

Coylton BESS Site

784-B042549

Bat Activity Survey Report

TNEI

October 2023

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ACRONYMS/ABBREVIATIONS

| Acronyms/Abbreviations | Definition |
|------------------------|---|
| BCT | Bat Conservation Trust |
| BESS | Battery Energy Storage System |
| EPS | European Protected Species |
| ILP | Institute of Lighting Professionals |
| LBAP | Local Biodiversity Action Plan |
| MAGIC | Multi Agency Geographic Information for the Countryside |
| NBN | National Biodiversity Network |
| NS | NatureScot |
| NPF4 | National Planning Framework 4 |
| OS | Ordnance Survey |
| PEA | Preliminary Ecological Appraisal |
| PRF | Potential Roost Feature |
| SAC | Special Area of Conservation |
| SSSI | Site(s) of Special Scientific Interest |
| SWSEIC | Southwest Scotland Environmental Information Centre |
| W&CA | Wildlife & Countryside Act 1981 (as amended) |

EXECUTIVE SUMMARY

| Contents | Summary |
|--------------------------------|--|
| Site Location | The site is located approximately 2km northeast of Drongan in the county of Ayrshire, Scotland, and is centred at Ordnance Survey (OS) National Grid Reference NS 46435 19660. |
| Proposals | The proposed development is the construction and operation of a Battery Energy Storage System (BESS) and associated infrastructure including cable route, access roads, security fencing and signage. |
| Scope of this Survey(s) | Two manual bat activity transect surveys and two automated static monitoring surveys were undertaken. |
| Results | <p>The surveys found that:</p> <ul style="list-style-type: none">• Five species of bat use the site.• Bat activity was largely concentrated along a line of mature broad-leaved trees, a small number of which may be required to be felled for the planned cable route.• These trees may be used by roosting bats, and therefore the plans for the site risk disturbance to and/or killing/injury of bats. <p>The site was found to be at regional importance for foraging and commuting bats based on the Wray <i>et al.</i> (2010) method.</p> |
| Recommendations | <p>As a result of the findings of this bat activity survey it is recommended that:</p> <ul style="list-style-type: none">• Trees should be retained wherever possible. Any trees with potential roost features (PRFs) which are due to be felled must be checked by a suitably licensed bat ecologist using a torch and endoscope directly prior to felling.• Any lighting on the site must be designed in line with ILP guidance. <p>The landscaping plan submitted as part of the landscape documents is considered likely to increase connectivity and foraging habitat, suitably enhancing the site for bats. Additional measures to enhance the site for bats could include the provision of a range of bat boxes attached to suitable retained trees on the site.</p> |
| Conclusions | Provided the measures within this report for mitigation can be adopted, it is anticipated that plans for this site would be compliant with current local and national biodiversity planning policy and legislation. |

1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by TNEI on behalf of Statkraft UK Ltd (“the Applicant”) in May 2023 to undertake bat activity surveys of the land at the location of the proposed Coylton Battery Energy Storage System (BESS), hereafter referred to as “the site”.

This report has been prepared by Assistant Ecologist Ash Ronaldson BSc (Hons) and the conditions pertinent to it are provided in **Appendix A**.

Bats are protected species; full details of that protection, including types of offences and policy position are provided in **Appendix B**.

1.2 SITE LOCATION

The site is located off the A70 Ayr Road, approximately 2km northeast of Dronagan in Ayrshire, and is centred at Ordnance Survey National Grid Reference NS 46435 19660 (**Figure 1**). It comprises the Coylton Substation and two agricultural fields, with the northern boundary formed by the A70 road, southwestern boundary by a tree line, and western, eastern, and southern boundaries within agricultural fields. The wider landscape primarily comprises mixed farmland with a colliery 600m north.

1.3 DEVELOPMENT PROPOSALS

The proposed development is the construction and operation of a BESS and associated infrastructure such as landscaping, access roads, and security fencing.

1.4 PURPOSE OF THE REPORT

The purpose of this report is to:

- Identify the species assemblage on site, including the presence of common, rarer or rarest species of bat;
- Categorise the value of the site for bats (as per Reason & Wray (2023)).
- Understand the spatial and temporal distribution of bat activity across the site.
- Assess the effects of the proposed development of the site relating to bat species; and
- Provide recommendations for mitigation and enhancement where necessary.

The details of this report will remain valid until September 2024 after which the validity of this assessment should be reviewed to determine whether further updates are necessary.

The recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

2.0 METHODOLOGY

2.1 HISTORIC SURVEYS

This report should be read in conjunction with Tetra Tech’s 2023 Coylton BESS Update Preliminary Ecological Appraisal Report (Tetra Tech, 2023). This survey found that the site provided low potential for foraging and commuting bats.

2.2 DESK STUDY

A desktop study was carried out as part of the PEA, and comprised three elements:

- A data search requested from Southwest Scotland Environmental Information Centre (SWSEIC) in November 2022 of non-statutory sites and records of bats within 2km of the site boundary.
- A data search of NBN Atlas (<http://nbnatlas.org>) in October 2023 for records of bats within 2km of the site boundary.
- An online search using the Multi Agency Geographic Information for the Countryside (MAGIC) (<https://magic.defra.gov.uk>) website, NatureScot Sitelink (<https://sitelink.nature.scot>), and Ordnance Survey (OS) and Aerial Imagery (<https://www.bing.com/maps>). This included a search for any designated sites within 2km supporting bats. The search was conducted in October 2023.

2.3 MANUAL TRANSECTS

In accordance with guidance set out in the Bat Conservation Trust’s Bat Surveys: Good Practice Guidelines (Collins, 2016), transect surveys were completed when weather conditions were suitable (i.e., not during heavy rain, low temperatures or strong winds).

The activity surveys were completed using two surveyors, following a pre-determined transect route incorporating all accessible features or habitat types that are of value to foraging and commuting bats. Activity surveys commenced at sunset and concluded 2 hours after sunset. Weather conditions (temperature, precipitation and wind speed) were recorded at the start and end of each survey, and survey dates and weather conditions are provided in Table 1.

Table 1: Survey Dates and Weather Conditions

| Survey No. | Date | Time | | Air Temperature (°C) | | Wind Speed (Beaufort scale) | Cloud Cover (%) | Precipitation (%) |
|------------|----------|-------|-------|----------------------|-------|-----------------------------|-----------------|-------------------|
| | | Start | End | Initial | Final | | | |
| 1 | 31.05.23 | 21:48 | 23:48 | 19 | 16 | 2 | 40 | 0 |
| 2 | 22.08.23 | 20:36 | 22:36 | 15 | 14 | 1 | 60 | 0 |

The surveyors noted bat activity, using both visual observation and audio bat detectors to identify foraging and/or commuting behaviour. Surveyors recorded the time and a description of any activity. Additionally, where bats could be seen, the patterns and directions of the bats’ flight were also recorded.

The surveyors were all qualified ecologists and experienced at conducting bat surveys. All surveys were completed using an Elekon Batlogger M (full spectrum detectors) and were walked along a set transect (wherever possible) at a steady pace. The direction in which the transect was walked was changed between surveys in order to record activity around the site at different times. The recorded data was analysed using Bat Explorer to confirm the species’ present onsite. The recordings and the field notes were used to help build a picture of bat use across the site and to identify areas of relatively higher use.

2.4 AUTOMATED STATIC MONITORING

In accordance with Bat Conservation Trust’s Bat Surveys: Good Practice Guidelines (Collins, 2016) for low value habitats, one automated bat detector (Anabat Express) was deployed within the line of trees on the site, as shown in **Figure 1**. This location was chosen subjectively as a small number of trees in this location may be required to be felled as part of the plan for the site. The tree line is considered the most likely area of the site to provide commuting and foraging opportunities for bats, and the surrounding grassland habitats are also suitable for foraging.

The static detector was left to record for a minimum of 5 consecutive nights in suitable weather conditions within each of the sampled seasons (summer and autumn). Surveys were not contiguous, i.e., they were spaced out to include a reasonable time gap between each monitoring period. The detectors were set to ‘Night Only’ mode and recorded 30 minutes prior to sunset and finished 30 minutes after sunrise and all calls were recorded in full spectrum. A summary of the weather conditions during the static monitoring is provided in Table 2.

Table 2: Monitoring Dates and Weather Conditions

| | Dates | Average air Temperature (°C) | | Average Wind Speed | Average Cloud Cover (%) | Average Precipitation (%) |
|--------|-------------------------|------------------------------|-------|--------------------|-------------------------|---------------------------|
| | | Initial | Final | | | |
| Summer | 28.06.2023 – 05.07.2023 | 12 | 13 | Light air | 60 | Periods of rain |
| Autumn | 22.08.2023 – 05.09.2023 | 15 | 19 | Light air | 70 | Periods of rain |

All static detectors were positioned at approximately 1.5m height and in each case, the omnidirectional microphone of the Anabat Express was positioned on the side with the microphone facing south. Calls were subsequently analysed using Anabat Insight software (Version 2.0.5-1). The monitoring data was processed using the BatClassify plugin within the software and subsequently all of the species ID suggestions were manually verified. Data is presented as an activity index of bat passes per night (total number of passes in one night).

2.5 VALUING BAT POPULATIONS IN A WIDER ECOLOGICAL CONTEXT

Bats are a European protected species (EPS), but it does not follow that all sites supporting bats are of European importance. The importance of bats in a specific development project can be assessed objectively by valuing the bats that could be impacted by the development and characterising the likely impacts. The assessment of the value of the bat population on site is based on Reason & Wray (2023). UK bat species have been subdivided into groups, dependent on how common they are: widespread; widespread in many geographies, but not as abundant in all; rarer or restricted distribution; rarest Annex II species and very rare. These have been further subdivided based upon the location surveyed. Table 3 presents the rarity categorisation of bats in Southern Scotland. The tables in the following sections have been adapted from Reason & Wray (2023). Each rarity category receives a score. Widespread species score 1; widespread in many geographies score 2; rarer species score 3 and rarest species score 4 (Table 4). The maximum score a site in Southern Scotland can achieve is 24. Sites which score above 45% of the maximum score of 24 are considered of County level importance. Those scoring above 55% of 24 are of Regional Importance and those scoring above 70% are of National importance (Table 5).

Once the value of the bat assemblage was calculated, robust mitigation for any impact on the bats was determined.

Table 3: Categorising bats by distribution and rarity in Scotland (scientific names not given)

| Location: Southern Scotland | | | |
|---------------------------------------|---|--|---|
| Rarest Annex II species and very rare | Rarer or restricted distribution | Widespread in many geographies but not abundant in all | Widespread |
| Brandt's | Whiskered Noctule Nathusius' pipistrelle Leisler's | Daubenton's Natterer's Brown long-eared | Common pipistrelle Soprano pipistrelle |

Table 4: Assessing the importance of a bat assemblage in Southern Scotland.

| Location: Southern Scotland | | | |
|---------------------------------------|----------------------------------|--|------------|
| Rarest Annex II species and very rare | Rarer or restricted distribution | Widespread in many geographies but not abundant in all | Widespread |
| Score 4 | Score 3 | Score 2 | Score 1 |

Table 5: Thresholds for assessing importance

| Maximum possible score | County importance | Regional importance | National importance |
|------------------------|-------------------|---------------------|---------------------|
| 24 | 11 | 13 | 17 |

2.6 LIMITATIONS

The walked transect surveys were undertaken in suitable weather conditions with temperatures over 10°C at sunset. There was light rain at the start of the August dusk transect survey; however, bat activity was still recorded on the survey and therefore these slightly unfavourable weather conditions are not considered to be a significant constraint to the overall conclusions of the assessment.

Due to site access issues static monitoring did not take place in spring, and due to pregnant cattle on the site which could not easily be moved by the farmer, additional static monitoring was undertaken in place of a third walked transect survey in autumn. Bat activity levels across the site were found to be generally low on the transect surveys and primarily concentrated along the tree line; therefore, it was considered that a longer period of static monitoring would be likely to provide more meaningful results than a third transect survey. Although this deviates from the BCT Guidelines (Collins, 2016) followed at the time of the survey, it is not considered to be a limitation and the survey effort is considered appropriate for the site and survey purpose.

Static monitoring was undertaken in generally suitable weather conditions in line with BCT Guidelines (i.e., not during periods of heavy rain, low temperatures or strong winds).

The automated survey recorded no bats on one night out of eight during the summer monitoring period, and one night out of 15 during the autumn monitoring period. However, bats were recorded on every other evening during the monitoring periods thereby confirming that the automated bat detector was working correctly and that the results demonstrate low activity during these evenings.

The walked transect surveys were completed with the assistance of bat detectors. All survey techniques are subject to bias, and bat detector surveys may under-record species with weak echolocation calls, such as brown long-eared bats. However, these biases were considered when interpreting the results. (It is also of note that Batloggers are very effective at picking up quiet calls from brown long-eared bats). Some bat calls are variable dependent on the habitats they fly in and on their activity (commuting, foraging, social interaction, etc) and extremely similar between species. In these cases, it is accepted that species are identified to genus level or group level (e.g., *Myotis*, *Myotis/Plecotus* and *Nyctalus/Eptesicus*) (Collins, 2016). Where call parameters are inconclusive the species has been labelled as 'unknown'. This allows the dataset to be interpreted accurately and transparently.

Please note that for transects, the Batloggers record 'calls' (single echolocation pulses) whereas for statics, we report 'passes' – i.e., a sequence of 3 or more echolocation calls (which is automated when recording with the Anabat Express and analysing data in the Anabat Insight software). This means that the static and transect data are not directly comparable.

Notwithstanding the limitations highlighted above, the survey effort applied is considered sufficient to meet the aims of the survey.

The details of this report will remain valid for a period of one year from the date of the survey (i.e., until September 2024), after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals on which this report was based.

3.0 BASELINE CONDITIONS

3.1 HISTORIC SURVEYS

A bat roost assessment of the trees on the site was completed by Jordane Marsh as part of the preliminary ecological appraisal in November 2022, and results are detailed in the Update Preliminary Ecological Appraisal Report (Tetra Tech, 2023).

3.2 DESK STUDY

At the time of writing, the data requested from SWSEIC of non-statutory sites and records of bats within 2km of the site had not been received.

The data search of NBN Atlas did not return any records of bats within 2km of the site. Searches of MAGIC and NatureScot SiteLink did not find any designated sites within 2km supporting bats.

3.3 FIELD SURVEYS

3.3.1 Manual Transects

Species Assemblage

The activity transects revealed at least four species of bat active across the site;

- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Noctule *Nyctalus noctula*
- Leisler's bat *Nyctalus leisleri*

Spatial Distribution of Bat Activity

Table 6 summarises the results of the walked transect surveys and describes the spatial distribution of bat activity. The results should be read in conjunction with Figures 2, 3 and 4 which illustrate the locations of flight lines and show a 'heat map' of activity. Please note that the transect data does not distinguish between individual or multiple bats but where multiple bats were observed interacting this is highlighted qualitatively.

Table 6: Summary of manual transect results.

| Date | Relevant Figures | Species Recorded | Spatial Distribution of Activity |
|------------|------------------|---|---|
| 31.05.2023 | Figure 2 | Common pipistrelle Soprano pipistrelle Noctule Leisler's bat | Occasional common and soprano pipistrelle foraging and commuting activity was heard along the tree line, with no more than one bat seen or heard at any time. One Leisler's pass and two noctule passes were heard near the tree line during this survey. |
| 22.08.2023 | Figure 3 | Common pipistrelle Soprano pipistrelle Noctule | Occasional common and soprano pipistrelle foraging and commuting activity was observed along the tree line and in the scrub habitat at the southeast corner of the site, close to sunset. No more than two bats were seen or heard at any time. A noctule was heard in the distance close to the end of the survey in the north field. |

3.3.2 Automated Static Monitoring

The automated bat detectors deployed on site recorded one additional species of bats on the activity transects: *Myotis* sp.

Static Monitoring Results Summary

A summary of the monitoring results is shown below in Table 7. A detailed bat data results table is provided in **Appendix C**.

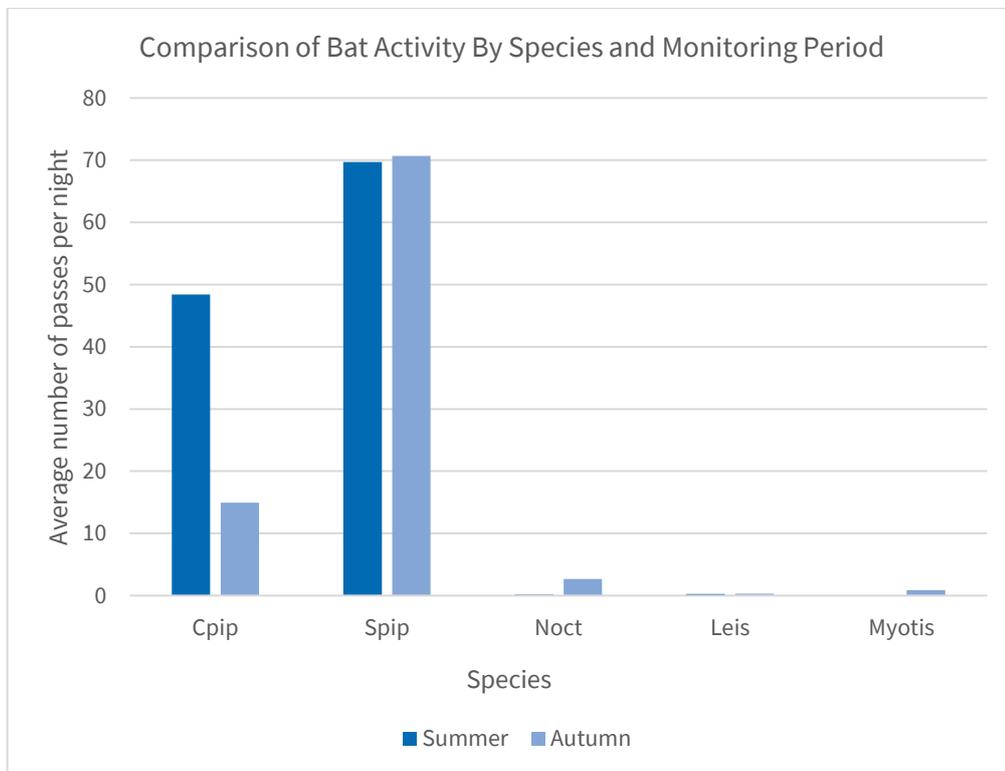
Table 7: Summary of overall bat activity per month

| Month | Bat Activity Levels (bat passes per night) | |
|-----------|--|-----|
| July | Maximum | 216 |
| | Mean | 104 |
| | Median | 103 |
| August | Maximum | 221 |
| | Mean | 114 |
| | Median | 94 |
| September | Maximum | 186 |
| | Mean | 41 |
| | Median | 6 |

Bat Species Activity Comparison

Soprano pipistrelle was the most abundant species recorded throughout both monitoring periods (Chart 1), followed by common pipistrelle. Common pipistrelle activity was higher in summer and lower in autumn. Noctule, Leisler’s and Myotis sp. activity levels were continually low.

Chart 1: Bat species activity comparison



3.3.3 Valuation of Bat Population Using the Site

The bat assemblage on site was found to be of value at a county level based on the Reason & Wray (2023) method. This assessment is based on the presence of common pipistrelle score = 1; soprano pipistrelle score = 1, noctule score = 3, Leisler’s bat score = 3 and Myotis sp. score = 4 (maximum score given for Myotis species as subspecies could not be identified). Total score was 12, 50% of the maximum score for bat assemblages in Southern Scotland and a County level importance category. The landscape on site is of gappy hedgerows and moderate field sizes of mixed agriculture with an unknown number of roosts nearby.

4.0 DISCUSSION

4.1 IMPACTS

Following the desk study and field survey, five species of bats have been found to use the site; primarily common pipistrelle and soprano pipistrelle with occasional noctule, myotis sp., and Leisler's bat. The site is assessed as of regional value for commuting and foraging bats.

Based on the site layout plan provided by TNEI (**Appendix D**) there are likely to be adverse effects on bats through loss of foraging habitat, severance of connectivity, killing and injury and disturbance during the construction and operational phase.

4.1.1 Loss of Habitats

The planned cable route location cuts through a tree line which provides habitat suitable for commuting, foraging, and roosting bats. The felling of a small number of trees to facilitate the cable route will remove a small amount of this habitat.

There is limited connectivity to other suitable habitats within the wider landscape, and the activity levels recorded during the surveys suggest that the site is being regularly used by only a small number of relatively common bat species. There are other trees within the tree line which provide potential roosting features, and as bats may cross gaps up to 10m wide (Entwhistle *et al.*, 2001), the size of the gap required for the cable route (widening the current gap between trees from 2m to approximately 4-5m) is considered unlikely to prevent bats from continuing to use the tree line for foraging and commuting.

Grassland habitats within the site are suitable for foraging by bats, however, there is ample similar habitat nearby.

The impacts on bats of removing a small portion of these habitats are therefore considered to be minimal.

4.1.2 Loss of Connectivity

The tree line provides connectivity between trees and scrub habitats at the north and south of the site. The felling of trees to create a 4-5m gap for the cable route is considered unlikely to sever this connectivity.

4.1.3 Killing & Injury

The felling of trees with PRFs may lead to killing or injury of any bats within.

4.1.4 Construction-phase Disturbance

Noise, vibration, and artificial light at night from construction activities may cause disturbance to bats using the nearby tree line for roosting, commuting, or foraging.

4.1.5 Operational-phase Disturbance

Artificial light at night may cause disturbance to commuting or foraging bats.

4.2 MITIGATION

As adverse effects on bats are anticipated, mitigation will be required in accordance with Policy ENV 6 of the East Ayrshire Local Development Plan (2017) in order to meet the objectives:

- *The planning and design of any development which has the potential to impact on a protected species will require to take into account the level of protection afforded by legislation and any impacts must be fully considered prior to the submission of any planning application.*
- *Any new development must protect, and where appropriate incorporate and/or extend, existing habitat networks, helping to further develop the Central Scotland Green Network in Ayrshire.*

The mitigation hierarchy principles are:

- Avoidance – to avoid adverse effects as far as possible by designing out or using preventative measures during the construction process thus resulting in an environmental effect of neutral significance.
- Reduction – to minimise adverse effects as far as possible.
- Compensation – involves measures of the same value to offset the impact.

4.2.1 Loss of Habitat

A landscaping plan provided by TNEI includes the infilling of hedgerows with native species, and the addition of various tree and plant species including a woodland wildflower mix. This is likely to enhance the site for invertebrates, increasing foraging resources for bats and mitigating the loss of a relatively small area of tree and grassland habitats. The majority of hedgerow and tree line habitat will be retained.

4.2.2 Loss of Connectivity

The landscaping plan for the site includes the retention and infilling of an existing hedgerow, as well as creation of a new hedgerow with additional trees and plants around the BESS site. This is likely to improve connectivity across the site.

4.2.3 Killing & Injury

In order to avoid killing or injuring bats, any trees with PRFs (as assessed in the Preliminary Ecological Assessment (Tetra Tech, 2023)) which are due to be felled must be checked by a suitably licensed bat ecologist using a torch and endoscope directly prior to felling.

4.2.4 Construction-phase disturbance

Where possible, works should take place during daylight hours only. Should artificial lighting be required, the following measures should be taken in line with ILP guidance (Institute of Lighting Professionals (ILP), 2023):

- Lights should be designed to be as low to the ground as possible (specifically not above 8m);
- Directional lighting should be used to avoid light spillage, particularly towards the tree line. Hoods/cowls can be used to direct light below the horizontal plane (ideally at an angle less than 70 degrees); and

- Lights should be switched off at night (particularly during the months of April to October inclusive when bats are active), or at least motion sensed.

4.2.5 Operational-phase disturbance

As in the construction phase, a lighting strategy for the site should be designed in line with ILP guidance:

- Lights should be designed to be as low to the ground as possible (specifically not above 8m);
- Directional lighting should be used to avoid light spillage, particularly towards the tree line. Hoods / cowls can be used to direct light below the horizontal plane (ideally at an angle less than 70 degrees); and
- Lights should be switched off at night (particularly during the months of April to October inclusive when bats are active), or at least motion sensed.

4.3 ENHANCEMENT

It is a requirement of the National Planning Framework 4 (NPF4) to provide enhancements for biodiversity as part of development.

The landscaping plan provided by TNEI (submitted as part of the landscape documents) demonstrates the infilling of existing hedgerows, creation of additional hedgerow habitats, tree planting, and areas of wildflower meadow habitat. These plans comprising native species will provide additional foraging and commuting habitats for bats throughout the site.

Additional measures to enhance the site for bats could include the provision of a range of bat boxes attached to suitable retained trees on site (Schwegler 1FR, 1F, 2FN and 1FF or similar). Lighting should be directed away from these new roost features.

5.0 SUMMARY

As a result of the findings of this bat activity survey it is recommended that:

- Any trees with PRFs (as assessed in the Preliminary Ecological Appraisal) which are due to be felled must be checked by a suitably licensed bat ecologist using a torch and endoscope directly prior to felling.
- Any lighting on the site must be designed in line with ILP guidance.

6.0 CONCLUSION

Provided the measures within this report for mitigation can be adopted, it is anticipated that plans for this site would be compliant with current local and national biodiversity planning policy and legislation.

7.0 REFERENCES

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FIGURES

Figure 1: Site Location Plan With Static Detector Location

Figure 2: Spring Transect Result

Figure 3: Summer Transect Result

Figure 4: Combined Transect Surveys Heat Map

FIGURE 1: SITE LOCATION PLAN WITH STATIC DETECTOR LOCATION



Site Location Plan with Static Detector Location
Coyton BESS



TNEI

Legend

- Site boundary
- Static detector

Notes:

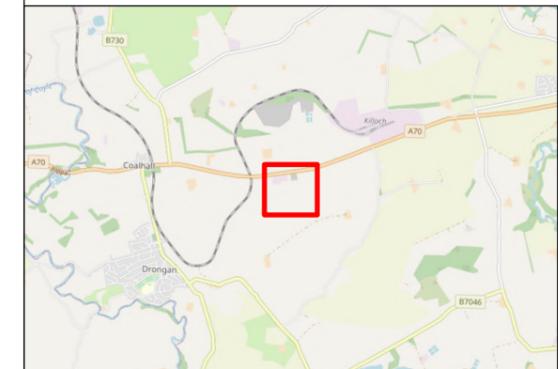
Drawn by: EMILY.GARDNER
 Checked by: AR
 Office: Southampton

Figure No. 1
 Revision No. A
 20 October 2023

0 25 50 75 100 Meters
 Scale 1:2,500 @A3

British National Grid
 NGR: 246425E 619546N

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The Pavilion, 1st Floor
 Botleigh Grange
 Office Campus
 Hedge End
 Southampton
 Hampshire, SO30 2AF

FIGURE 2: SPRING TRANSECT RESULT



Spring Transect Result

Coylton BESS



TNEI

Legend

- Site boundary
- ▲ Leisler's bat, *Nyctalus leisleri*
- Common pipistrelle, *Pipistrellus pipistrellus*
- Soprano pipistrelle, *Pipistrellus pygmaeus*
- Myotis sp., *Myotis spec.*
- ▲ Noctule, *Nyctalus noctula*

Notes:

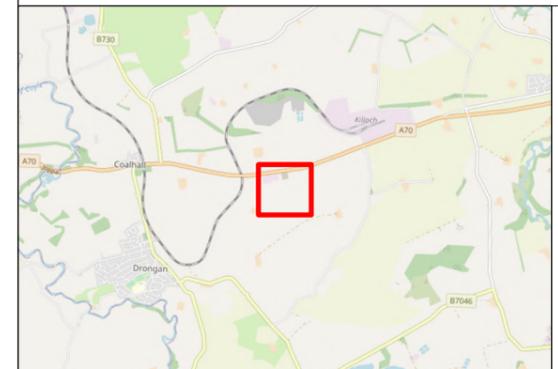
Drawn by: EMILY.GARDNER
 Checked by: AR
 Office: Southampton

Figure No. 2
 Revision No. A
 20 October 2023

0 25 50 75 100 Meters
 Scale 1:2,500 @A3

British National Grid
 NGR: 246470E 619533N

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FIGURE 3: SUMMER TRANSECT RESULT



Summer Transect Result

Coylton BESS



TNEI

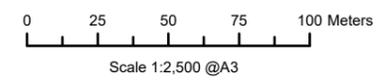
Legend

- Site boundary
- Common pipistrelle, *Pipistrellus pipistrellus*
- Soprano pipistrelle, *Pipistrellus pygmaeus*
- Noctule, *Nyctalus noctula*
- Pipistrelle sp., *Pipistrellus spec.*

Notes:

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Figure No. 3
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FIGURE 4: COMBINED TRANSECT SURVEYS HEAT MAP



Combined Transect Surveys Heat Map

Coylton BESS



TNEI

Legend

Site boundary
 Expected calls per 10m²

- 1 - 8
- 8 - 16
- 16 - 33
- 33 - 55
- 55 - 80
- 80 - 110

- Leisler's bat, *Nyctalus leisleri*
- Common pipistrelle, *Pipistrellus pipistrellus*
- Soprano pipistrelle, *Pipistrellus pygmaeus*
- Myotis sp., *Myotis spec.*
- Noctule, *Nyctalus noctula*
- Noctule sp., *Nyctalus spec.*
- Pipistrelle sp., *Pipistrellus spec.*

Notes:

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 Office: Southampton

Figure No. 4
 Revision No. A
 20 October 2023

0 30 60 90 120 Meters
 Scale 1:3,310 @A3

British National Grid
 NGR: 246431E 619519N

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APPENDICES

Appendix A: Report Conditions

Appendix B: Legislation and Relevant Planning Policy

Appendix C: Detailed Results of the Automated Static Monitoring

Appendix D: Proposed Site Layout Plan

APPENDIX A: REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of TNEI (“the Client”) and Statkraft UK Ltd (“the Applicant”) for the proposed uses stated in the report by Tetra Tech Limited (“Tetra Tech”). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B: LEGISLATION AND RELEVANT PLANNING POLICY

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. Since it was first introduced, the Act has been amended several times. All bats are protected through inclusion under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and benefit from various levels of protection. This legislation makes it an offence to:

- Intentionally or recklessly kill or injure these animals; and
- Sell, offer for sale, possess or transport for the purpose of sale of publish advertisement to buy or sell individual reptiles.

All are also listed under Schedule 5 Section 9.4b and 9.4c which makes it an offence to:

- Intentionally disturb while occupying a structure or place used for shelter or protection; and
- Obstruct access to such a site.

National Planning Framework 4

National Planning Framework 4 (NPF4) is the top tier of planning policy. The Framework provides guidance to local authorities and other agencies on planning policy and the operation of the planning system.

“Policy 1 gives significant weight to the nature crisis to ensure that it is recognised as a priority in all plans and decisions. Policy 4 protects and enhances natural heritage, and this is further supported by Policy 5 on soils and Policy 6 on forests, woodland and trees. Policy 20 also promotes the expansion and connectivity of blue and green infrastructure, whilst Policy 10 recognises the particular sensitivities of coastal areas.

Protection of the natural features of brownfield land is also highlighted in Policy 9, and protection of the green belt in Policy 8 will ensure that biodiversity in these locations is conserved and accessible to communities, bringing nature into the design and layout of our cities, towns, streets and spaces in Policy 14.

Most significantly, Policy 3 plays a critical role in ensuring that development will secure positive effects for biodiversity. It rebalances the planning system in favour of conserving, restoring and enhancing biodiversity and promotes investment in nature-based solutions, benefiting people and nature. The policy ensures that Local Development Plans (LDPs) protect, conserve, restore and enhance biodiversity and promote nature recovery and nature restoration. Proposals will be required to contribute to the enhancement of biodiversity, including by restoring degraded habitats and building and strengthening nature networks. Adverse impacts, including cumulative impacts, of development proposals on the natural environment will be minimised through careful planning and design, taking into account the need to reverse biodiversity loss. Development proposals for national, major or Environmental Impact Assessment (EIA) development will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks, so they are in a demonstrably better state than without intervention. Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity.”

See here for full details: <https://www.gov.scot/publications/national-planning-framework-4/>

East Ayrshire Local Development Plan (2017)

POLICY ENV 6: Nature Conservation

The importance of nature conservation and biodiversity will be fully recognised in the assessment of development proposals. This will be achieved by ensuring that:

- 1. Any development likely to have a significant effect on a Natura 2000 site which is not directly connected with or necessary to its conservation management must be subject to a “Habitats Regulations Appraisal”. Such development will only be approved if the appraisal shows that there will be no adverse effect on the integrity of the site*
- 2. Any development affecting a SSSI will only be permitted where it will not adversely affect the integrity of the area or the qualities for which it has been designated or where any significant adverse effects on the qualities for which it is designated are clearly outweighed by social, environmental or economic benefits of national importance.*
- 3. Any development that may adversely impact on areas of local importance for nature conservation, including provisional wildlife sites, local geodiversity sites and local nature reserves, will be expected to demonstrate how any impact can be avoided or mitigated.*
- 4. If there is evidence that protected species may be affected by a development, steps must be taken to establish their presence. The planning and design of any development which has the potential to impact on a protected species will require to take into account the level of protection afforded by legislation and any impacts must be fully considered prior to the submission of any planning application.*
- 5. Any new development must protect, and where appropriate incorporate and/or extend, existing habitat networks, helping to further develop the Central Scotland Green Network in Ayrshire.*

The Council will apply ‘the precautionary principle’ where the impacts of a proposed development on nationally or internationally significant natural heritage resources are uncertain but there is sound evidence indicating that significant irreversible damage could occur.

Local Biodiversity Action Plan (LBAP)

Coylton BESS Site Bat Activity Survey Report

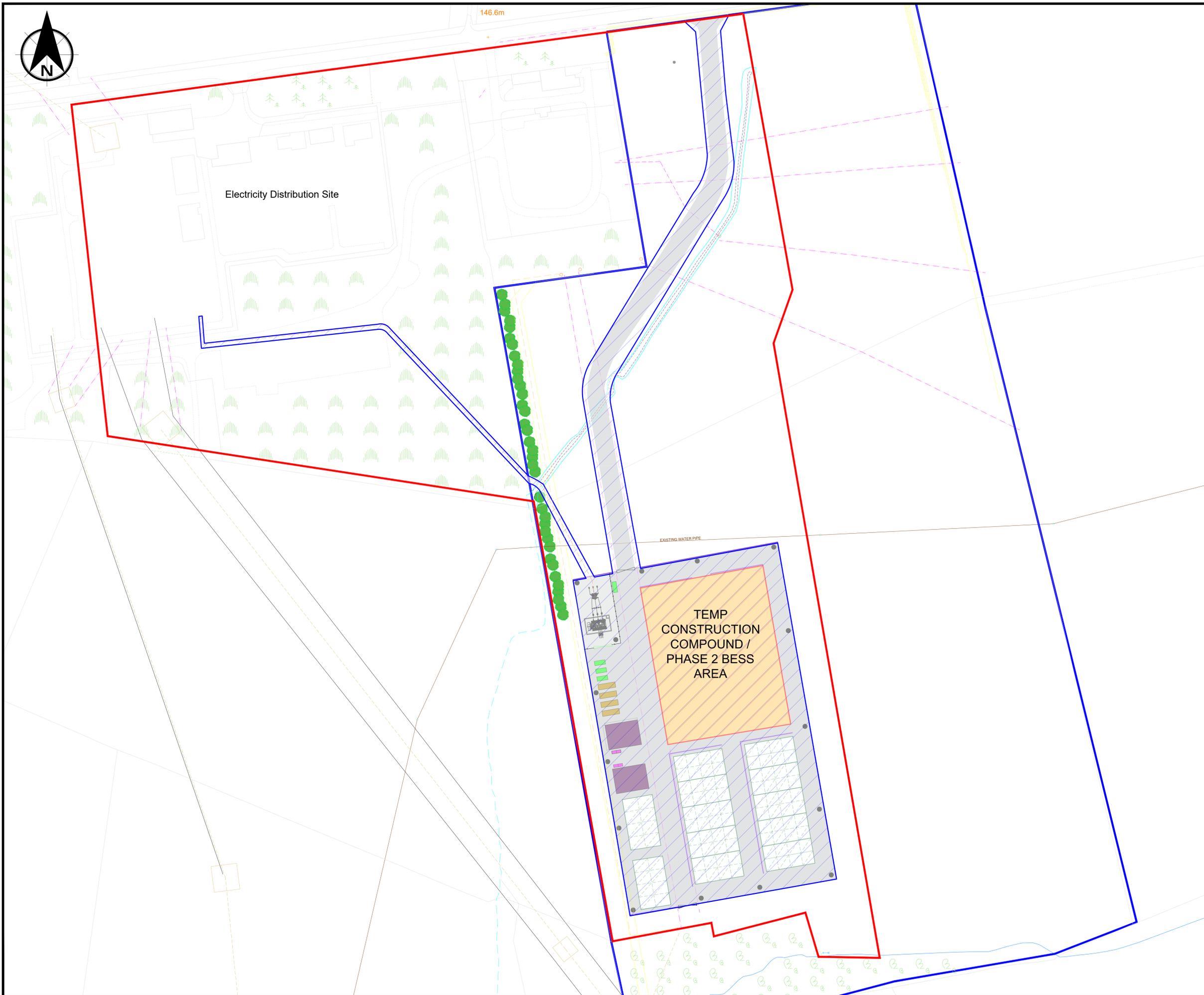
Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAPs may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision-making process.

APPENDIX C: DETAILED RESULTS OF THE AUTOMATED STATIC MONITORING

| Survey period | Species | No. of passes in detection period |
|-------------------------------------|---------------------|-----------------------------------|
| Summer (28.06.2023 – 05.07.2023) | Common pipistrelle | 339 |
| | Soprano pipistrelle | 488 |
| | Noctule | 1 |
| | Leisler's | 2 |
| | Myotis sp. | 0 |
| Autumn (22.08.2023 – 05.09.2023) | Common pipistrelle | 224 |
| | Soprano pipistrelle | 1,060 |
| | Noctule | 40 |
| | Leisler's | 5 |
| | Myotis sp. | 13 |

APPENDIX D: PROPOSED SITE LAYOUT PLAN



LEGEND

- SITE BOUNDARY
- EXISTING WATER PIPE
- INDICATIVE GRID CABLE ROUTE
- NOISE ATTENUATION / SECURITY FENCING AT 4.5m HIGH
- EXISTING OVERHEAD LINE (33 kV)
- LAND WITHIN CONTROL OF APPLICANT
- UNDERGROUNDING OF 33 kV CABLE
- EXISTING DITCH
- EXISTING INDICATIVE DITCH ALIGNMENT
- HV YARD INTERNAL SECURITY FENCING AT 3.4m HIGH
- COMMS HOUSE 5.63 m (H) x 14.20 m (L) x 18.80 m (W)
- AUX TRANSFORMER 2.50 (H) x 2.60 m (L) x 1.60m (W)
- STORES 2.60 m (H) x 6.10 m (L) X 2.40 m (W)
- OFFICES 3.60 m (H) x 9.80 m (L) x 3.1 m (W)
- POROUS CRUSHED AGGREGATE HARD SURFACING
- 4.5 m HIGH GATE (CLOSE BOARDED)
- 3.4 m PALISADE GATE
- CCTV / LIGHTING POLE (6m High)
- EXISTING VEGETATION
- EXISTING TREES

BATTERY CONTAINER AND HV YARD KEY:

- INDICATIVE BATTERY BLOCK
- HV EQUIPMENT 8 m (H) x 28.1 m (L) x 14.4 m (W)
- HV YARD 6.58 m (H) x 40.42 m (L) x 20.78 m (W)

PHASING KEY

- PHASE 1
- TEMP CONSTRUCTION COMPOUND / PHASE 2 BESS AREA

| 05 | 09/10/23 | FOR INFORMATION | SH | RL | RL |
|------|----------|-------------------|-------|-------|-------|
| Rev. | Date | Amendment Details | Drw'n | Chk'd | App'd |

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Drawing Status: **FOR INFORMATION**

Project Title: **COYLTON BESS**

Drawing Title: **PROPOSED SITE LAYOUT PLAN - DETAILED**

| | | | | |
|----------------|----------|----------|----------|----------|
| Scale | Designed | Drawn | Checked | Approved |
| 1:1000 | SH | SH | RL | RL |
| Original Size | Date | Date | Date | Date |
| A1 | 09/10/23 | 09/10/23 | 09/10/23 | 09/10/23 |
| Drawing Number | Revision | | | |
| 15627 - 032 | 5 | | | |