and connection to existing adjoining water main; the provision of all necessary utility services and all ancillary site works at St. Finians Way, Main Street, Newcastle, Co. Dublin. Figure 3.1 shows the site layout.

Figure 3.1: Site layout



4 THE RECEIVING ENVIRONMENT AND ECOLOGICAL ASSESSMENT

4.1 General Location

The receiving environment is in the main town of Newcastle, South Dublin with site access off the R120 regional road. The subject site is bordered to the North, East and West by neighbouring dwellings and to the South by grassland. See Figure 4.1 Location of subject site.

Figure 4.1: Location of subject site

4.2 Designated Sites

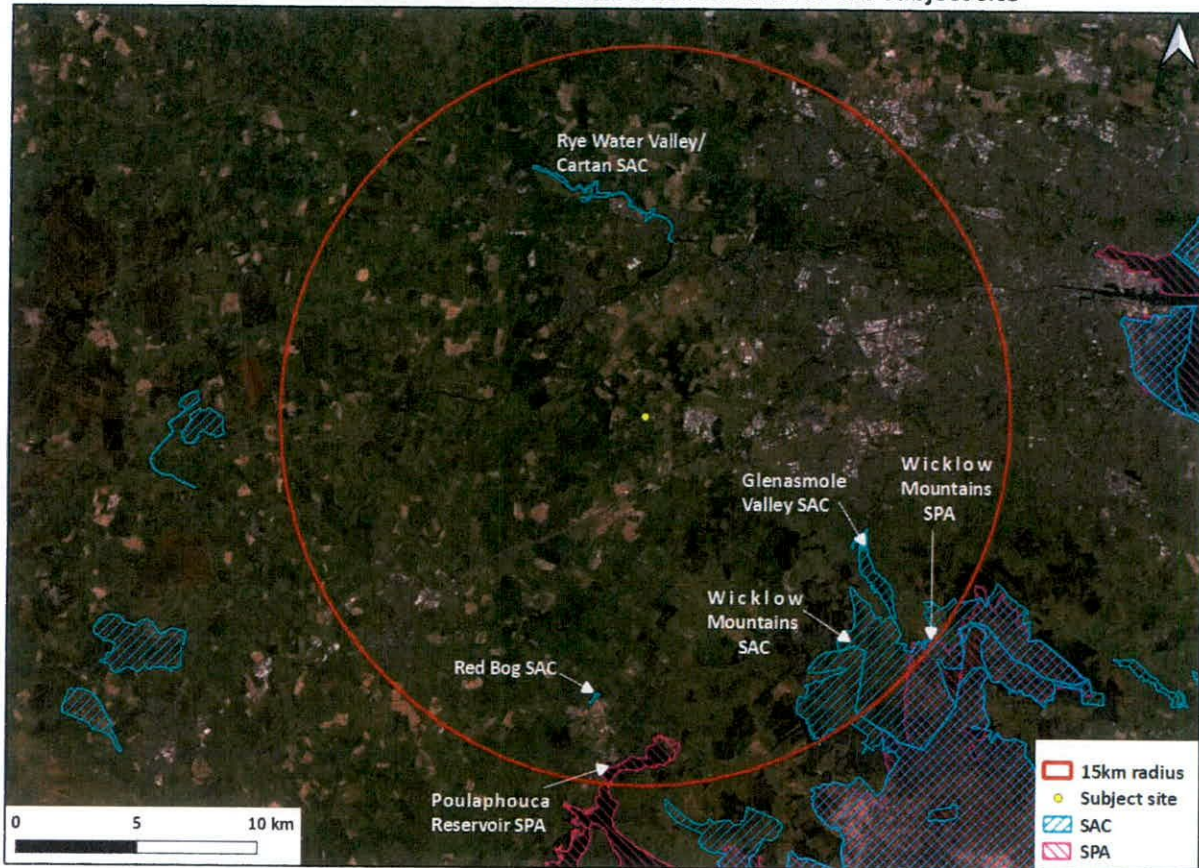
4.2.1 Natura 2000 sites

In terms of the identification of relevant Natura 2000 sites, the zone of impact (also known as the area of influence) is determined based on their potential connectivity (source-pathway-receptor model) to the project in terms of, for example:

- Nature, scale, timing and duration of works and possible impacts
- Distance and nature of pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Sensitivity and location of ecological features.

The 'zone of influence' (Zoi) is essentially the effect area over which alterations may have potential ecological impact. The Zoi over which the proposed development may impact upon Natura 2000 Sites and their Qualifying Interests will vary for different ecological receptors, depending on the pathway for potential impacts, as well as the specific nature of the habitats/species (e.g. some species have ability to move/disperse and some habitats have better ability than others to absorb impacts). Having considered the potential ecological impacts through source-receptor-pathway connectivity (e.g. hydrological link) and given the nature of the proposed project, it was deemed that the zone of influence for such projects would be limited to a radius of 15 km as recommended by NPWS. The Natura 2000 sites occurring within 15 Km of the subject site are listed in Table 4.1, below, and are screened for possible threats from the development. Figure 4.2 indicates the relative locations of all listed Natura 2000 sites in relation to the subject site.

Figure 4.2: Natura 2000 sites within a 15km radius of the subject site



(This map was created using QGIS software and data from the NPWS)

Table 4.1: Screening of Natura 2000 Sites within Zone of Influence

Site Name	Site Code	Distance from Subject Site	Avenue of Connectivity to Subject Site	Significant Threat Possible (Y/N)
Rye Water Valley/Cartan SAC	001398	7.11km N	No direct hydrological link to subject site. No avenue of connectivity. No suitable ex-situ habitat	N – No significant negative effects foreseen as a result of this development due to the distance and absence of direct avenue of connectivity
Glenasmole Valley SAC	001209	9.91km SE	No direct hydrological link to subject site. No avenue of connectivity. No suitable ex-situ habitat	N – No significant negative effects foreseen as a result of this development due to the distance and absence of direct avenue of connectivity
Wicklow Mountains SAC	002122	11.03km SE	No direct hydrological link to subject site. No avenue of connectivity. No suitable ex-situ habitat	N – No significant negative effects foreseen as a result of this development due to the distance and absence of direct avenue of connectivity
Wicklow Mountains SPA	004040	14.39km SE	No direct hydrological link to subject site. No avenue of connectivity. No suitable ex-situ habitat	N – No significant negative effects foreseen as a result of this development due to the distance and absence of direct avenue of connectivity
Red Bog SAC	000397	11.47km SW	No direct hydrological link to subject site. No	N – No significant negative effects foreseen as a result of

Site Name	Site Code	Distance from Subject Site	Avenue of Connectivity to Subject Site	Significant Threat Possible (Y/N)
			avenue of connectivity. No suitable ex-situ habitat	this development due to the distance and absence of direct avenue of connectivity
<i>Poulaphouca Reservoir SPA</i>	004063	12.93km S	No direct hydrological link to subject site. No avenue of connectivity. No suitable ex-situ habitat	N – No significant negative effects foreseen as a result of this development due to the distance and absence of direct avenue of connectivity

No avenue for effect was identified between the subject site and any European Site. The potential for significant effects on European sites can be excluded at this stage of assessment.

4.2.2 Proposed Natural Heritage Areas (pNHA) / Natural Heritage Areas (NHAs)

Table 4.2 details the NHA/pNHA sites within the zone of influence of the proposed development. No Natural Heritage Areas occur within 15km of the proposed development.

Table 4.2: Screening of NHA/pNHA sites within zone of influence

Site Name	Site Code	Distance from Subject Site	Avenue of Connectivity to Subject Site	Significant Threat Possible (Y/N)
<i>Grand Canal pNHA</i>	2104	2.14	No direct hydrological link to subject site. Urban drainage from Newcastle village likely enters hydrological pathway leading to grand canal as referenced in EPA Flow Network Dataset by River Waterbody Code IE_EA_09L012100.	N – The implementation of SUDS measures and the separation of the proposed development from hydrological pathway leading to pNHA , and scale and nature of the proposed development will ensure no significant effects occur to this pNHA.
<i>Slade Of Saggart And Crooksling Glen Pnha</i>	211	5.40	No direct hydrological link to subject site. No avenue of connectivity.	N
<i>Liffey Valley pNHA</i>	128	6.98	No direct hydrological link to subject site. No avenue of connectivity.	N
<i>Kilteel Wood pNHA</i>	1394	6.99	No direct hydrological link to subject site. No avenue of connectivity.	N
<i>Rye Water Valley/Carton pNHA</i>	1398	7.13	No direct hydrological link to subject site. No avenue of connectivity.	N
<i>Lugmore Glen</i>	1212	7.23	No direct hydrological link to subject site. No	N

Site Name	Site Code	Distance from Subject Site	Avenue of Connectivity to Subject Site	Significant Threat Possible (Y/N)
			avenue of connectivity.	
Royal Canal pNHA	2103	7.77	No direct hydrological link to subject site. No avenue of connectivity.	N
Glenasmole Valley pNHA	1209	9.90	No direct hydrological link to subject site. No avenue of connectivity.	N
Dodder Valley pNHA	991	10.28	No direct hydrological link to subject site. No avenue of connectivity.	N
Red Bog, Kildare pNHA	397	11.18	No direct hydrological link to subject site. No avenue of connectivity.	N
Poulaphouca Reservoir pNHA	731	12.79	No direct hydrological link to subject site. No avenue of connectivity.	N
Liffey At Osberstown pNHA	1395	14.83	No direct hydrological link to subject site. No avenue of connectivity.	N
Donadea Wood pNHA	1391	14.97	No direct hydrological link to subject site. No avenue of connectivity.	N

No avenue for effect was identified between the subject site and any nationally designated site. The potential for significant effects on nationally designated site can be excluded at this stage of assessment.

4.3 Phase 1 Habitat Survey

The phase 1 habitat survey found the following habitats occurred on-site, *BL3 Buildings and Artificial Surfaces*, *WL1 Hedgerow*, *WL2 Treeline*, *GS2 Dry Meadow*, and *WS1 Scrub*. No rare or protected Flora was observed during the habitat survey.

Dry Meadow (GS2)

Dry meadow occurs throughout the majority of the site (Photograph 4.1). The grassland contains species such as Rye-grasses (*Lolium* spp.) and Meadow-grasses (*Poa* spp.) Yorkshire-fog (*Holcus lanatus*), Plantains (*Plantago* spp.), Nettle (*Urtica dioica*), Creeping Buttercup (*Ranunculus repens*) and Ragworts (*Senecio* spp.).

Buildings and Artificial Surfaces (BL3)

A small area of artificial surface (BL3) is located to the Northern boundary of the subject site which is part of the neighbouring dwelling's street.

Hedgerow (WL1)

Hedgerow occurs at the western and eastern boundary (Photograph 4.2). At the eastern boundary, it is largely composed of a Leylandii hedge (Castlewellan Gold variety) with some semi-mature Beech trees contained within it towards the northern end and a clump of semi-mature Sycamore trees towards the southern end. At the western boundary Hedgerow habitat is comprised of Leylandii hedge (Castlewellan Gold Variety) with a semi-mature Elder tree at the southern end.

Treelines (WL2)

Treelines occur at the southern boundary and partially at the northern boundary of the subject site. At the southern boundary this habitat is comprised of Leylandii hedge, Lodgepole Pine, Sycamore, Rowan, and Horse Chestnut.

At the northern boundary the Treeline habitat is comprised of a semi-mature Oak tree, with some smaller Elder bushes growing underneath. Next to the Elder there is a clump of trees including a semi-mature Alder tree and several young stems of Ash and Beech.

WS1 Scrub

There is one small area of scrub in the central eastern part of the site. It contains various shrub species including, Bamboo, Spirea, Variegated Laurel, and Photinia along with some young Sycamore trees.

Invasive species

No third schedule invasive species were found within the subject site nor in the immediate surrounding environs. Best practice should be followed in all aspects of operation of the development as the introduction of invasive species on site could negatively affect local biodiversity. The control of invasive alien species will follow guidelines issued by the National Roads Authority - *The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads* (NRA 2020) and the National Park and Wildlife Services - *Invasive Species in Ireland* document.

Photograph 4.1:

Subject site looking South, GS2 Habitat in Foreground, WL2 Treeline in Background



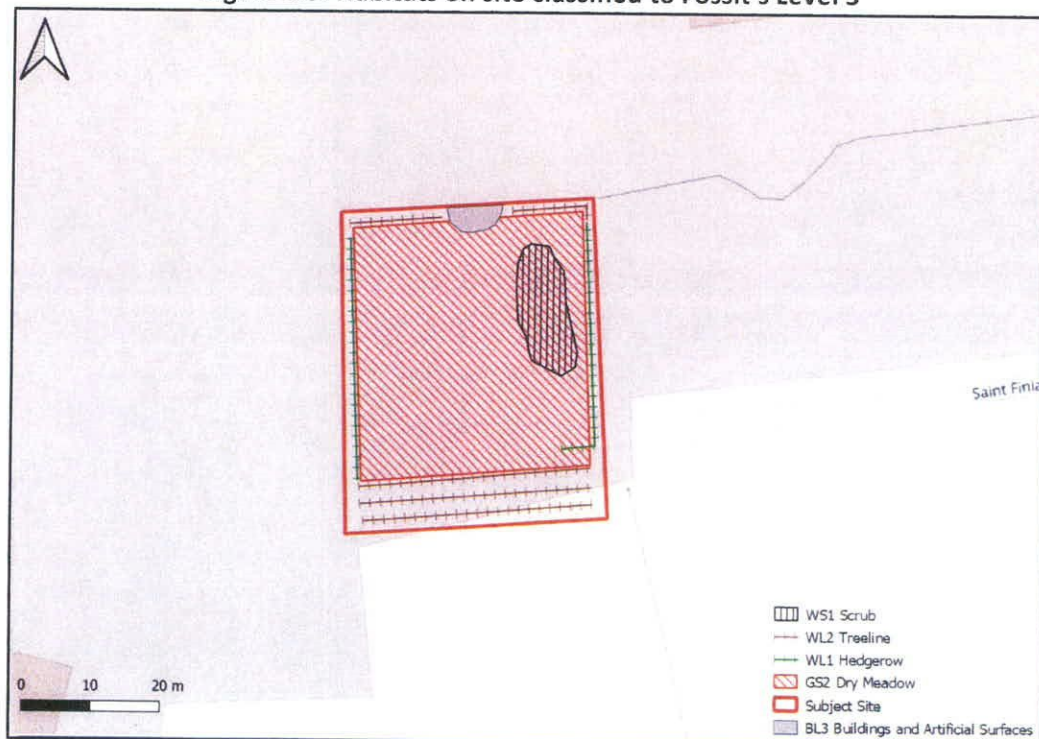
Photograph 4.2: WL1 Hedgerow at the eastern boundary



Habitat Map

Guidelines from the Heritage Council were used to form the basis of the mapping exercise. A survey area was delineated in the immediate vicinity of the subject site with a view to representing adjacent or proximal habitats. Data gathered was used to produce a thematic habitat map (Figure 4.3) illustrating the relative position and scale of habitats in the study area. However, position and scale of habitats shown are approximate only and should be considered only as a broad representation of the study area.

Figure 4.3: Habitats on site classified to Fossit’s Level 3



(This map was created using QGIS)

4.4 Protected Fauna

Birds

Typical urban Bird species were observed within the site including Rook, Robin, Woodpigeon and Jackdaw which were spotted around the Treeline along the Southern site boundary. No SCI species for Special Protection Areas were observed on site.

Badgers

Following site investigation within the footprint of the development there were no signs of Badger presence as listed in Section 2.2.

Bats

The trees/hedgerows around the site were inspected for any signs of bat activity such as droppings, grease marks, urine staining, claw marks, presence of bat fly pupae. No signs of Bat activity were observed. The predawn survey did not record any roosting bats onsite and no bats were recorded commuting through the site. None of the trees located around the subject boundary were considered suitable for roosting bats as they did not support any potential roost features.

4.5 Field Survey Constraints

No significant difficulties were encountered during site investigation and surveys.

4.6 Characterisation of Ecological Features

Ecological features on-site are assigned importance in Table 4. According to the NRA framework. For the purpose of this EclA any features of local importance (higher value) that are identified in ecological assessment are considered in the impact assessment.

Table 4.3 : Characterisation of Ecological Features

Ecological Feature	Importance if present	Legal Protection	Assessment
Designated Sites	International Importance/ national importance	Birds and Natural Habitats Regulations	No avenue for significant effect to designated sites identified, no negative impacts will occur, can be excluded from impact assessment.
BL3 Buildings and Artificial Surfaces	N/A	N/A	Not of significant importance, can be excluded from impact assessment
GS2 Dry Meadow	Local (Lower)	N/A	Not of significant importance, can be excluded from impact assessment
WS1 Scrub	Local (Lower)	N/A	Not of significant importance, can be excluded from impact assessment
WL1 Hedgerow	Local (Lower)	N/A	Not of significant importance, can be excluded from impact assessment
WL2 Treeline Northern Boundary	Local (Lower)	N/A	Not of significant importance, can be excluded from impact assessment

Ecological Feature	Importance if present	Legal Protection	Assessment
WL2 Treeline Southern Boundary	Local (Higher)	N/A	Assigned local importance (higher value) as bird species protected under Wildlife Acts were observed within this habitat. Impact assessment should be conducted.
Species Designated QIs for SACs	International Importance	Birds and Natural Habitats Regulations, Wildlife Acts	None present on-site, development will not impact designated sites for these species, can be excluded from impact assessment
Bird Species Designated SCIs for SPAs	International Importance	Birds and Natural Habitats Regulations, Wildlife Acts	None present on-site, development will not impact designated sites for these species, can be excluded from impact assessment
Bird Species	Local (Higher)	Wildlife Acts,	Present on site, observed within Treeline habitat at southern boundary, as this feature is off local importance (higher value) impact assessment should be conducted.
Badger	International Importance	Wildlife Acts	None present on-site, can be excluded from impact assessment
Bats	Local (Higher)	Birds and Natural Habitats Regulations, Wildlife Acta	None present on-site, development will not impact designated sites for these species, can be excluded from impact assessment
Invasive Species	N/A	N/A	None present on-site, can be excluded from impact assessment.
Rare and Protected Flora		Wildlife Acts, Birds and Natural Habitats Regulations	None present on-site, development will not impact designated sites for these species, can be excluded from impact assessment

4.7 Impact Assessment

The WL2 Treeline at the Southern Boundary and Bird Species that utilise this habitat were identified of sufficient importance (local higher value) according to the NRA framework.

Table 4.4: Impact Assessment of Important Ecological Features

Impact	Duration & Magnitude	Key receptor affected	Likelihood in the absence of mitigation
Construction works could disturb bird species	Temporary to short term significant negative	Bird Species	Probable
Removal of WL2 Treeline at southern boundary could remove or fragment habitat for bird species.	Permanent Negative	WL2 Treeline, Bird Species	Probable
Removal of WL2 Treeline at Southern Boundary could impact habitat connectivity with existing Treeline at neighboring property to the east	Permanent Negative	WL2 Treeline, Bird Species	Probable
Importation of invasive species could degrade WL2 Treeline habitat		WL2 Treeline, Bird Species	Possible

4.8 Mitigation

4.8.1 Construction stage

Avoidance of Treeline removal/damage

An arboricultural impact assessment has been prepared for this application. All mitigation measures contained therein should be adhered to ensure trees identified for retention are protected from removal or damage arising from construction works.

Prior to any construction or demolition works on this site all trees and hedgerows destined for retention need to be protected by the use of protective barriers and or ground protection, fit for the purpose of ensuring the successful long-term preservation of the trees. In order for the retained trees to be adequately protected on the site a construction exclusion zone needs to be identified. This zone is calculated based on the root protection area (RPA), which is the minimum area in m² which should be left undisturbed around each retained tree. The RPA should be calculated as an area equivalent to a circle with a radius 12 times the stem diameter for a single stem tree and 10 times basal diameter measured immediately above the root flare for trees with more than one stem arising below 1.5m above ground level. In this case, where the trees are in groups, the protective fence should extend approximately 1m beyond the edge of the canopy of the woodland group.

Trees and hedgerows that are indicated to be retained must be protected by barriers, signage and/or ground protection prior to any materials or machinery being brought on site and prior to any development, demolition or soil stripping takes place. Areas that are designated for new plantings should be similarly protected. Barriers should be fit for the purpose of excluding construction activity. In most cases barriers should consist of a scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts.

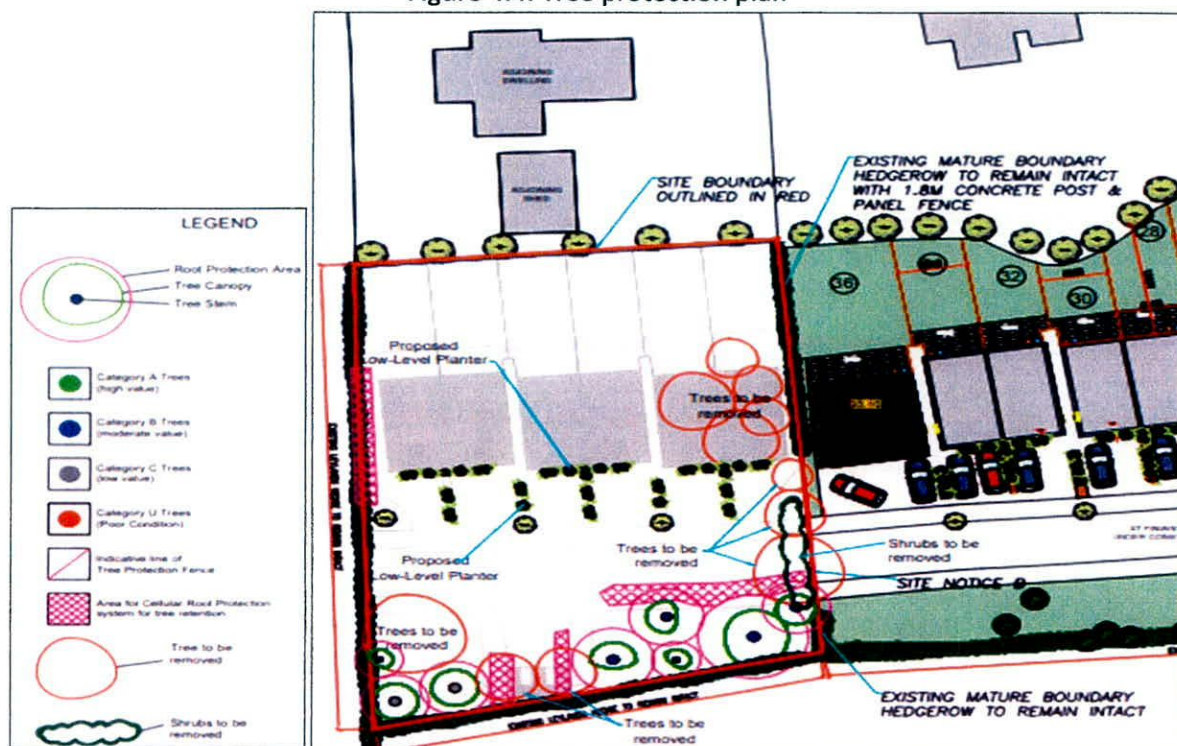
To ensure the protective barriers are respected, clear concise signage must be affixed to the barrier in an unrestricted easily viewed location.

The signage must state the following:

- No construction activity is to take place within the R.P.A.
- No materials of any kind are to be stored within the R.P.A.
- No washout of materials shall take place within the R.P.A.
- No fires are to be lit within the R.P.A.

The protective barriers shall remain in an undisturbed condition and only removed on completion of all construction activity finished grading and seeding.

Figure 4.4: Tree protection plan



Timing of works

- Clearance of trees and hedgerow are confined to outside the breeding season of 1st March to 31st August for birds.

Noise disturbance reduction

- Plant used at the site must have noise emission levels that comply with the limiting levels defined in EC Directive 86/662/EEC and any subsequent amendments. Any plant that is used intermittently must be shut down when not in use to minimise noise levels.
- All construction activities must follow the guidelines as set within BS 5228 - 1:2009+A1 2014. This includes guidance on several aspects of construction site practices, which include, but are not limited to: (a) Selection of quiet plant, (b) Control of noise sources, (c) Screening, (d) Hours of work.
- The best means practical, including proper maintenance of plant, must be employed to minimise the noise produced by on-site operations. All vehicles and mechanical plant must be fitted with effective exhaust silencers and maintained in good working order for the duration of the contract.
- Compressors must be of the "sound reduced" models fitted with properly lined and sealed acoustic covers which must be kept closed whenever the machines are in use and all ancillary pneumatic tools must be fitted with suitable silencers.

- Planting of the site boundaries must be undertaken in line with Section 5.1.2 which will act as a natural acoustic barrier around the site.
- Works that generate noise greater than 60DB are to be restricted to outside the period of October to April to avoid disturbance to wintering birds.
- Low vibration plant shall be used, contractors will be required to limit noise and vibration to acceptable standards.
- The ECoW shall monitor noise and vibration emissions throughout the duration of works.
- Diesel generators are to be enclosed in soundproof containers
- When selecting plant and machinery for works, modern machinery which comply European Communities Construction Plant and Equipment (Permissible Noise Levels Regulations) will be selected

Invasive Species Best Practice

- Good construction site hygiene must be employed to prevent the spread of invasive species with vehicles thoroughly cleaned down prior to leaving any site with the potential to have supported invasive species.
- Any material that is imported onto any site must come from a source that is certified as being free of invasive species as listed on the ‘Third Schedule’ of Regulations 49 & 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011).
- If invasive species are noticed during works, the ECoW is to be informed and an invasive species management plan should be produced, works should cease until biosecurity can be implemented and management strategies for the invasive species can be completed.

4.8.2 Operational stage

No mitigation is required for the operational stage.

4.9 Mitigation Summary and Residual Effects

Table 4.5 examines residual impacts after the implementation of mitigation and avoidance strategies

Table 4.5 Residual Impacts

Impact	Likelihood with implementation mitigation an avoidance
Construction works could disturb bird species.	Unlikely, timing of works and noise reduction measures render this impact negligible.
Removal of WL2 Treeline at southern boundary could remove or fragment habitat for bird species.	Unlikely, the tree protection strategy proposed, and the use of protective barriers and root protection strategies will avoid the majority of this impact. A small patch of trees at the southwest of the site is to occur. This only represents a small portion of this habitat. The scale of removal timing of works, and tree protection strategy render this impact negligible.
Removal of WL2 Treeline at Southern Boundary could impact habitat connectivity with existing Treeline at neighboring property to the east.	Unlikely, the tree protection strategy proposed, and the use of protective barriers and root protection strategies will ensure connectivity with neighboring hedgerow/Treeline is maintained. This impact is rendered negligible
Importation of invasive species could degrade WL2 Treeline habitat.	Unlikely, the best practice invasive species measures proposed will promote biosecurity and render this potential impact negligible.

4.10 Cumulative Effects

Recent planning applications within the vicinity of the subject site and The South Dublin County Development Plan 2016-2022 and The South Dublin County Development Plan 2022-2028 were reviewed to cumulatively assess any impact on the site in combination with plans within the surrounding environs.

- Planning Ref. SD18A/0363 for the (1) Construction of 22 three bedroom dwelling houses; (2) construction of access road and footpaths; (3) provision of car parking facilities; (4) construction of a foul sewer network to serve the development which shall connect into adjoining foul sewer network; (5) construction of a surface water sewer network to serve the development including the provision of the necessary attenuation elements and the connection of the surface water network to the adjoining surface water network; (6) provision of a watermain to serve the development and connection to Newcastle South adjoining water main; (7) demolition of the garden sheds; (8) provision of all necessary utility services; (9) all ancillary site works was granted in January 2020. An Ecological/Screening Report was prepared by Greentrack Environmental Consultants. Stage II AA was deemed not required. This development is not predicted to combine with the proposed development to culminate in effect to any important ecological features.
- Planning ref. SD19A/0040 for the Demolition of existing stables/sheds; construction of 28 dwellings comprised of 8 three bedroom, two storey semi-detached houses (Type A); 7 three bedroom, 2 storey terraced houses (Type B); 6 three bedroom, 2 storey terraced houses (Type C); 3 three bedroom, 2 storey terraced houses (Type D); 4 three bedroom, 2 storey semi-detached houses (Type E); all associated site development works, car parking, landscaping, open spaces, public lighting, connections to foul and surface water drainage/attenuation and water supply was granted in November 2019. A Screening for Appropriate Assessment report was prepared by Wildlife Surveys to accompany this planning application. Stage II AA was deemed not required. This development is not predicted to combine with the proposed development to culminate in effect to any important ecological features.
- Planning ref. SHD3ABP-305343-19 for the (1) The demolition of 5 structures on site, total area measuring 359sq.m; (2) development of 406 residential homes; (3) a childcare facility (4) 1 commercial unit; (5) reservation of a school site (6) new vehicular, cycle and pedestrian access from Main Street; (7) continuation of Newcastle Boulevard forming part of a new east-west link street; (8) a new Public Park (2ha); (9) pocket parks and greenway together with associated internal access roads, pedestrian and cycle paths and linkages; (10) 1 single storey marketing suite (81sqm) and signage (including hoarding) during the construction phase of development only and (11) all associated site and development works. The overall site comprises lands to the south of Main Street (c.15ha) together with 3 additional infill sites at the corner of Burgage Street and Newcastle Boulevard (c. 0.8ha); No. 32 Ballynakelly Edge (c.0.05ha); and Ballynakelly Rise (c.0.18ha) was granted in December 2019. A Screening Report for Appropriate Assessment report was prepared by OPENFIELD Ecological Services to accompany this planning application. Stage II AA was deemed not required. This development is not predicted to combine with the proposed development to culminate in effect to any important ecological features.

5 CONCLUSIONS AND SUMMARY

This EcIA identified important ecological features relevant to the site for the proposed development. Identified features were then subject to impact assessment in relation to the proposed development. Impacts were identified and mitigation and avoidance strategies were proposed. Residual impacts after mitigation and avoidance strategies were found to be negligible.

It is concluded that the proposed development will not have a significant negative effect on any ecological feature of importance.

This EclA has been prepared by Greentrack Consultants with all reasonable care, due diligence and professional application. This Ecological Report has been prepared with the best scientific knowledge on the current development and associated works that is available to Greentrack at the time of writing. Information contained within this report is based on the interpretation of data collected and has been accepted by Greentrack in good faith.

This EclA Report is prepared under instruction from Pavement Homes Ltd. c/o William Donoghue & Associates Main Street, Mountcharles, Co. Donegal, planning applicants to the South Dublin County Council in response to schedule 3 of the FI published in April 2022 under planning no. SD22A/0045. Greentrack accept no responsibility to any third party to whom this report is made known or available. Any such third parties rely on the findings of this report at their own risk.

Date: 31/08/2022

This Ecological Report has been prepared by Greentrack Consultants with all reasonable care, due diligence and professional application. This Ecological Report has been prepared with the best scientific knowledge on the current development and associated works that is available to Greentrack at the time of writing. Information contained within this report is based on the interpretation of data collected and has been accepted by Greentrack in good faith. This Ecological Report is prepared under instruction from Pavement Homes Ltd, planning applicant to the South Dublin County Council. Greentrack accept no responsibility to any third party to whom this report is made known or available. Any such third parties rely on the findings of this report at their own risk.

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APPENDIX I: Bat Survey

A pre-dawn bat survey was carried out on 30/07/2022 using an Echo Meter Touch 2 PRO device. The survey began at 03:40 and was carried out for a duration of for 2 hours and 15 mins. 2 hours of the survey occurred in darkness and continued for 15 minutes after sunrise to ensure no bats or possible bat activity was missed. No bat calls were recorded on the Echo Meter nor did the ecologist observe any bat activity. See below images taken from bat survey recordings.

Image 1.1 Bat Survey Recording at 03:42

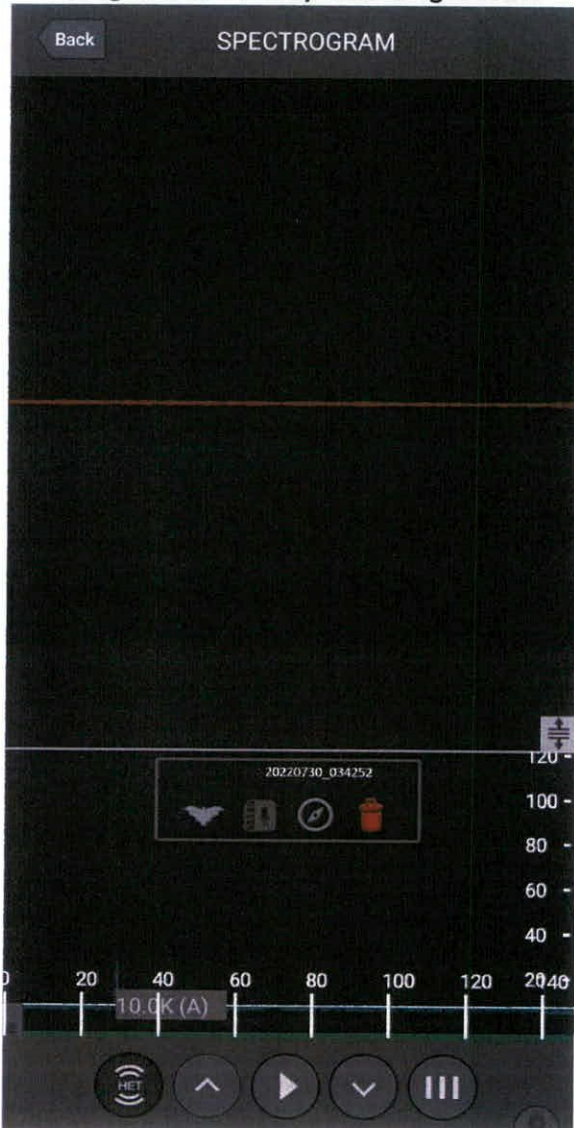


Image 1.2 Bat Survey Recording at 04:10

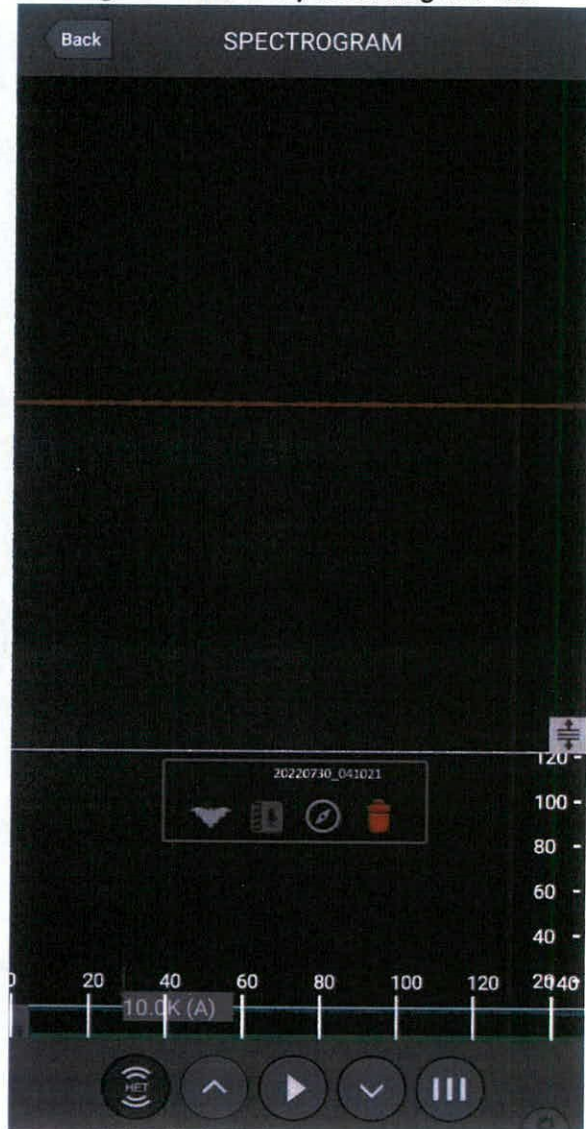


Image 1.3 Bat Survey Recording at 04:42

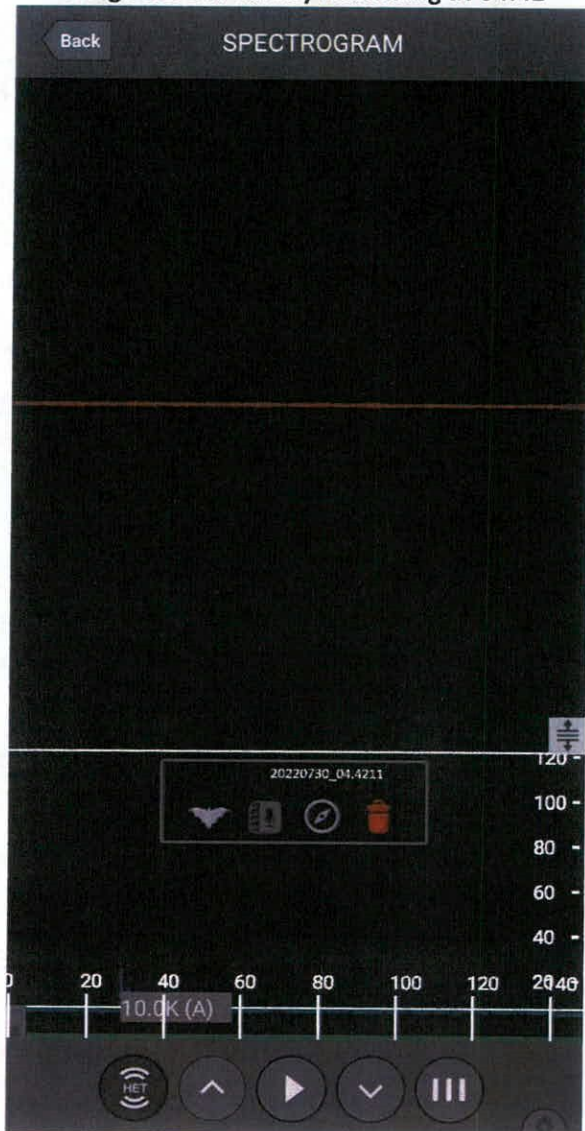


Image 1.3 Bat Survey Recording at 05:10

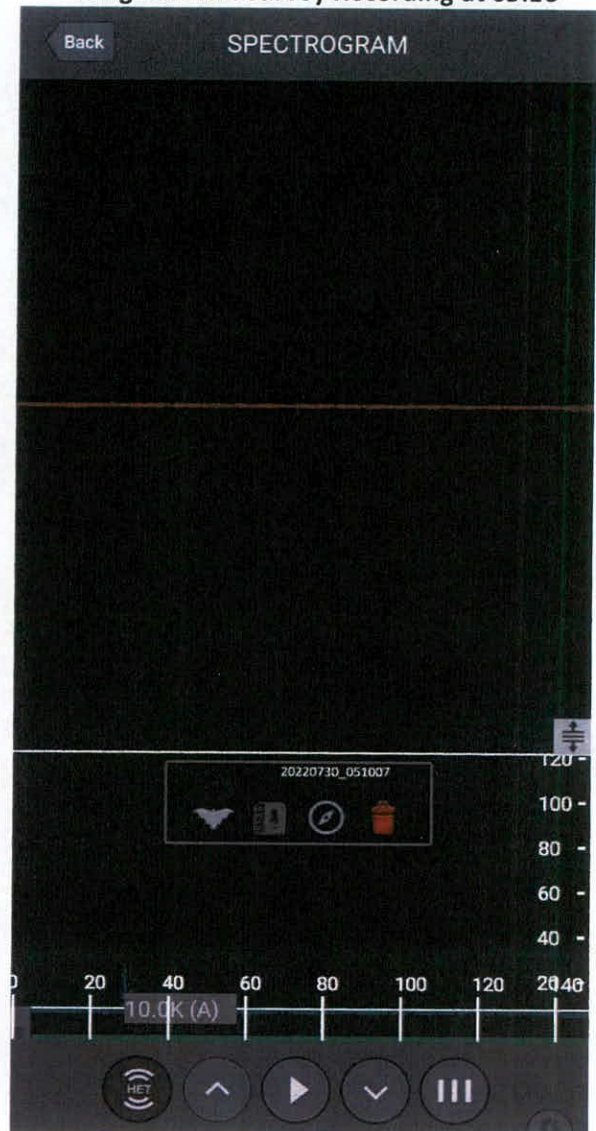


Image 1.5 Bat Survey Recording at 05:43

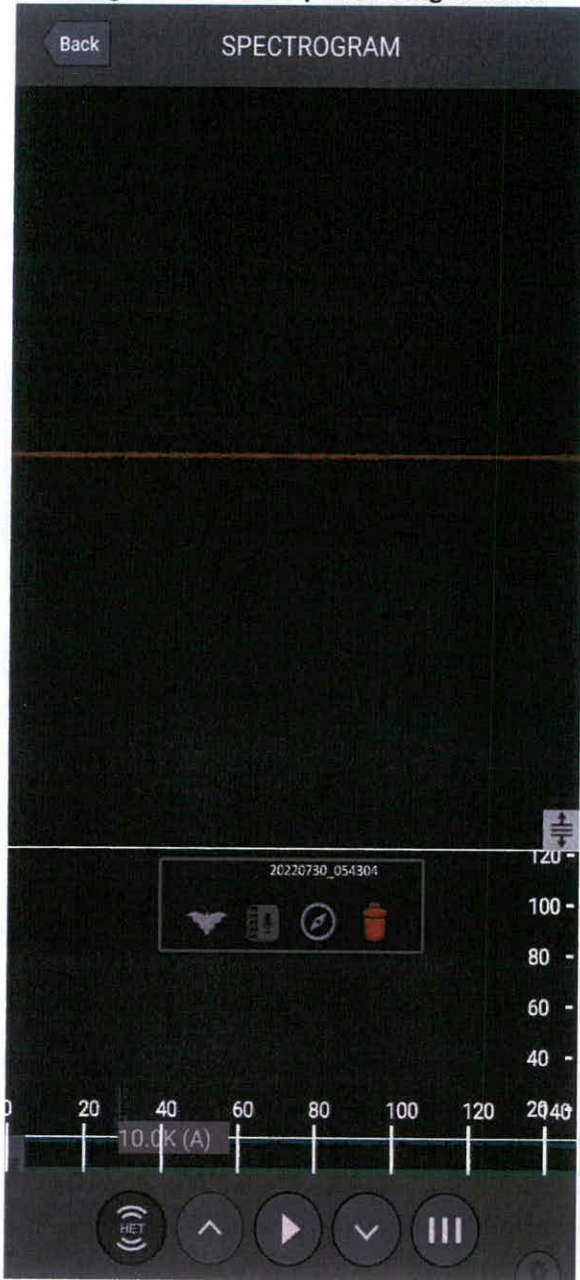


Image 1.6 Bat Survey Recording at 05:56

