

HOLMSTON FARM ENERGY STORAGE SYSTEM

Preliminary Ecological Appraisal Report
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1.0 Introduction

1.1 Background

SLR Consulting Limited (SLR) was commissioned by RES UK and Ireland Limited in June 2022 to undertake a Preliminary Ecological Appraisal (PEA) of proposed Ayr energy storage facility (OS grid reference NS 36215 21305), herein referred to as the 'Site'. The PEA is being undertaken to inform a planning application, further site design, constraints and opportunities for biodiversity enhancements, and the need for further survey work to inform a full planning application.

This PEA report presents the main findings of the desk study and walkover survey, categorising baseline habitats/conditions and their nature conservation value and predicting the ecological impacts that have the potential to occur based upon the site layout plan provided to us (see **Appendix 03**). It goes on to evaluate these findings and make recommendations in respect of potential impacts and further survey requirements if considered necessary.

1.2 Site Description

The Site is located on land at Holmston Farm approximately 2.5km west of the centre of Ayr, west of Scotland. The Site consists of a small active commercial coniferous plantation with an understory of modified grassland and neutral grasslands, as well as lines of trees, hedgerows and a small area of road leading from the A77.

The Site is 150m South of the River Ayr to the north with woodland immediately adjacent to the north, arable farmland to the east, the A70 to the south, and the A77 to the west.

The main area of the site is shown on the aerial photograph in **Appendix 02**.

1.3 Details of the Proposed Development

The proposed development involves the installation of an energy storage facility, the siting of battery enclosures, power conversion units and transformers, a substation, hardstanding, fencing, vehicular access, grid connection and ancillary works.

1.4 Scope of this Report

This report presents the findings of the PEA. The report seeks to:

- establish baseline conditions and determine the importance of ecological features present (or those that could be present), as far as is possible;
- to identify potential ecological constraints to the proposed development and make initial recommendations to avoid potentially significant effects on important ecological features, where possible;
- to identify potential requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design); and
- to establish any requirements for more detailed surveys.

1.5 Evidence of Technical Competence and Experience

The initial field work was undertaken by Callum Taylor, MSc, BSc, Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM), Senior Ecologist at SLR.

Reporting was undertaken by Niamh Ní Nagy BSc, Student Member of CIEEM, a Graduate Ecologist at SLR, with 6 months' professional ecological consultancy experience.

The report has been subject to Quality Assurance review as per SLR's policies by Sara Toule, with 9 years' professional ecological consultancy experience.

1.6 Relevant Legislation and Policy

A summary of relevant Legislation¹ and Policy text is included in **Appendix 01**.

1.6.1 Local Policy

The Site lies within South Ayrshire Council planning authority which highlights in their development plan² the protection required of important habitats such as woodland, individual trees and rivers. Fauna and Flora are mainly captured under the habitats they prioritise, such as those mentioned here.

¹ SLR is not a legal practice, and the summary is provided as a reference only.

² [localdevplan_final.pdf \(south-ayrshire.gov.uk\)](#)

2.0 Methodology

The baseline ecological data was collated by a combination of desk-based study and field survey consistent with all current standard methodologies and published good practice guidelines.

2.1 Desk Study

An ecological data search was requested from the South West Scotland Environment Information Centre (SWSEIC) in July 2022 to provide records of protected and otherwise notable species, and non-statutory protected sites for the Site and land within a 2km radius of it. At the time of writing, no response had been received from SWSEIC. NatureScot's Ancient Woodland Inventory³ was searched for records of ancient woodland within 2km of the Site.

An internet-based desk study was also undertaken, whereby the Multi-Agency Geographic Information for the Countryside (MAGIC) website (<http://magic.gov.uk>) and NatureScot's SiteLink (<http://sitelink.nature.scot>) was searched for statutory designated sites and their citations, including:

- Ramsar sites;
- Special Areas of Conservation (SACs);
- Special Protection Areas (SPAs);
- Sites of Special Scientific Interest (SSSIs);
- Locally designated sites such as Local Nature Conservation Sites (LNCS) or Local Wildlife Sites (LWS); and
- Local Nature Reserves (LNR), National Nature Reserves (NNR), and RSPB and Wildlife Trust Reserves.

2.2 Field Survey(s)

2.2.1 Habitats

A Preliminary Ecological Appraisal (PEA) survey was undertaken by Callum Taylor, Senior Ecologist with SLR Consulting on 11th July 2022. The survey covered the red line boundary of the site, as well as a 50m buffer around the site boundary.

The Site was surveyed to identify the broad habitat types present in accordance with the UK Habitat Survey (UKHab) methodology⁴, this was extended to include preliminary checks for notable, protected, or rare species of both flora and fauna. Particular features of interest were recorded on the field map, the locations of which are shown on **Appendix 02**. The field surveys were undertaken using a larger red line boundary which has since been reduced. The results have been reported in full to provide additional context of the wider area.

Habitats present within the survey area were mapped using the UKHab criteria and coding. Boundary fences/walls (if present) were not mapped. Particular features of interest were recorded on the field map using target notes (TNs) and notes on the condition of each habitat were also recorded, supported by photographs.

The UKHab is a comprehensive classification system for the UK that has been developed to benefit from changes in habitat categorisation and recording analysis in recent decades. The system comprises a principal hierarchy (the Primary Habitats) which include broad habitats and priority habitats and non-hierarchical Secondary codes. Habitat nomenclature and definitions have been designed to remain as close to existing systems as possible in order that data can be collected, analysed, and translated without ambiguity.

³ NatureScot Ancient Woodland Inventory ([Ancient Woodland Inventory - Natural Spaces - NatureScot \(snh.gov.uk\)](https://ancient-woodland-inventory.nature.scot))

⁴ UK Habitat (UKHab) Classification (<https://ukhab.org/>)

The survey methodology was extended to include preliminary checks and surveys for notable, protected, or rare species of flora and fauna. In addition, the presence of plant species included within Schedule 9 of the WCA was searched for during the survey. Plants included within the schedule include (but are not limited to) Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), and Giant hogweed (*Heracleum mantegazzianum*). It is an offence under the Act to plant or cause the spread of species listed on Schedule 9 into the wild.

Whilst not a full botanical or protected species survey, the method of survey enables experienced ecologists to obtain an understanding of the ecology of a site such that it is possible either:

- to confirm the conservation significance of the site and assess the potential for impacts on habitats/species likely to represent a material consideration in planning terms; or
- to establish the scope and extent of any additional specialist ecological surveys that will be required before such confirmation can be made.

2.2.2 Fauna

The site was broadly assessed for habitats and features with potential to support protected or notable species, together with any field signs of such species including but not limited to reptiles, badger (*Meles meles*), bats, otter (*Lutra lutra*) great crested newt (*Triturus cristatus*) and breeding birds.

2.3 Limitations

2.3.1 Desk Study

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that protected species not identified during the data search do in fact occur within the vicinity of the Site.

2.3.2 Field Survey(s)

The timing of the survey in July 2022 was within the main growing season and general ecological survey season so no constraints were identified in the categorisation of habitats.

The woodland immediately adjacent to the northeast boundary of Site could not be accessed therefore a precautionary approach has been undertaken in this assessment.

Notes for the condition assessment were taken at the time of survey but not reported within this report. These notes were for the purpose of use should the Biodiversity Net Gain Metric be employed to assess the value of the habitats on Site. The data would then be presented in a standalone Biodiversity Net Gain Plan Report.

It is not foreseen that these limitations noted here would cause a significant impact on the survey results presented here in this report.

3.0 Results

3.1 Desk Study

3.1.1 Statutory Designated Sites

There are no statutory designated sites of national or international importance within 2km of the application site boundary.

3.1.2 Non-Statutory Designated Sites

The Site is situated within the Galloway & Southern Ayrshire UNESCO Biosphere⁵ reserve, which are sites where interdisciplinary approaches to understanding and managing changes and interactions between social and ecosystems are tested.

3.1.3 Priority Habitat Inventories, including Ancient Woodland

Thirteen areas of ancient woodland were found within 2km of the Site, the closest of which is Witchbrae Wood, a woodland of semi-natural origin, adjacent to the north of the red line boundary to the north of the Site. The woodland will be protected by avoidance measures including, but not limited to, appropriate standoff measures, pollution management plans.

3.2 Habitats

3.2.1 Within the Site

The following main habitat types and features were recorded within the survey area; it should be noted that localised occurrences of other habitat types may be present, and this list encompasses the main habitat types evident during the initial survey:

Habitats within Site:

- c1 – arable and horticulture;
- g3c – other neutral grassland;
- g3c8 – Holcus-Juncus neutral grassland;
- g4 – modified grassland;
- h2 – hedgerow;
- h2a – hedgerow (priority habitat);
- u1b – developed land, sealed surface;
- w1f – lowland mixed deciduous woodland;
- w1g6 – line of trees; and
- w2c – other coniferous woodland.

Habitats within survey area (but not within Site):

⁵ Full details can be found at: [Our UNESCO Biosphere - Galloway and Southern Ayrshire Biosphere \(gsabiosphere.org.uk\)](https://gsabiosphere.org.uk)

- g3c8 – Holcus-Juncus neutral grassland;
- g4 – modified grassland;
- u1b – developed land; sealed surface;
- u1b5 – buildings; and
- w1g6 – line of trees.

A short description of each habitat type is provided below.

3.2.2 c1 – Arable and Horticulture

There is an arable field to the southwest of the Site, located outside the red line boundary, which provides minimal suitable habitat due to the managed nature of the area.



Photo 3-1 – Arable crops to the Southwest of the Site

3.2.3 g3c – Other Neutral Grassland

Several areas of other neutral grassland are present on site, with a very small proportion located within the red line boundary to the northwest. They are of low species diversity, dominated by shorter grasses containing common grass species such as common bent (*Agrostis capillaris*), meadow foxtail (*Alopecurus pratensis*), and cocksfoot (*Dactylis glomerata*). Sward height was low at time of survey suggesting recent management.

Grassland to the north of the line of hawthorn (*Crataegus monogyna*) trees, north of the Christmas tree plantation, is dominated by rosebay willowherb (*Chamaenerion angustifolium*), tall grass species such as cocksfoot and meadow foxtail, as well as injurious species such as thistle (*Cirsium vulgare*), bramble (*Rubus fruticosus*), nettle (*Urtica dioica*), with the occasional willow tree (*Salix sp.*).

Two further areas of other neutral grassland to the east of the site and adjacent to the power substation contains species such as Timothy grass (*Phleum pratense*), meadow foxtail, birds-foot trefoil (*Lotus corniculatus*), and other common species.



Photo 3-2 – Other Neutral Grassland to the north of the Site

3.2.4 g3c8 – Holcus-Juncus Neutral Grassland

Where the battery storage is proposed to be constructed lies on a grassland with poor species assemblage that is dominated by approximately 70% Juncus and creeping buttercup (*Ranunculus sp.*), which are tolerant to wet ground conditions. Common grass species included sweet vernal (*Anthoxanthum odoratum*), meadow foxtail, cocksfoot, and common bent. There are small stands of bramble and scattered trees throughout the sward, consisting of predominately of willow.



Photo 3-3 – Holcus-Juncus Neutral Grassland to the centre of the Site

3.2.5 g4 – Modified Grassland

The coniferous tree plantation portion of the site is mapped as modified grassland due to the trees being grown for the purpose of Christmas and are felled every year. The plantation is comprised of a singular species, likely Northern Fir (*Abies Sp.*), and is regularly managed with signs of cutting from the base. This creates small piles of deadwood at the base of each tree but due to the regular disturbance it is unlikely be used by protected species. It is considered that this would be deemed similar habitat to arable crop due to the management methods but the understorey is of a more valuable habitat. Therefore, this has been assessed as a modified grassland.

The grassland between is varied but with a strong dominance of meadow foxtail and Common bent . Other common species are present such as buttercup (*Ranunculus sp.*), white clover (*Trifolium repens*), and perennial ryegrass (*Lolium perenne*). The same g4 grasslands can be found on the field boundaries, often with poached areas from vehicles and more dominance of short grasses and herbs.



Photo 3-4 – Modified Grassland to the south of the Site



Photo 3-5 – Modified Grassland containing the Christmas Tree Plantation

3.2.6 h2 - Hedgerow

To the west of the Site on either side of the field gate entrance is a hawthorn dominated hedgerow with bramble and nettle in the understory as well as common grasses including meadow foxtail and cocksfoot.

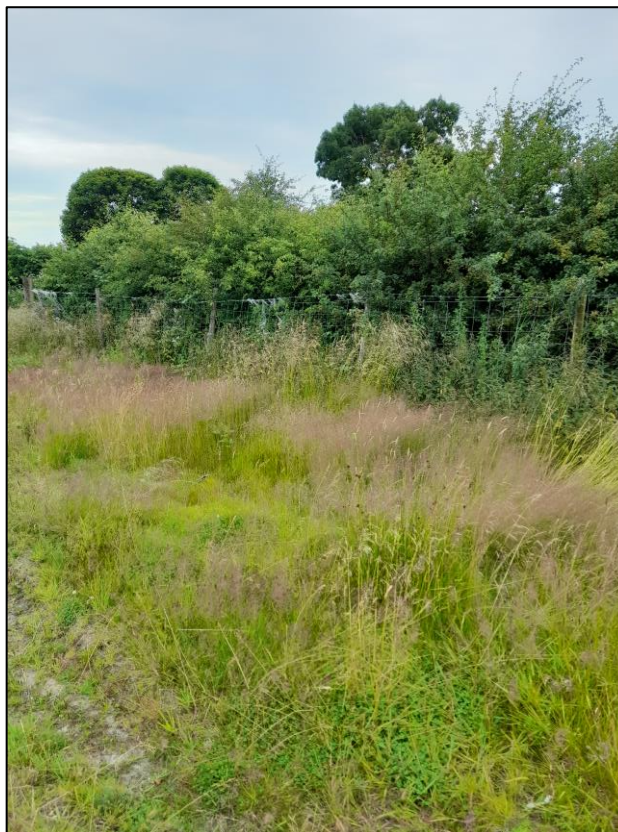


Photo 3-6 – Hedgerow to the west of the Site

3.2.7 h2a – Hedgerow (priority habitat)

The hedgerow to the east of the site has a variety of species including bramble, hawthorn, hazel, and willow. There are stands with dense ivy cover and the hedgerow is bordered by tussocky grasses. The hedgerow with mature trees has the potential to offer roosting/nesting, commuting and foraging potential to protected species.

While it is not foreseen that any felling or management is required, hedgerows are present immediately adjacent to the red line boundary and have the potential to support protected species. Therefore, they will be considered for further assessment.



Photo 3-7 – Hedgerow to the east of the Site

3.2.8 u1b – Developed land, sealed surface

The only sealed surfaces within the red line boundary consists of the access road and gateway into the Site leading from the A77.

Outside of Site boundaries to the south of the associated carpark for Dobbies Garden Centre and to the east is the access road and power substation.

3.2.9 u1b5 – Building

To the south of the Site is the commercial building for Dobbie’s Garden Centre and to the east is the power substation with associated infrastructure.

3.2.10 w1f - Lowland mixed deciduous woodland

The majority of trees within the woodland are thin in diameter at breast height (DBH), however they are densely covered in ivy with visible damage such as cracks and rot holes, and have been coppiced possibly for firewood (recent fire damage within tree line). The linear stretch of woodland branches out into a double-stemmed plantation on either side, bordering the River Ayr. Openings in the woodland contain ash (*Fraxinus excelsior*), fern (*Tracheophyta Sp.*), nettle, ivy (*Heder helix*), lady’s bedstraw (*Galium verum*). There is suspected ash dieback affecting some trees. The large area of lowland mixed deciduous woodland to the northeast of the site is dominated by birch (*Betula sp.*). The area immediately south contains pockets of injurious plants with young saplings including rowan (*Sorbus aucuparia*) present. The woodland may have originated as plantation but is showing signs of succession with smaller birch, willow (*Salix sp.*), ash, rowan, and hawthorn trees amongst mature trees. The woodland is surrounded by a barbed wire fence approximately 5ft in height, obstructing access. Species visible from the woodland edge include beech (*Fagus sylvatica*), hawthorn, and birch, all of which are mature and show clear signs of damage (such as cracks and knot holes). There are a number of dead trees

present also, with potential bat roosting features present. Bluebell (*Hyacinthoides non-scripta*) is present in large stands, as well as smaller pockets and dead wood is present small stands throughout.

Hawthorn trees reaching up to 8m in height are present along the barbed wire fence with a bramble and nettle understory, as well as several grass species such as meadow foxtail, cocksfoot and common bent. Occasional bindweed (*Convolvulus sp.*) and cow parsley (*Anthriscus sylvestris*) present within the linear hawthorn trees.

3.2.11 w1g6 – Line of trees

In the north Site boundary, there is a line of trees consisting mainly of hawthorn but also with mature maple, sycamore and oak trees, with heights of up to 15m or more, some of which may have bat potential (Target Notes 1 – 5), with some willow trees still maturing. Additionally, rosebay willowherb and bramble dominate within the treeline.

Alongside the linear access road, leading from eastern side of Dobbie’s garden centre to the northeast towards the power substation, is dominated by species including hawthorn, whitebeam, and willow, with tall stands of nettle, Timothy grass, meadow foxtail, common and curly dock (*Rumex obtusifolius* and *crispus* respectively), birds-foot trefoil, amongst other common species. The majority of tree species are thin in terms of DBH, however they are densely covered in ivy with some displaying visible damage such as cracks and rot holes. The line of trees leads on to the lowland mixed deciduous woodland to the northeast of Site. The linear habitat bordering Dobbies to the north and east is of a similar structure but primarily of maple, sycamore, hawthorn, silver birch, and willow.

The line of trees adjacent to the A77 and A70 are dominated by silver birch but have oak, alder, and ash present in the tree canopy. The understorey is dominated by bramble, nettle, common bent, meadow foxtail, sweet vernal and other common species.



Photo 3-8 – Line of Trees to the west of the Site

3.2.12 w2c – Other Coniferous Woodland

Coniferous woodland located within the red line boundary but not associated with the plantation. It contains a small area of younger, stunted coniferous trees and scattered willow trees. It has been noted that these trees may be removed prior to the construction works taking place. Tree cover is dense towards the north but has several large openings with short common grasses and herbs, consisting of common species such as creeping buttercup, white clobber, common bent and fern species.



Photo 3-9 – Mixed Deciduous Woodland to the east of the Site

3.3 Protected and Priority Species

3.3.1 Designated Sites

There are no designated sites within the Site boundaries, but Witchbrae Wood Ancient Woodland exists immediately adjacent to the north of Site. There are no plans to disturb the ancient woodland through any direct management such as felling, coppicing, limb removal or understory clearance.

While no management of the woodland is anticipated, in the absence of mitigation designated sites could be impacted, and therefore, have been included in further assessment.

Additionally, the Site is situated within the Galloway & Southern Ayrshire UNESCO Biosphere⁶ reserve. However, the habitats considered here within Site would be of limited additional value with Christmas tree plantation, arable and urban habitats dominating the immediate surroundings. The Site itself has the potential, with enhancements, to become a more valuable resource for biodiversity with the enhancement measures proposed in the landscape plan.

3.3.2 Plants

As the data request from SWSEIC was not returned, no previous records of plants, including invasive species, were obtained. During the walkover survey, however, bluebell (*Hyacinthoides non-scripta*) was found in the woodland to the north of Site. Bluebells are listed on Schedule 8 of the Wildlife and Countryside Act (1981), making it an offence to intentionally pick, uproot or destroy any part of the plant.

No invasive species were found during the walkover survey.

⁶ Full details can be found at: [Our UNESCO Biosphere - Galloway and Southern Ayrshire Biosphere \(gsabiosphere.org.uk\)](https://gsabiosphere.org.uk)

3.3.3 Mammals

No data was returned by SWSEIC regarding species present within 2km of the Site, so it is not possible to comment on what species have been recorded as being previously present within and nearby to the Site.

Bats

During the walkover survey five trees were found to have potential to support roosting bats (Target Notes 1 – 5; **Appendix 02**). The surrounding habitats offer poor commuting and foraging potential. Further survey would be recommended to confirm the possible presence of bat roosts within the trees identified as having bat roost potential.

Badgers

During the walkover survey no field signs or setts were identified, however habitat suitable for badger is present within the survey area in the form of tussocky grasslands. The Site is bordered by berry supporting species and supports some mature woodland offering resource for foraging, commuting and sett creation.

Badger have therefore been included in further assessment.

Otter and Water Vole

The walkover survey did not identify any field signs of otter or water vole and there are no riparian habitats within Site. However, the River Ayr lies approximately 150m from the Site to the north with woodland mature woodlands adjacent to the watercourse.

Otter and water vole have therefore been included for further assessment.

Other Mammals

Very few signs of mammals were recorded during the walkover survey, however some mammal pathways were present, and droppings were found but due to lack of other field signs of other species these are thought to be due to rabbits. Habitat suitability on Site and in the surrounding area is poor for other protected mammals such as Eurasian red squirrel (*Sciurus vulgaris*), pine marten (*Martes martes*), and brown hare (*Lepus europaeus*). Therefore, no other mammals are not considered to be potential ecological constraints to this development and are omitted from further discussion.

3.3.4 Amphibians (Including Great Crested Newt)

No amphibians were detected during the walkover survey and no waterbodies were found with permanence, but suitable habitat was found within Site and its surroundings with dense tussocky grasses, hedgerows, and woodland with dead wood.

Due to the lack of waterbodies, it is unlikely that the Site would support breeding populations of amphibians. The habitats within Site and in surrounding habitats may offer refuge to amphibians in their terrestrial phase while commuting or hibernating.

Amphibians have therefore been included for further assessment.

3.3.5 Reptiles

No field signs of reptiles were found during the walkover survey but dense tussocky grasses, hedgerow and woodland with dead wood offer potential feeding, commuting and hibernating habitats for reptiles.

Reptiles have therefore been included for further assessment.

3.3.6 Birds

The Site has limited potential for nesting birds, restricted to scattered trees and the stunted coniferous woodland. The surrounding habitat provides suitable habitat for nesting and foraging birds with woodland, hedgerow, and mature trees.

Birds are therefore considered for further assessment.

3.3.7 Invertebrates

No protected or notable invertebrates were observed during the walkover survey. While the Site supports habitats with a range of common pollinating plant species, these are often lacking in diversity and influenced by the commercial practices of the surrounding Site. Biodiversity enhancements should be identified to target these species assemblages which will in turn benefit other protected species. Protected invertebrates are therefore included for further assessment.

4.0 Ecological Constraints and Opportunities

The PEA has identified a number of potential ecological constraints and opportunities that will require to be mitigated for in support of any future planning application.

4.1.1 Habitats

The majority of the habitats lost will be g3c8 (Holcus-Juncus neutral grassland), which provide foraging opportunities for mammals, birds, and invertebrates, and the area of stunted w2c (other coniferous woodland), which provide minimal foraging opportunities.

With the construction of the attenuation pond and respective drainage channels, the area of g3c8 lost will be retained as g3c grassland, as per the landscape plan (**Appendix 03**), provided by the Client.

The linear woodland to the south of the proposed battery storage unit will be enhanced with the planting of more native trees species, widening the woodland.

The Ancient woodland to the north of Site will be retained with appropriate avoidance measures which would be recommended to be identified in the Construction Environmental Management Plan. These measures would include, but not be limited to, biosecurity and pollution event procedures, stand off zones, noise and dust pollution prevention procedures.

4.2 Species

4.2.1 Mammals

Bats

While a full PRA has not been undertaken, five trees along the hedgerow to the north of the Site noted as having bat roost potential are within 30m of the proposed access track to the energy storage facility. The linear woodland and scrub habitats, as well as the mature woodland to the north of site, have several mature trees with visible features suitable for bat roosts. However, these are out with of Site boundaries and no impacts are foreseen. Those trees that are found within Site are young with no obvious signs of damages which could offer potential roost features for bats.

A pre-construction survey will be recommended to be conducted three months prior to Site clearance/commencement of construction works to establish the presence or likely absence of roosts and assess the level of work required within the southern linear trees. This should be with reference to Bat Conservation Trust Good Practice Guidelines (2016)⁷.

On completion of the pre-construction survey, suitable avoidance and mitigation measures should be prescribed that are in tune with the works programme and detailed design. These should be included in the CEMP.

Badger

Whilst we did not receive any data to inform on previous records of badger on Site or in the surrounding area, there is good foraging and sett creation habitat present on Site.

It is therefore advised that a pre-construction walkover survey be carried out to inform the baseline of badger activity and search for setts on Site. This should be with reference to methodology from both The Mammal Society (1989)⁸, and Scottish Badgers (2018)⁹ and be conducted three months prior to works commencing. This

⁷ Bat Conservation Trust (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd Edition.

⁸ The Mammal Society (1989). Surveying Badgers. ISBN: 0 906282 06 3

⁹ Scottish Badgers (2018). Surveying for Badgers: Good Practice Guidelines. Version 1.

will allow adequate time to report and apply for a license to NatureScot should disturbance of or exclusion/closure of any setts be necessary to lawfully permit works to proceed (that would otherwise be considered 'interference'). Works within 30m of a sett would require a license and this buffer distance for licensing may need to be extended up to 100m for the more disturbing activities such as piling.

Badgers are most sensitive to disturbance during the breeding season. Licenses aren't usually granted for works near to badger setts during this period, which runs from 1 December to 30 June inclusive. Surveys and works would need to be programmed accordingly.

On completion of the pre-construction survey, suitable avoidance and mitigation measures should be prescribed that are in tune with the works programme and detailed design. Opportunities for enhancements should also be included.

Otters

Records of otter on Site were not available, nor were any field signs identified during the walkover survey. The Site itself is dominated by grassland and Christmas tree plantation so offers limited potential for otter to seek shelter. It is therefore considered unlikely that otter are resident on Site. That said, the River Ayr is 150m north of the Site, which offers potential use by otter for foraging, commuting, with woodland in the borders offering resting site creation.

Due to the small-scale activities of the Site, and commercial activities of the surrounding environment, and natural disturbance barriers from the woodland habitats on the borders of Site it is considered unlikely that an Otter presence absence survey would be required prior to planning application.

However, it is still possible for Site activities to indirectly impact otter via disturbance of otter shelter, pollution events in the absence of pollution prevention or mitigation, entrapment/injury should otter enter the Site during construction activities.

Therefore, a pre-construction survey will be recommended to be conducted three months prior to site clearance/commencement of construction works to establish the presence of any otter field signs and resting sites. The methods will take reference of standard guidance (Chanin, P., 2003a¹⁰ and Chanin, P., 2003b¹¹) and along the River Ayr within 250m of Site.

This will allow adequate time to report and apply for a license application to NatureScot should disturbance of or exclusion/closure of any places of shelter be necessary to lawfully permit works to proceed. Works within 250m of a place of shelter will need to consider the suitability for breeding (no evidence of potential breeding sites currently known).

On completion of the pre-construction survey, suitable avoidance and mitigation measures will be prescribed that are in tune with the works programme and detailed design. Opportunities for enhancements should also be included.

4.2.2 Amphibians and Reptiles

With a lack of permanent waterbodies on or within 500m of Site, there is limited potential for breeding amphibians, including Great Crested Newt. However, with moderate terrestrial habitat and Site and good terrestrial habitat in the surrounding habitats, some of which adjacent to Site, there is the potential that amphibians and reptiles could be found on Site.

It would be recommended that a two-stage cutting regime be implemented for the clearance of grassland habitat to allow common amphibians and reptiles to disperse safely. The grass would be cut initially to 15cm then cut to

¹⁰ Chanin P (2003a) Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series No. 10. English Nature, Peterborough

¹¹ Chanin, P (2003b) Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough

ground level 48 hours later. Arisings would be placed outside of the working area and protected from interference. The Site would then be maintained at ground level or excavated and left as bare earth for the remainder of the construction period.

In the unlikely event that a great crested newt is found, work would require to cease, and the Ecological Clerk of Works (ECoW) contacted immediately who will advise on the required approach.

4.2.3 Birds

The Site provides poor habitat for ground nesting birds due to the annual cutting of the Christmas tree plantation/the management of the g4 habitat, and the nature of the c1 arable fields. The woodland to the northeast of the Site does offer potential for nesting birds.

Nesting opportunities for birds are likely limited to young scrub and trees within Site which have confirmed not to be cleared.

It would be recommended that site clearance works and construction works would take place outside of the breeding bird season (March to August/early September inclusive). Should this not be possible, a pre-clearance/construction bird survey would take place by a suitably qualified ECOW, up to 48 hours prior to works commencing. Should any nests be identified, they will be marked, and an appropriate buffer will be implemented to minimise the risk of disturbance (species dependent). No works would be permitted in the buffer zone until the suitably qualified ecologist has confirmed the birds have fledged and the nest is no longer active.

4.2.4 Protected Invertebrates

The Site provides suitable habitat for protected invertebrates, including in their larval stage. However, the Site is of limited value with dominant stands of herbs and grasses of a limited diversity.

Therefore, the Site may be of limited value to protected invertebrates, but it would be recommended that enhancement opportunities be implemented where possible. The landscaping plan should include plants suitable for pollinator species and protected invertebrates. It would also be recommended to include insect hotels on trees and log piles created in woodlands to provide refuge.

4.3 Recommendations for Further Surveys

Prior to the commencement of works, it is recommended that a pre-construction site walkover take place by a suitably experienced ecologist to establish the potential presence of bat tree roosts, badger, and otter field signs, as well as breeding birds. In the event that bat roosts, badger setts, or otter resting sites should be identified, a review of working methods would be required and a license application to NatureScot may be necessary.

4.4 Potential Opportunities for Biodiversity Enhancements

Development plans are indicative at this stage and surveys to confirm the presence or absence of a number of protected or notable species have not yet been undertaken. Therefore, the recommendations listed below to provide nature conservation enhancements, as required under local planning policy, are very generic. The list below is not exhaustive and may change depending on the detailed design of the development and any protected or notable species confirmed to be present following further survey work recommended in Section 4.3.

The measures identified may also be subject to Biodiversity Net Gain calculation to confirm a net gain in biodiversity.

The following measures may be applicable;

- installation of features such artificial bat roosts and bird nesting boxes will provide additional roosting and nesting opportunities for a range of species.

- installation of insect hibernacula will provide additional refuge opportunities for invertebrates.
- retention of priority habitats and features, including woodland and mature trees.
- enhancement of grassland areas where diversity of species is currently low.

APPENDIX 01

Relevant Legislation and Planning Policy

Conservation of Habitats and Species Regulations

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb¹² wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 come into effect on the day that the United Kingdom exits the EU. In summary they can be considered to state that The Habitats Regulations will continue to remain in force effectively unchanged post exit, until such time as they are specifically replaced by another article of legislation.

Conservation of Habitats and Species Regulations

These Regulations amend the Conservation (Natural Habitats, &c.) Regulations 1994, which make provision for the transposition of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

Regulation 2 amends schedule 2 of the 1994 Regulations to add the Eurasian Beaver (otherwise known as the European Beaver) to the list of European Protected Species of Animals that are given protection under the 1994 Regulations.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure, or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure, or take any wild animal listed under Schedule 5 to the Act; • intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act; or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

¹² Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which significantly affects the local distribution or abundance of the species.

Nature Conservation (Scotland) Act 2004 (as amended)

The Nature Conservation (Scotland) Act 2004 places duties on public bodies in relation to the conservation of biodiversity, increases protection of Sites of Special Scientific Interest (SSSI), amends legislation on Nature Conservation Orders, provides for Land Management Orders for SSSIs and associated land and strengthens wildlife enforcement legislation, among other requirements. It also amends the legislation for protected species, introducing new conditions to the 'incidental results of a lawful operation' defence for all wild birds and certain species of animal and plant.

The Act places a duty on every public body to further the conservation of biodiversity consistent with the proper exercise of their functions.

It also requires Scottish Ministers to designate one or more strategies for the conservation of biodiversity as the Scottish Biodiversity Strategy, and to publish lists of species of flora, fauna and habitats of principal importance. The lists of species of flora and fauna and habitats of principal importance in Scotland is known as the Scottish Biodiversity List (SBL)².

The Wildlife and Natural Environment (Scotland) Act 2011 (as amended)

The Wildlife and Natural Environment (WANE) (Scotland) Act 2011 (as amended) makes changes to existing legislation covering specific wild fauna (e.g., birds, rabbits, hare etc), deer management, game management/licensing, species licensing, snaring, protection of badgers, muirburn, invasive non-native species, protected areas and enforcement/liability in relation to certain offences. In relation to bats, the WANE Act:

- Introduces the offence of 'knowingly causing or permitting' certain 'acts' within Sections 6, 7 and 15A as 'offences' under the W&C Act 1981;
- Permits derogation of disturbance and/or destruction of bat roosts by the appropriate authority for development purposes, subject to specific requirements of licensing; and furthermore
- Wildlife crime now requires to be documented in an annual report, as a result of Section 20 of the WANE Act, which inserted a new Section 26B into the W&C Act 1981. It prescribes that Ministers must lay a report every calendar year on offences which relate to wildlife, to include information on incidences and prosecutions during the year and on research and advice relevant to those offences.

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to interfere with a badger sett intentionally or recklessly. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020

The Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020 increases the maximum available sentences in relation to a range of offences concerning animal health and welfare and wildlife; provides regulatory powers for the issuing of fixed penalty notices; and provides authorised persons with new powers regarding animals taken into their possession.

Note that the Scottish Government has passed legislation to maintain the same levels of legal protections of wildlife in Scotland post EU-exit³.

Natural Environment & Rural Communities (NERC) Act 2006

The NERC Act 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations. Section 41 of the Act requires the publication of a list of habitats and

species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

Relevant Planning Policy

National Planning Framework 4

The National Planning Framework 4 (NPF4)¹³ sets out guidance for local planning authorities in Scotland on how to apply planning policies when drawing up plans and making decisions about planning applications. In order to comply with the biodiversity provisions of the recently adopted NPF4, development proposals should demonstrate that they contribute to the enhancement of biodiversity. Of particular relevance to this project, Policy 3 of the NPF4 states that:

“a) Development proposals will contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats and building and strengthening nature networks and the connections between them. Proposals should also integrate nature-based solutions, where possible;”

“c) Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity, in accordance with national and local guidance. Measures should be proportionate to the nature and scale of development.; and”

“d) Any potential adverse impacts, including cumulative impacts, of development proposals on biodiversity, nature networks and the natural environment will be minimised through careful planning and design. This will take into account the need to reverse biodiversity loss, safeguard the ecosystem services that the natural environment provides, and build resilience by enhancing nature networks and maximising the potential for restoration.”

¹³ National Planning Framework 4: Revised Draft, as adopted by Scottish Ministers as of 13 Feb 2023.

APPENDIX 02

UKHab baseline and Target Notes

236000 236200 236400

621400

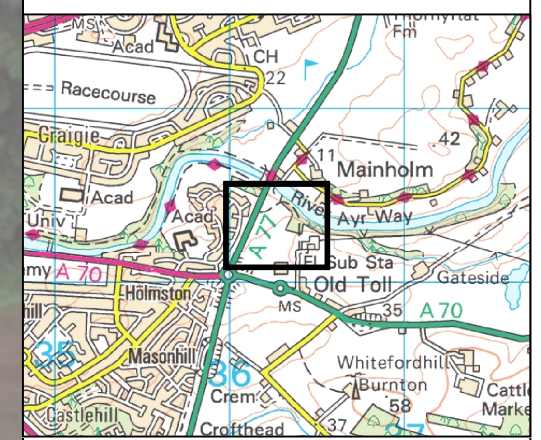
621200

405.064781.00001.0002.1 Baseline BNG

- Secondary Codes**
- 10 - Scattered Scrub
 - 11 - Scattered Trees
 - 16 - Tall Herb
 - 47 - Native
 - 49 - Veteran Trees
 - 56 - Young Trees - Planted
 - 69 - Fence
 - 76 - Recent Management
 - 80 - Unmanaged
 - 111 - Road
 - 119 - Seasonally Wet
 - 161 - Tall or Tussocky Sward



- LEGEND**
- Site Boundary
 - UK Habitat Classification**
 - h2 - Hedgerow
 - g3c8 - Holcus-Juncus neutral grassland
 - g4 - Modified Grassland
 - u1b - Developed Land, Sealed Surface
 - w1g6 - Line of Trees
 - w2c - other coniferous woodland



SLR

4/5 LOCHSIDE VIEW
EDINBURGH PARK
EDINBURGH
EH12 9DH

T: +44 (0)131 335 6830
www.slrconsulting.com

AYR ENERGY STORAGE PROJECT



PEA REPORT



BASELINE UK HABITAT SURVEY


FIGURE 1

Scale: 1:1,750 @ A3 Date: MARCH 2023



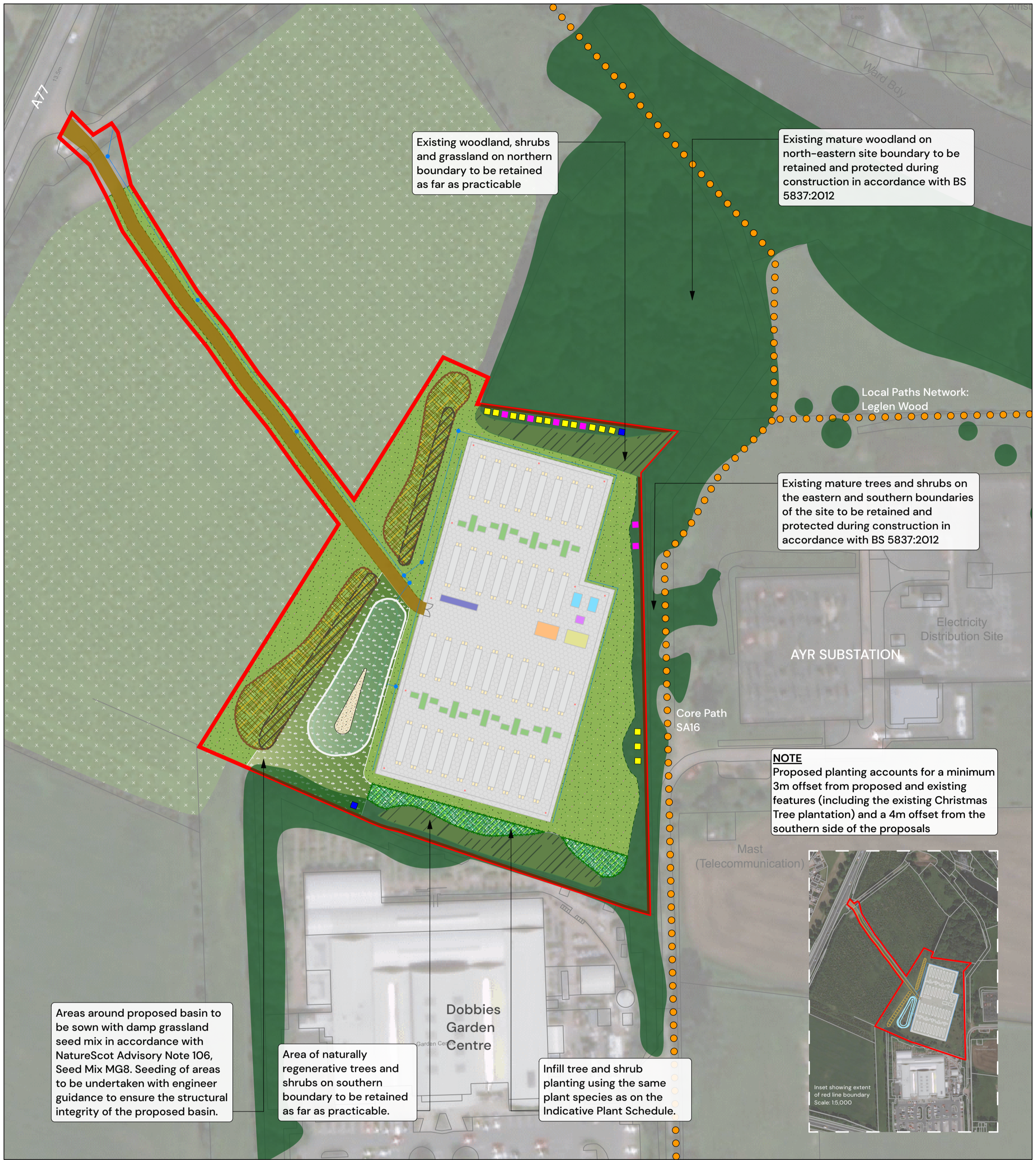
Target Note (TN)	Photograph	Description
1		Mature ash tree with dense ivy cover, damages to limbs and dense ivy cover.
2		Mature ash tree with dense ivy cover, damages to limbs and dense ivy cover.

Target Note (TN)	Photograph	Description
3		Mature ash tree with dense ivy cover, damages to limbs and dense ivy cover.
4		Mature ash tree with dense ivy cover, damages to limbs and dense ivy cover.

Target Note (TN)	Photograph	Description
5		Mature ash tree with dense ivy cover, damages to limbs and dense ivy cover.

APPENDIX 03

Landscape Plan



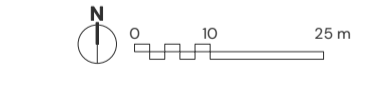
- KEY**
- EXISTING**
- Site boundary
 - Trees & vegetation
 - Christmas Tree plantation
 - Public rights of way
 - Woodland, shrubs and grassland

- PROPOSED**
- Meadow grass: Wild Flower Meadow MG5 or similar & approved
 - Meadow grass: Damp Grasslands Mixture MG8 or similar & approved
 - Native tree & shrub planting blocks
 - Infill native tree & shrub planting
 - Gravel to base of attenuation basin

- Linear drainage channel
- Bund
- Indicative bird box location
- Indicative bat box location
- Indicative insect box location

Indicative Plant Schedule: native tree & shrub planting

SPECIES	SIZE	%
Betula pendula	60-80cm ht, B, 1+1, transplant, seed-raised	25
Quercus robur	60-80cm ht, B, 1+1, transplant, seed-raised	15
Betula pubescens	60-80cm ht, B, 1+1, transplant, seed-raised	10
Sorbus aucuparia	60-80cm ht, B, 1+1, transplant, seed-raised	10
Sorbus aria	60-80cm ht, B, 1+1, transplant, seed-raised	10
Salix cinerea	60-80cm ht, B, 1+1, transplant, seed-raised	10
Prunus avium	60-80cm ht, B, 1+1, transplant, seed-raised	10
Prunus padus	60-80cm ht, B, 1+1, transplant, seed-raised	5
Prunus spinosa	60-80cm ht, B, 1+1, transplant, seed-raised; branches, 2 breaks	5



Rev	Date	By	Note
F	02.03.23	VR	Minor amends
E	23.02.23	VR	Minor amends
D	22.02.23	VR	New layout
C	07.02.23	TR	Minor amends
B	19.01.23	NW	Minor amends
A	07.12.22	TR	Minor amends

**Landscape Masterplan
Holmston Farm**

Client: RES
 DRWG No: P22-1768_EN_001 REV: F
 Drawn by: VR Approved by: GC
 Date: 17/11/2022
 Scale: 1:1,000 @ A2

PEGASUS GROUP

EUROPEAN OFFICES

AYLESBURY

T: +44 (0)1844 337380

BELFAST

belfast@slrconsulting.com

BIRMINGHAM

T: +44 (0)121 2895610

BONN

T: +49 (0)176 60374618

BRADFORD-ON-AVON

T: +44 (0)1225 309400

BRISTOL

T: +44 (0)117 9064280

CARDIFF

T: +44 (0)2920 491010

CHELMSFORD

T: +44 (0)1245 801630

CORK

T: +(021) 240 9000

DUBLIN

T: +353 (0)1 296 4667

EDINBURGH

T: +44 (0)131 335 6830

EXETER

T: +44 (0)1392 490152

FRANKFURT

frankfurt@slrconsulting.com

GLASGOW

glasgow@slrconsulting.com

GRENOBLE

T: +33 (0)6 23 37 14 14

KILKENNY

kilkenny@slrconsulting.com

LEEDS

T: +44 (0)113 5120293

LONDON

T: +44 (0)203 8056418

MAIDSTONE

T: +44 (0)1622 609242

MANCHESTER

T: +44 (0)161 8727564

NETHERLANDS\

T: +31 6 28 02 18 80

NEWCASTLE UPON TYNE

T: +44 (0)1844 337380

NOTTINGHAM

T: +44 (0)115 9647280

SHEFFIELD

T: +44 (0)114 2455153

SHREWSBURY

T: +44 (0)1743 239250

SPAIN

T: +34 6 82 04 83 01

STIRLING

T: +44 (0)1786 239900

WORCESTER

T: +44 (0)1905 751310