

Appendix 5

Appendix 5.1 Preliminary Ecological Assessment

Appendix 5.2 Ecology Report

Appendix 5.3 Flood Risk Assessment

SWE Ref: SWE 171

Version No: DRAFT

Date: 10th December 2019

Client: SUEZ Recycling &
Recovery UK Ltd



South West Ecology

Preliminary Ecological Appraisal Report



Cannon Bridge Transfer Station

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1.0 INTRODUCTION

1.1 Background

SWE Limited was commissioned by SUEZ Recycling & Recovery UK Limited to undertake an ecological appraisal of the site (herewith referred to as the 'site', which is defined as the zone of influence of potential development works) known as 'Connon Bridge Transfer Station. The site lies within a rural area at East Taphouse, Liskeard, Cornwall PL14 4NP (Ordnance Survey grid reference at approximate centre of Site: SX 176621).

The appraisal was required to inform on the potential ecological impacts of extending the Transfer Station to the north, to include a new food waste bay in order to accommodate a new collections contract. The extension may comprise a standalone building or a physical extension. In addition, a fire tank will be required to the south of the Transfer Station. The works will require the removal of a small area of trees to accommodate ground investigation works and the fire tank. At the time of writing this report no detailed plans of the proposal were available.

1.2 Purpose of this Report

The purpose of this report is to:

- provide a Preliminary Ecological Appraisal (PEA) through consideration of field survey and historic biodiversity data;
- identify potential ecological constraints and opportunities in relation to development and use of the site;
- identify mitigation and compensation measures which could be required to ensure compliance with nature conservation legislation; and
- identify appropriate enhancement measures which could be incorporated into site design, in line with local and national planning policy.

This report has been written in accordance with the guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) 2017¹.

¹ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal. Second Edition*. Chartered Institute of Ecology and Environmental Management, Winchester. December 2017.

1.3 Site Description

The site primarily consisted of a large modern building, hardstanding, bare ground, a small plantation woodland, and areas of grassland (Figure 1). The site was bounded by the HWRC station to the south, woodland to the west, and landfill undergoing restoration to the north and east. The wider landscape comprised of mixed agricultural land, hedgerows, and small broadleaf woodlands.

Figure 1. The site. GoogleEarth 22nd June 2018.



1.4 Author

The author of this report, Dr Steve Holloway, has over twenty years' professional experience of ecology, environmental management and nature conservation in the private, public and voluntary sectors. Dr Holloway is a full member of CIEEM and is a Chartered Environmentalist (CEnv).

All work is undertaken in accordance with the CIEEM recommendations, the most up-to-date and relevant survey guidance available at the time, and in compliance with BS:42020:2013² Biodiversity. Code of Practice for Planning and Development.

² BSI. 2013. *BS:42020:2013 Biodiversity. Code of Practice for Planning and Development.*

2.0 RELEVANT LEGISLATION AND PLANNING POLICY

2.1 Legislation³

2.1.1 *Conservation of Habitats and Species Regulations 2017*

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 disturb⁴ 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). Species include hazel dormouse *Muscardinus avellanarius* and all bats.

The Habitats Regulations 2017 will continue to implement the Habitats Directive and certain elements of the Birds Directives in England. The Habitats Regulations 2010 have been amended ten times since they were last consolidated (in 2010) and are likely to remain in place for some time if the UK exits the EU.

2.1.2 *Wildlife & Countryside Act 1981*

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 e.g. hazel dormouse, all bat species, and all reptile species;

³ Please note that the summary of relevant legislation provided here is intended for general guidance only. The original legislation should be consulted for definitive information.

⁴ 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 affects significantly the local distribution or abundance of the species.

- 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 (not applicable for the Site as no species listed on the Schedule were found); or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act (not applicable for the Site as no species listed on the Schedule occur).

2.1.3 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 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.

The Section 41 list includes a number of bat species, dormouse, hedgehog *Erinaceus europaeus*, slow worm *Anguis fragilis*, grass snake *Natrix natrix*, and common toad *Bufo bufo*.

2.1.4 Badger Act

Specific protection for badgers is provided by the Protection of Badgers Act 1992⁵ which makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett, or obstructing access to it.

2.1.5 Wild mammals Protection Act

The Wild Mammals (Protection) Act 1996 makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering. A "wild mammal" means any mammal which is not a domestic or captive animal within the meaning of the Protection of Animals Act 1911.

⁵ 9 The National Archives. Protection of Badgers Act 1992. [online]. Available at: <http://www.legislation.gov.uk/ukpga/1992/51/contents> [Accessed 11 April 2018]

2.2 Planning Policy

2.2.1 National Policy

The National Planning Policy Framework (NPPF)⁶ sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05⁷, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out.

Paragraph 175 of the NPPF deals with habitats and biodiversity in relation to planning applications. With respect to this assessment the following parts of paragraph 175 apply (in part):

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

2.2.2 County Policy

Adopted as a Council document in 2018, the Biodiversity Guide⁸ sets out an approach by Cornwall Council for achieving a gain for nature within development sites. It does this by encouraging more biodiverse green and blue space within development sites, such as parks, ponds and corridors of open green space along rivers and hedges. It also gives prescriptive measures for the provision of bat and bird boxes, and bee bricks to make space for nature and the expected quality of ecological reporting for planning applications.

⁶ Department for Communities and Local Government. 2019. *National Planning Policy Framework*.

⁷ Office of the Deputy Prime Minister. 2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. ODPM Circular 06/2005.

⁸ Cornwall Council. 2018. Cornwall Planning for Biodiversity Guide.

3.0 METHODOLOGY

3.1 Desk Study

A review of online data within 1 km radius of the site was undertaken 24th November 2019. The data included statutory designated sites⁹ and records of 'species of conservation concern' at a national, regional and local level¹⁰. Online data was accessed from MAGIC¹¹ and the National Biodiversity Network (NBN) Atlas¹². Given the scale of the proposed development a data request to Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) was deemed disproportionate to any potential impacts of the proposal. This is in accordance with CIEEM (2017) guidance.

3.2 Field Survey

A survey was conducted by Dr Holloway on 22nd November 2019. The weather at the time of survey was 12°C, overcast with F2 winds (wind speed is categorised in accordance with the Beaufort Scale¹³). The survey area consisted of all land within the planning application red line boundary (Figure 1).

An 'extended' Phase 1 Habitat Survey was conducted in line with CIEEM guidance (2017¹⁴). The field methodology was based on the Joint Nature Conservation Committee (JNCC, 2010¹⁵) advice. All habitats were mapped and the presence or potential for presence of protected species noted.

3.3 Limitations

There were no limitations to the survey.

⁹ Statutory designated sites include those protected under national or international legislation, such as Sites of Special Scientific Interest (SSSI). Non-statutory sites include Local Wildlife Sites (LWS) and County Wildlife Sites (CWS).

¹⁰ This includes species protected under international and national legislation, as well as species included in the UK, Red Data Books, and Red or Amber lists of 'birds of conservation concern', and Species of Principle Importance (NERC 2006).

¹¹ <http://www.natureonthemap.naturalengland.org.uk/magicmap.aspx>

¹² <https://nbnatlas.org/>

¹³ The Beaufort scale measures wind speed on a twelve point scale from zero (calm) to 12 (hurricane).

¹⁴ CIEEM 2017. Guidelines for Preliminary Ecological Appraisal. 2nd Edition. Technical Guidance Series.

¹⁵ Joint Nature Conservation Committee. 2010. Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit.

4.0 RESULTS

4.1 Desk Study

4.1.1 Designated Sites

There were no statutory sites designated for nature conservation within 1 km of the site.

The site was 3.4 km northeast, but within the Impact Risk Zone, for Boconnoc Park and Woods Site of Special Scientific Interest (SSSI). Boconnoc SSSI is of international importance for its rich and diverse lichen flora. It is also important for its broadleaf woodland and for dragonflies.

4.1.2 Species

There were records for protected and notable species within 1 km of the site. Species of note that may be relevant to the assessment of the site were:

Bats

Brown long-eared bat *Plecotus auritus*

Common pipistrelle *Pipistrellus pipistrellus*

Lesser horseshoe *Rhinolophus hipposideros*

Other mammals

Badger *Meles meles*

Hazel dormouse *Muscardinus avellanarius*

West European hedgehog *Erinaceus europaeus*

Birds

House sparrow *Passer domesticus*

Song thrush *Turdus philomelos*

Amphibians and reptiles

Common lizard *Zootoca vivipara*

4.2 Field Survey

The site habitats were categorised as: plantation woodland, grassland, bare ground, and buildings (Drawing 1). The hardstanding areas did not contain any ecological interest and are therefore not considered further in this assessment.

4.2.1 Plantation Woodland

The small plantation (c. 0.1 ha) comprised of immature ash *Fraxinus excelsior*, goat willow *Salix caprea*, alder *Alnus glutinosa*, silver birch *Betula pendula*, sycamore *Acer pseudoplatanus*, and hazel *Corylus avellana* (Figure 2). The trees did not contain any Potential Roost Features (PRFs) for bats.

The ground-flora comprised bracken *Pteridium aquilinum*, bramble *Rubus fruticosus*, common nettle *Urtica dioica*, red campion *Silene dioica*, thistles *Cirsium* sp., bedstraw *Galium aparine*, male fern *Dryopteris filix-mas*, cock's-foot *Dactylis glomerata*, and willowherb *Chamaenerion angustifolium*.

Figure 2. Plantation woodland looking east.



4.2.2 Grassland

The majority of the grassland occurred to the east of the Transfer Station and consisted of two small areas totalling c. 0.04 ha (Figure 3). The grass was a sown amenity grass mix with herbs

comprising clovers *Trifolium* sp., ribwort plantain *Plantago lanceolata*, and docks *Cirsium* sp. The sward was mown to a short turf. A small patch of longer grass dominated by cock's-foot was located to the north of the Transfer Station and the small cabin (Figure 4).

Figure 3. Grassland to the east of the Transfer Station, looking northwest.



Figure 4. Small patch of longer grassland.



4.2.3 Bare Ground

The bare ground occurred to the east and north of the transfer station.

Approximately 50% of the bare ground consisted of a track and turning area with negligible ecological interest.

The remainder consisted of a northeast facing bank (Figure 5). The bank was sparsely vegetated. Plant species included grasses such as cock's-foot, buddleia *Buddleja davidii*, perforate St John's wort *Hypericum perforatum*, rose of Sharon *Hypericum calycinum*, thistles *Cirsium* sp., bramble, western gorse *Ulex gallii*, and small saplings of birch and alder.

Figure 5. Bare ground on bank to the southwest of the Transfer Station.



4.2.4 Buildings

The buildings consisted of a modern steel frame Transfer Station (Figure 6) in active use, and a small metal cabin (Figure 7). There was also a metal shipping container. None of the structures had any value for protected species.

Figure 6. Transfer Station, northeast aspect.



Figure 7. Cabin to the north of the Transfer Station.



4.2.5 Species

Species of fauna noted over the site were: blue tit *Cyanistes caeruleus*, blackbird *Turdus merula*, woodpigeon *Columba palumbus*, wren *Troglodytes troglodytes*, and robin *Erithacus rubecula*.

5.0 ASSESSMENT

The results of the desk study and field survey were assessed in accordance with current legislation and policy. A proportionate approach was taken in relating the findings to the proposed development and current use of the site.

5.1 Designated Sites

Although the site is within the Impact Risk Zone for Boconnoc SSSI, the proposal would not impact on the integrity of the habitats and species associated with the conservation site i.e. broadleaf woodland, lichens, and dragonflies.

5.2 Habitats

Although broadleaf woodland is a Priority Habitat (lowland mixed deciduous woodland) the trees within the site were immature and are likely to have been planted in the last ten to fifteen years (examination of historic GoogleEarth imagery shows there to be an absence of woodland in 2002). The ground-flora was dominated by bracken and brambles with very little diversity. There was an absence of an established shrub layer. Therefore, the trees within the site were not considered to collectively represent Priority Habitat. Plantation woodland is commonplace throughout England and is of low ecological value.

The grassland was typical of amenity lawns and was of negligible ecological value.

The vegetation associated with the bare ground consisted of commonplace plant species typical of disturbed ground. This type of habitat is ubiquitous throughout England where land disturbance as a result of industrial works and development have taken place. The bare ground habitat was therefore of negligible ecological value.

The buildings had no ecological value.

5.3 Species

Bats

The site may be used by bats such as pipistrelles for foraging, but only as a negligible part of a much wider resource. Based on the habitats present and their connectivity to the wider landscape, the site can be classified under current guidance (Collins, 2016) as having low suitability for bats. As there were no PRFs for bats within the site no mitigation for this species group is required.

Dormouse

The trees were immature with an undeveloped shrub layer. It is considered highly unlikely that this habitat has been colonised by hazel dormouse since its planting and as such this species does not require mitigation.

West European hedgehog

The area of trees may be used by hedgehogs for breeding and foraging. The proposed removal of the trees could potentially injure or kill hedgehogs and as such mitigation will be required.

Reptiles

The small patch of longer grass to the north may be used by common lizards, but in very low numbers. There was insufficient cover to allow for reptile survey to be undertaken, however a precautionary approach should be undertaken when clearing the longer grass habitat.

Nesting birds

There was nesting potential within the tree area. Therefore, mitigation measures for nesting birds will need to be employed during vegetation clearance of this area.

5.4 Recommendations

5.5 Survey

Given the scale of the proposal and the habitats noted, no survey for protected species is required.

5.6 Mitigation Measures

Any trenches (e.g. utility trenches or trenches for foundations) left exposed overnight will be provided with a means of escape for wildlife (as per BS 42020:2013) such as European hedgehog. Such measures will include either a shallow sloped edge or angled board (minimum 30cm width). These will be positioned at a maximum angle of 30°.

No vegetation clearance of the tree area, which could affect nesting birds, will take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check for active birds' nests immediately beforehand and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place

to protect nesting bird interest (as per BS 42020:2013). Any birds nesting will be left to complete breeding (i.e. until all dependant juveniles have fledged).

The area of longer grass should be cut in three stages using hand tools during the reptile active season (April to early October): the first cut, using hand tools, to c. 10 cm height; the second 24 hrs later to c. 5 cm; and the third to ground level. This will displace any reptiles present into the adjacent habitat to the north.

5.7 Biodiversity Opportunities

In accordance with Cornwall Council's Biodiversity Guide a net gain for nature should be achieved within the site. There will be a loss of habitat due to the proposed development, albeit it that the habitats are of low to negligible ecological value. There will also be a loss of potential bird nesting and reptile habitat. Therefore, a degree of compensation will be required. This could be achieved through habitat creation and the provision of bat and bird boxes, and a reptile hibernaculum, within the site.

Opportunities for habitat creation should focus on the area to the west and north of the Transfer Station building. A mosaic habitat of grassland, dry heath and bare ground could be created with occasional trees and shrubs planted to provide structural diversity. Planting should consist of native species appropriate to the area and ground conditions. Any grass/heath seed should be of local provenance.

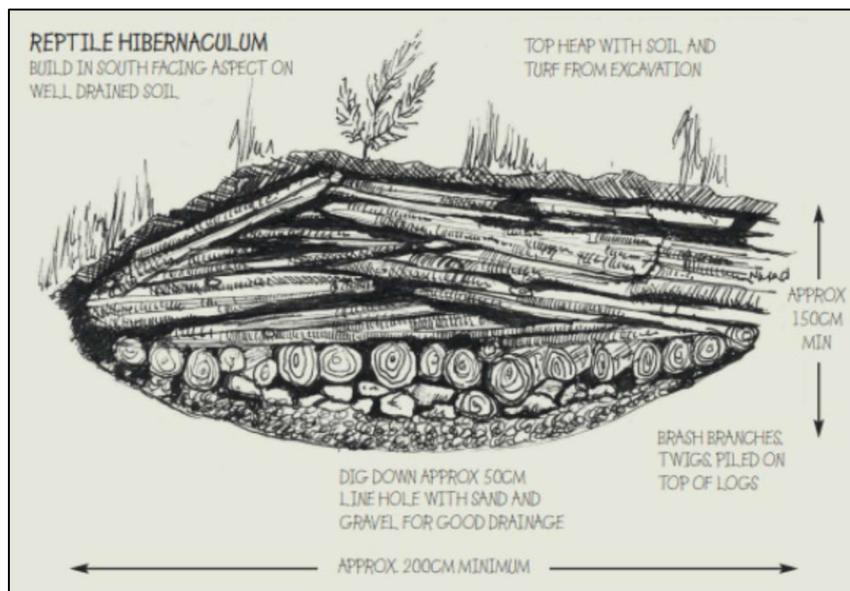
The inclusion of bird and bat boxes onto the external surface of the extended Transfer Station and/or on retained trees adjacent to the site would further enhance the area for wildlife. It is recommended that 2 no. bat boxes e.g. Eco Bat Box, and 2 no. sparrow terrace boxes¹⁶ are erected.

One no. hibernaculum could be created to encourage reptiles and amphibians. To provide a hibernaculum an underground chamber could be excavated to 2.0 - 4.0 m diameter, and 0.5 m depth, and lined with sand and gravel to improve drainage (Figure 8). The hole would be loosely back filled with stones, rocks and logs, and branches and brash placed over the top. The structure would be capped with soil and turfs to form an insulating layer and to protect it

¹⁶ <https://www.nhbs.com/house-sparrow-terrace-fsc-nest-box>

from frost. Small gaps into the interior will be left to enable reptiles and amphibians to enter and exit the finished hibernaculum (plastic piping can be added to enhance entrance points).

Figure 8. Example of a hibernacula design¹⁷.



¹⁷ Julian, A.J. & Hand, N.K. (2018). ARG UK Advice Note 11. Managing Habitat for Adders: Advice for Land Managers. Amphibian and Reptile Groups of the UK.

6.0 CLOSURE

This report has been prepared by SWE Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

The information presented in this report provides guidance to reduce the risk of offences under UK law. However, SWE is not a legal practice and disclaims any responsibility to the client and others for actions that lead to offences being caused, whether or not the guidance contained in this report is followed. Interpretation of UK legislation is presented in good faith; however for the avoidance of doubt, we recommend that specialist legal advice is sought.

This report is for the exclusive use of SUEZ Recycling & Recovery Limited; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SWE.

SWE disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

DRAWING 1. PHASE 1 HABITAT MAP



SWE Ref: SWE 254

Version No: 2

Date: 8th March 2021

Client: SUEZ Recycling &
Recovery UK Ltd



South West Ecology

Ecology Report



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1.0 INTRODUCTION

1.1 Background

SWE Limited was commissioned by SUEZ Recycling & Recovery UK Limited (hereby referred to as the applicant) to undertake an ecological appraisal of the site (herewith referred to as the 'site', which is defined as the zone of influence of potential development works) known as Connon Bridge Transfer Station. The site lies within a rural area at East Taphouse, Liskeard, Cornwall PL14 4NP (Ordnance Survey grid reference at approximate centre of the site: SX 176621).

The appraisal was required to inform on the potential ecological impacts of extending the Transfer Station to the north, to include a new food waste building to accommodate a new collections contract. Additional works include an external yard, fire tank and pump house, a new water pipe, and a new access track. Subsequent to the assessment of the above, additional survey was conducted to assess the potential impact of a turning head to the north of original site. The two areas are shown on Figure 1 (note that they are labelled site a and b only for the purposes of this ecological assessment).

1.2 Purpose of this Report

The purpose of this report is to:

- provide a Preliminary Ecological Appraisal (PEA) through consideration of field survey and historic biodiversity data;
- identify potential ecological constraints and opportunities in relation to development and use of the site;
- identify mitigation and compensation measures which could be required to ensure compliance with nature conservation legislation; and
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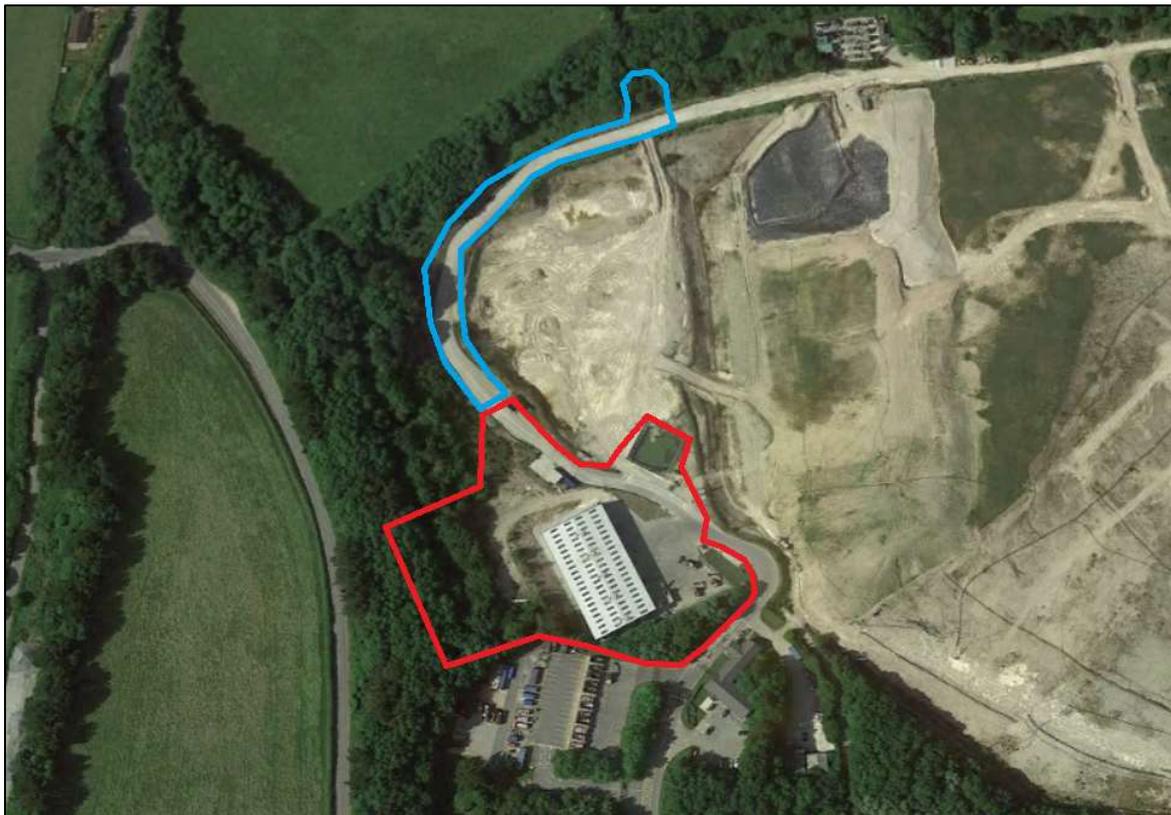
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¹ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal. Second Edition*. Chartered Institute of Ecology and Environmental Management, Winchester. December 2017.

1.3 Site Description

The site primarily consisted of woodland, scrub, ruderal, a recycling centre building, hardstanding, and bare ground (Figure 1). The site was bounded by the HWRC station and car parking to the south, woodland and the A3359 highway to the west, and landfill undergoing restoration to the north and east. The wider landscape comprised of restored landfill, mixed agricultural land, hedgerows, and small broadleaf woodlands.

Figure 1. The site (red – site A; blue – site B). GoogleEarth, June 2018.



1.4 Report Lifespan

In accordance with CIEEM guidance² this report, and the results of the ecological survey contained within, remains valid for 12 months.

² CIEEM. 2019. On the Lifespan of Ecological Reports and Surveys. Advice Note. April 2019.

1.5 Author

The author of this report, Dr Steve Holloway, has over twenty years' professional experience of ecology, environmental management, and nature conservation in the private, public and voluntary sectors. Dr Holloway is a full member of CIEEM and is a Chartered Environmentalist (CEnv).

All work was undertaken in accordance with the CIEEM recommendations, the most up-to-date and relevant survey guidance available at the time, and in compliance with BS:42020:2013³ Biodiversity. Code of Practice for Planning and Development.

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⁷ Office of the Deputy Prime Minister. 2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. ODPM Circular 06/2005.

broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out.

Paragraph 175 of the NPPF deals with habitats and biodiversity in relation to planning applications. With respect to this assessment the following parts of paragraph 175 apply (in part):

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

2.2.2 County Policy

The Cornwall Local Plan (adopted on 22 November 2016) provides a planning policy framework for Cornwall for the period up to 2030. Policy 23 of the Plan considers the natural environment. The relevant parts of Policy 23 in relation to the Site are sections 3 and 4 which are as follows:

3. Biodiversity and Geodiversity

Development should conserve, protect and where possible enhance biodiversity and geodiversity interests and soils commensurate with their status and giving appropriate weight to their importance.

All development must ensure that the importance of habitats and designated sites are taken into account and consider opportunities for the creation of a local and county-wide biodiversity network of wildlife corridors which link County Wildlife Sites and other areas of biodiversity importance, helping to deliver the actions set out in the Cornwall Biodiversity Action Plan.

3 (c). Local Sites

Development likely to adversely affect locally designated sites, their features or their function as part of the ecological network, including County Wildlife Sites, Local Geological Sites and sites supporting Biodiversity Action Plan habitats and species, will only be permitted where the need and benefits of the development clearly outweigh the loss and the coherence of the local ecological network is maintained.

3(d). Priority species and habitats

Adverse impacts on European and UK protected species and Biodiversity Action Plan habitats and species must be avoided wherever possible (i) subject to the legal tests afforded to them, where applicable (ii) otherwise, unless the need for and benefits clearly outweigh the loss.

3(e). Ancient woodland and veteran trees

Development must avoid the loss or deterioration of ancient woodland and veteran trees, unless the need for, or benefits of, development on that site clearly outweigh the loss.

4. Avoidance, mitigation and compensation for landscape, biodiversity and geodiversity impacts

Development should avoid adverse impact on existing features as a first principle and enable net gains by designing in landscape and biodiversity features and enhancements, and opportunities for geological conservation alongside new development. Where adverse impacts are unavoidable, they must be adequately and proportionately mitigated. If full mitigation cannot be provided, compensation will be required as a last resort.

Adopted as a Council document in 2018, the Biodiversity Guide⁸ sets out an approach by Cornwall Council for achieving a gain for nature within development sites. It does this by encouraging more biodiverse green and blue space within development sites, such as parks, ponds and corridors of open green space along rivers and hedges. It also gives prescriptive measures for the provision of bat and bird boxes, and bee bricks to make space for nature and the expected quality of ecological reporting for planning applications.

From March 2020 Cornwall Council is applying a 10% net gain requirement to all major planning applications. The definition of major development is as follows:

- 10+ dwellings / over half a hectare / building(s) exceeds 1000m².
- Office / light industrial - 1000+ m² / 1+ ha.
- General industrial - 1000+ m² / 1+ ha.
- Retail - 1000+ m²/ 1+ ha.

⁸ Cornwall Council. 2018. Cornwall Planning for Biodiversity Guide.

In line with DEFRA recommendations developments will be monitored for up to 30 years. This is to ensure that they accord with their biodiversity obligations. These obligations will be secured by way of planning conditions.

3.0 METHODOLOGY

3.1 Desk Study

A review of online data within 1 km radius of the site was undertaken 2nd May 2020. The data included statutory designated sites⁹ and records of 'species of conservation concern' at a national, regional, and local level¹⁰. Online data was accessed from MAGIC¹¹ and the National Biodiversity Network (NBN) Atlas¹².

Historic biodiversity data within a 1 km radius of the site was obtained from the Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) on 16th June 2020. This was in accordance with CIEEM (2017) guidance.

3.2 Field Survey

An initial survey was conducted by Dr Holloway on 4th May 2020. The weather at the time of survey was 16°C, overcast with F1 winds (wind speed is categorised in accordance with the Beaufort Scale¹³). The survey area consisted of all land within the planning application red line boundary (Figure 1). An additional site visit was conducted on 6th October 2020 to assess the potential impact of a turning circle to the north of the original site. The weather at the time of the second visit was 12°C, partially sunny, with F2 winds.

On both occasions an 'extended' Phase 1 Habitat Survey was conducted in line with CIEEM guidance (2017¹⁴). The field methodology was based on the Joint Nature Conservation Committee (JNCC, 2010¹⁵) advice. All habitats were mapped and the presence or potential for presence of protected species noted.

⁹ Statutory designated sites include those protected under national or international legislation, such as Sites of Special Scientific Interest (SSSI). Non-statutory sites include Local Wildlife Sites (LWS) and County Wildlife Sites (CWS).

¹⁰ This includes species protected under international and national legislation, as well as species included in the UK, Red Data Books, and Red or Amber lists of 'birds of conservation concern', and Species of Principle Importance (NERC 2006).

¹¹ <http://www.natureonthemap.naturalengland.org.uk/magicmap.aspx>

¹² <https://nbnatlas.org/>

¹³ The Beaufort scale measures wind speed on a twelve point scale from zero (calm) to 12 (hurricane).

¹⁴ CIEEM 2017. Guidelines for Preliminary Ecological Appraisal. 2nd Edition. Technical Guidance Series.

¹⁵ Joint Nature Conservation Committee. 2010. Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit.

3.3 Limitations

There were no limitations to the surveys.

4.0 RESULTS

4.1 Desk Study

4.1.1 Designated Sites

There were no statutory sites designated for nature conservation within 1 km of the site.

The site was within the Impact Risk Zone (IRZ) for Boconnoc Park and Woods Site of Special Scientific Interest (SSSI). Boconnoc Park and Woods SSSI is of international importance for its rich and diverse lichen flora. It is also important for its broadleaf woodland and for dragonflies.

4.1.2 Species

There were records for protected and notable species within 1 km of the site. A summary of the species data can be found in Appendix 1. Species of note that have been recorded within the last 10 years and were relevant to the proposal (relevance based on the habitats present within the site being able to support the species) were:

Bats

Brown long-eared bat *Plecotus auritus*

Common pipistrelle *Pipistrellus pipistrellus*

Lesser horseshoe *Rhinolophus hipposideros*

Whiskered *Myotis mystacinus*

Other mammals

West European hedgehog *Erinaceus europaeus*

Birds

Collared dove *Streptopelia decaocto*

Dunnock *Prunella modularis*

House sparrow *Passer domesticus*

Song thrush *Turdus philomelos*

Flowering plants

Tormentil *Potentilla erecta*

Lichens

Usnea articulata

4.2 Field Survey

The site habitats were categorised as: broadleaf woodland, scrub, grassland/ruderal, bare ground, and buildings (Drawings 1 and 2). The hardstanding areas did not contain any ecological interest and are therefore not considered further in this assessment.

4.2.1 Broadleaf woodland

A small plantation woodland (c. 0.1 ha) comprising immature ash *Fraxinus excelsior*, goat willow *Salix caprea*, weeping willow *Salix Ssp.*, alder *Alnus glutinosa*, silver birch *Betula pendula*, sycamore *Acer pseudoplatanus*, hawthorn *Crataegus monogyna*, and hazel *Corylus avellana* (Figure 2) was located to the south of the RTS building (Phase 1 code: A1.1.2). The trees did not contain any Potential Roost Features (PRFs) for bats.

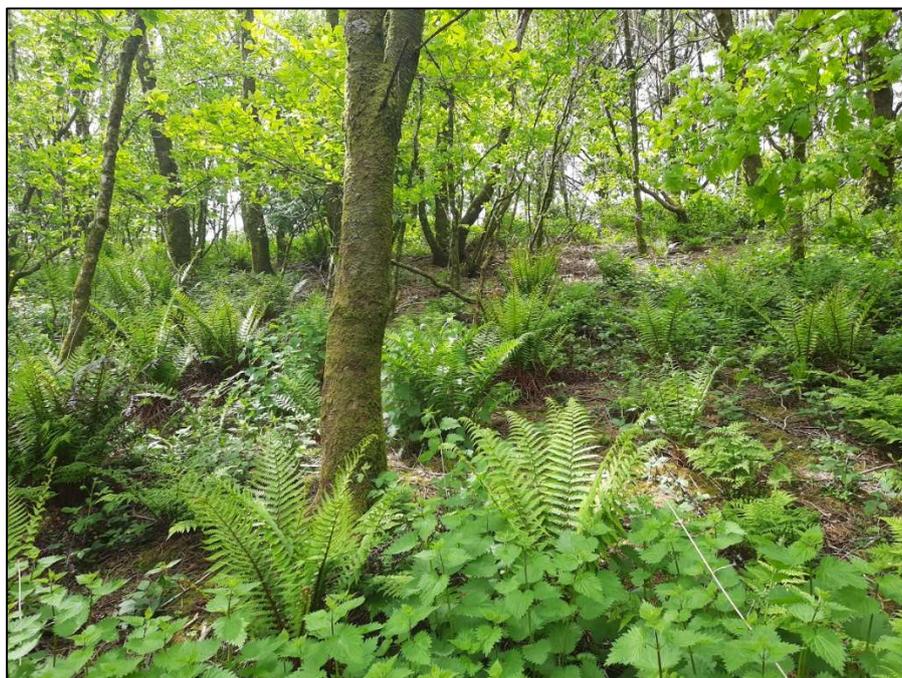
The ground-flora included bracken *Pteridium aquilinum*, bramble *Rubus fruticosus*, common nettle *Urtica dioica*, red campion *Silene dioica*, marsh thistle *Cirsium palustre*, bedstraw *Galium aparine*, male fern *Dryopteris filix-mas*, cock's-foot *Dactylis glomerata*, dog violet *Viola riviniana*, bluebell *Hyacinthoides non-scripta*, and willowherb *Chamaenerion angustifolium*.

Figure 2. Plantation woodland looking east.



To the west and north of the RTS there was a belt of broadleaf woodland (Figure 3). The wood appeared to be around 20 years old. The canopy layer consisted of immature pedunculate oak *Quercus robur*, sycamore, sweet chestnut *Castanea sativa*, beech *Fagus sylvatica*, ash *Fraxinus excelsior*, pines *Pinus Ssp*, weeping willow *Salix babylonica*, and alder, with occasional hazel. The edge of the woodland was dominated by goat willow, bramble, and common gorse. Large patches of bramble occurred within the woodland. The ground flora was sparse with creeping buttercup *Ranunculus repens*, common nettle, broad-leaved dock *Rumex obtusifolius*, bluebell, red campion *Silene dioica*, hart's-tongue fern *Asplenium scolopendrium*, and male fern *Dryopteris filix-mas*. The trees did not contain any Potential Roost Features (PRFs) for bats.

Figure 3. Broadleaf woodland.



4.2.2 Scrub and grass/ruderal

Areas of scattered scrub (Phase 1 code: A2.2) interspersed with grass/ruderal dominated ground flora was located to the north of the RTS alongside the access road (Figure 4).

The shrubs layer consisted of buddleia *Buddleja davidii*, bramble, alder, goat willow, and common gorse *Ulex europeus* which created an open canopy. The ground flora consisted of cock's foot *Dactylis glomerata*, yarrow *Achillea millefolium*, herb Robert *Geranium robertianum*, hogweed *Heracluem sphondylium*, willowherbs *Epilobium Ssp*, common sorrel *Rumex acetosa*, red campion, creeping buttercup *Ranunculus repens*, ribwort plantain, bramble, male fern, clovers *Trifolium Ssp.*, rose of sharon *Hypericum calycinum*, thistles

Cirsium Ssp., common ragwort *Senecio jacobaea*, common cat's-ear *Hypochaeris radicata*, common nettle, soft rush *Juncus effusus*, pendulous sedge *Carex pendula*, sweet vernal grass *Anthoxanthum odoratum*, and mosses.

Figure 4. Scrub and open ground habitat.



4.2.3 Grassland

The grassland (Phase 1 code: J1.2) occurred to the east of the Transfer Station and consisted of two small areas totalling c. 0.04 ha (Figure 5). The grass was a sown amenity grass mix with herbs comprising clovers *Trifolium sp.*, ribwort plantain *Plantago lanceolata*, and docks *Cirsium sp.* The sward was mown to a short turf.

4.2.4 Bare Ground

The bare ground (Phase 1 code: I2.3/J4) occurred to the east and north of the RTS (Figure 6) and alongside the access road, the latter on a steep slope c. 2 m in width (Figure 7).

Approximately 50% of the bare ground near to the RTS consisted of a track and turning area with negligible ecological interest. The remainder consisted of a northeast facing bank (Figure 6). The bank was sparsely vegetated. Plant species included grasses such as cock's-foot, sweet vernal grass *Anthoxanthum odoratum*, soft rush, buddleia, daisy *Bellis perennis*, perforate St John's wort *Hypericum perforatum*, ribwort plantain, rose of Sharon, thistles, bramble, western gorse *Ulex gallii*, and small saplings of birch and alder.

Figure 5. Grassland to the east of the Transfer Station, looking northwest.



Figure 6. Bare ground on bank to the southwest of the Transfer Station.



Figure 7. Bare ground alongside the access track.



4.2.5 Buildings

The buildings (Phase 1 code: J3.6) consisted of a modern steel frame RTS building (Figure 8) in active use, and a Clinical Waste Building (Figure 9). There was also a metal shipping container. None of the structures had any significant value for protected species although the RTS building may be used on occasion by birds such as feral pigeon for nesting.

Figure 8. Transfer Station, northeast aspect.



Figure 9. Existing Clinical Waste Building to the north of the Transfer Station.



4.2.6 Species

Species of fauna noted over the site were: blue tit *Cyanistes caeruleus*, blackbird *Turdus merula*, woodpigeon *Columba palumbus*, carrion crow *Corvus corone*, wren *Troglodytes troglodytes*, and robin *Erithacus rubecula*.

5.0 ASSESSMENT

The results of the desk study and field survey were assessed in accordance with current legislation and policy. A proportionate approach was taken in relating the findings to the proposed development and current use of the site.

5.1 Designated Sites

Although the site is within the IRZ for Boconnoc Park and Woods SSSI, the proposal would not impact on the integrity of the habitats and species associated with the conservation site i.e. broadleaf woodland, lichens, and dragonflies.

5.2 Habitats

The proposed development would primarily impact on an area of bare ground with negligible ecological value (proposed waste building, access, and water tank/pump house), a small area of plantation woodland (proposed turning head), and a small area of scrub/ruderal/grass mosaic habitat (proposed access and turning head).

The loss of bare ground to the proposed development would not be ecologically significant.

A small area of goat willow (approximately 2 to 3 trees) would be lost to the access track. In addition, the new water pipe connection will run through the woodland to the west of the proposed pump house. Alongside the established haul road, a small area of immature woodland would be impacted to the northern extent of the site to provide the turning point.

Although broadleaf woodland is a Priority Habitat (lowland mixed deciduous woodland) the trees within the site were immature and have been planted in the last eighteen years (examination of historic GoogleEarth imagery shows there to be an absence of woodland in 2002). The ground-flora was dominated by bracken and brambles with little diversity. There was an absence of an established shrub layer. Therefore, although the trees within the site were considered to collectively represent Priority Habitat, this was immature and of poor quality. Plantation woodland is commonplace throughout England and in this instance was of low ecological value.

Collectively the impact on the woodland habitat would be minor with the loss of a small number of commonplace immature trees. The impact of the proposed development would not be ecologically significant.

The scrub/ruderal/grass vegetation mosaic consisted of commonplace plant species typical of recently disturbed ground. This type of habitat is ubiquitous throughout England where land disturbance because of industrial works and development have taken place. The wider Connon Bridge Landfill Site which is undergoing restoration has an abundance of this habitat type with a similar species composition.

The scrub/ruderal/grass mosaic habitat was of low ecological value and the loss of a small area of this habitat to the proposed development would not be ecologically significant.

The buildings had negligible ecological value. The removal of the Clinical Waste Building and shipping container due to the development would not have any ecological impact.

Overall, the loss of habitat that would occur due to the proposed development is considered to represent a minor, direct, and permanent non-significant impact. In line with national and local policy proportionate compensation habitat will be required for the loss.

5.3 Species

No protected or Priority species were found during the surveys. However, habitats were deemed to be suitable to support bats (foraging and commuting only), hedgehog, various birds including Priority species, and reptiles.

Bats

The site may be used by bats such as pipistrelles for foraging, but only as a small part of a much wider resource. Based on the habitats present and their connectivity to the wider landscape, the site can be classified under current guidance (Collins, 2016) as having low suitability for bats.

The loss of a small area of low-quality habitat would represent a non-significant impact on commuting and foraging bats and therefore bat activity surveys were not deemed necessary.

As there were no tree PRFs for bats within the site, and the buildings were deemed unsuitable for bats, no mitigation for this species group is required.

West European hedgehog

The woodland and scrub habitat may be used by hedgehogs for breeding and foraging. The proposed development could potentially injure or kill hedgehogs during the clearance phase and as such mitigation will be required.

Nesting birds

There was nesting potential within the woodland and scrub habitats. Therefore, mitigation measures for nesting birds will need to be employed during vegetation clearance of this area.

Reptiles

The area of mosaic scrub/grass/ruderal habitat may be used by common lizards and slow worm, but if present they would be in low numbers due to the age of the site. A small area of scrub will be cleared limited to around the RTS and the new building area – no scrub or other vegetation will need to be cleared along the haul road. It is recommended that precautionary mitigation measures are undertaken when clearing any scrub and grassland/ruderal habitat.

5.4 Recommendations

5.5 Survey

Given the scale of the proposal and the habitats noted, no survey for protected species was required.

5.6 Mitigation Measures

Any trenches (e.g. utility trenches or trenches for foundations) left exposed overnight will be provided with a means of escape for wildlife (as per BS 42020:2013) such as European hedgehog. Such measures will include either a shallow sloped edge or angled board (minimum 30cm width). These will be positioned at a maximum angle of 30°.

No vegetation clearance of scrub or woodland, which could affect nesting birds, will take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check for active birds' nests immediately beforehand and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest (as per BS 42020:2013). Any birds nesting will be left to complete breeding (i.e. until all dependant juveniles have fledged).

The scrub and grass ruderal habitat should be cut back in three stages using hand tools. This should be done during the reptile active season (April to early October) after a search for nesting birds by a competent ecologist. The first cut, using hand tools, would be to c. 10 cm height removing all shrubs; the second cut 24 hrs later to c. 5 cm; and the third cut to ground level. This will displace any reptiles present into the adjacent habitat.

5.7 Biodiversity Opportunities

Opportunities were sought to maximise biodiversity net gain within the site, in accordance with the forthcoming Environmental Bill, the NPPF, and the Cornwall Council Planning for Biodiversity Guide (2018). Section 3.8 of the guidance states: *In line with the revisions to the NPPF and the increased importance and emphasis placed on achieving net gains for the environment and biodiversity through planning, the Council is developing an approach to the use of the DEFRA biodiversity metric in determining whether planning applications are delivering net gain.*

As an update, the council stated¹⁶: *Cornwall Council will be applying a 10% net gain requirement to all major planning applications from 1 March 2020. Ecological consultants will therefore need to ensure that data collected in 2019 and thereafter is suitable for use within the DEFRA 2.0 calculator.*

Biodiversity loss and gains were calculated using the Defra/Natural England Biodiversity Metric v2.0¹⁷. The figures used were estimated but provide an indication of the changes in biodiversity. As opportunities within the red line were very restricted, additional land outside of the site was sought to provide additional biodiversity value.

The combination of onsite and offsite habitat retention, enhancement, and creation will equate to a 10.48% net gain in habitat units, according to the Defra Biodiversity Metric (Table 1).

¹⁶ <https://www.cornwall.gov.uk/environment-and-planning/planning/planning-policy/adopted-plans/planning-policy-guidance/biodiversity-net-gain/>

¹⁷ <http://publications.naturalengland.org.uk/publication/5850908674228224>

Table 1. Headline results of the Defra Biodiversity Metric 2.0.

On-site baseline	<i>Habitat units</i>	4.40
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	3.50
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site baseline	<i>Habitat units</i>	1.10
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	<i>Habitat units</i>	2.46
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	<i>Habitat units</i>	0.46
	<i>Hedgerow units</i>	0.00
	<i>River units</i>	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	<i>Habitat units</i>	10.48%
	<i>Hedgerow units</i>	0.00%
	<i>River units</i>	0.00%

The habitats to be impacted within the site were are of low to negligible ecological value. It is intended to provide habitats of higher value within the areas of bare ground alongside the haul road. A mosaic habitat of acid grassland and dry heath will be created using hydroseeding. This will be established alongside the haul road for some 230 m to the north bank (between the drainage chippings and the scrub habitat), along parts of the south bank where it does not conflict with the restoration programme. A degree of scrub/grass/ruderal/turf cut back / removal may be required prior to hydroseeding with a management strategy put in place for a minimum of 5 years after seeding to control invasive plant growth and to allow the heathland plants to become established. Any sown seed will be of local provenance.

In addition, 2.46 habitat units will be created within improved grassland fields to the north of the site. This will be through enhancing c. 0.5 ha of the fields into wildflower meadow habitat.

The proposed habitat enhancements will provide a net gain for biodiversity, providing additional habitat for a wide range of fauna and flora including reptiles and invertebrates.

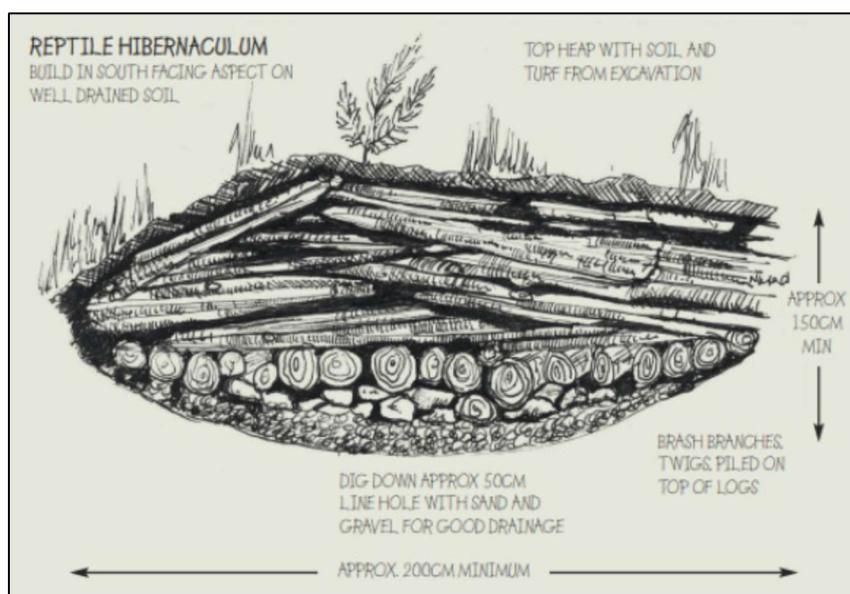
The inclusion of bird and bat boxes onto the external surface of the proposed waste building and/or on retained trees within the woodland will further enhance the area for wildlife. It is

recommended that 4 no. sparrow terrace boxes¹⁸, and 4 no. bat boxes e.g. Eco Bat Box, are erected.

Four no. bee boxes¹⁹ would be placed in appropriate habitat i.e. open south-facing ground along the side of the haul road. Bee blocks provide breeding opportunities for solitary bees, a species which are in rapid decline in the UK.

Two no. hibernaculum could be made within the new habitat to encourage reptiles. These should be placed to the top of the north bank which runs alongside the haul road. To provide a hibernaculum an underground chamber would need to be excavated to 2.0 - 4.0 m diameter, and 0.5 m depth, and lined with sand and gravel to improve drainage (Figure 10). The hole would be loosely back filled with stones, rocks and logs, and branches and brash placed over the top. The structure would be capped with soil and turfs to form an insulating layer and to protect it from frost. Small gaps into the interior will be left to enable reptiles and amphibians to enter and exit the finished hibernaculum (plastic piping can be added to enhance entrance points).

Figure 10. Example of a hibernacula design²⁰.



Note: the wildlife box and hibernacula enhancements are not considered within the Defra Biodiversity metric.

¹⁸ <https://www.nhbs.com/house-sparrow-terrace-fsc-nest-box>

¹⁹ <https://www.greenandblue.co.uk/collections/shop-bee-houses/products/bees-block>

²⁰ Julian, A.J. & Hand, N.K. (2018). ARG UK Advice Note 11. Managing Habitat for Adders: Advice for Land Managers. Amphibian and Reptile Groups of the UK.

6.0 CLOSURE

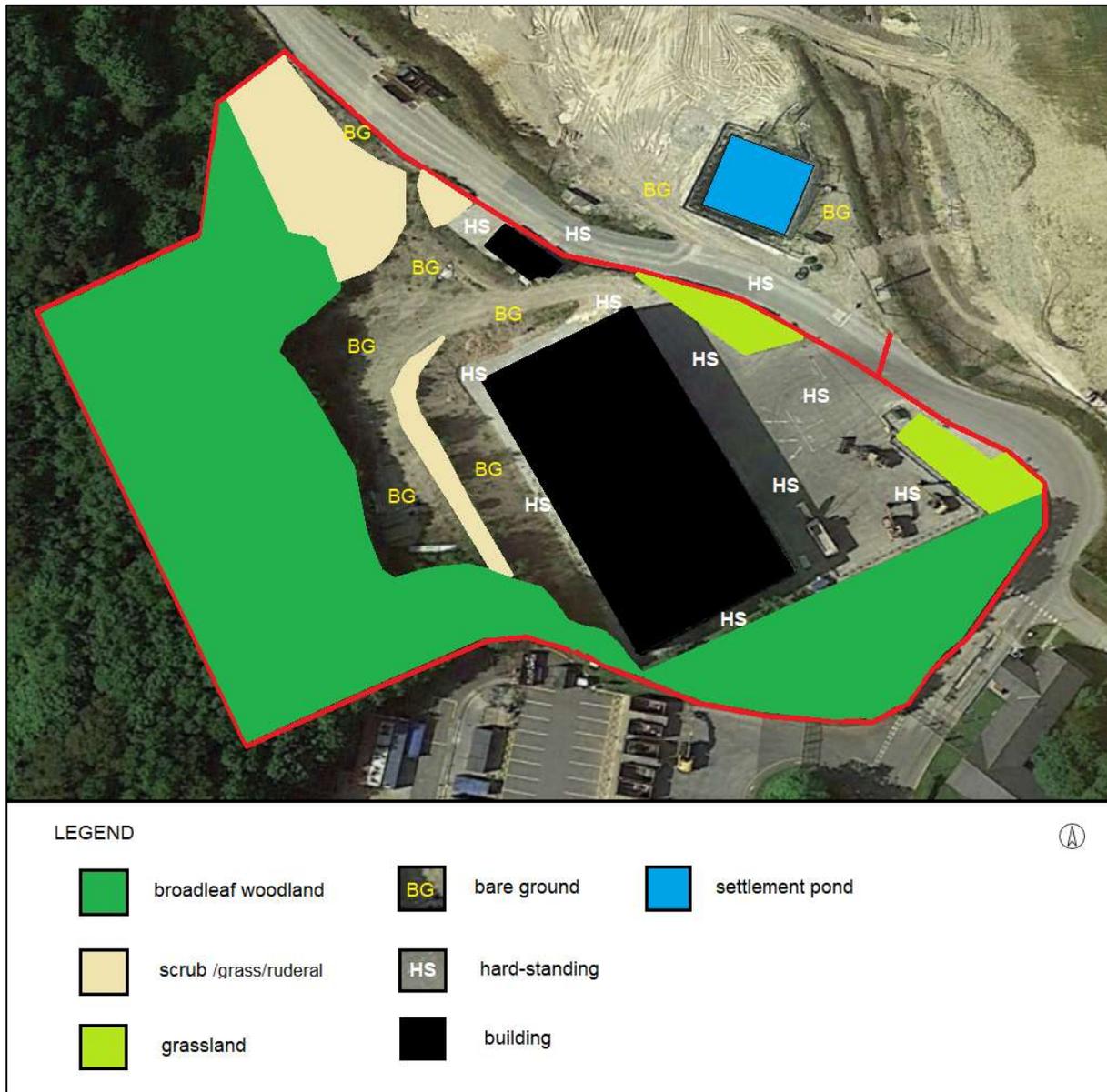
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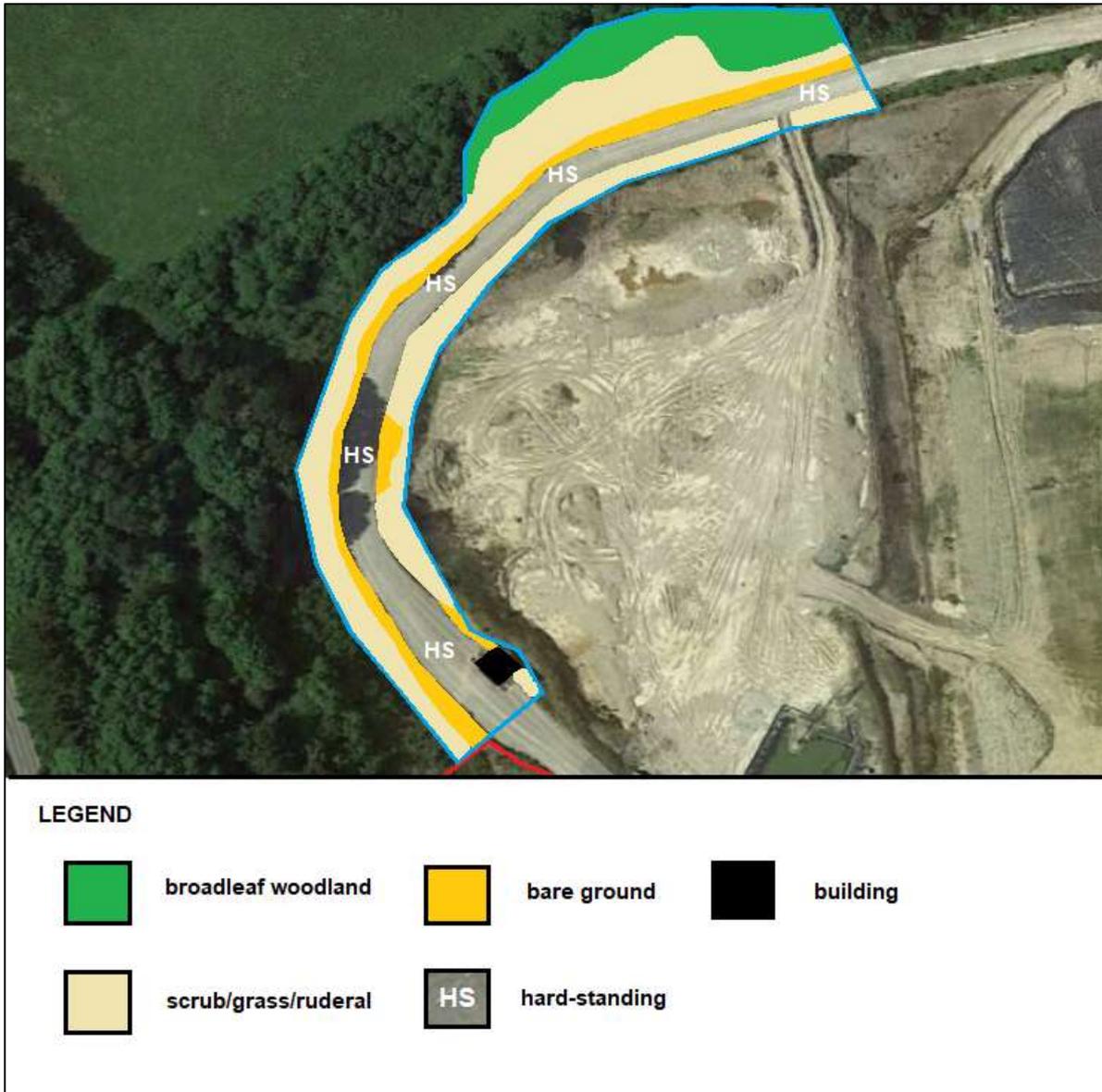
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DRAWING 1. PHASE 1 HABITAT MAP AREA A.



DRAWING 2. PHASE 1 HABITAT MAP AREA B.



APPENDIX 1. ERCCIS SUMMARY DATA



Protected and designated species records table

This table summarises records from 1960 onwards. The sighting numbers are total number of records in period, not the number of individuals

Details on abundance can be seen in your excel dataset, but please note that where 'Present' appears in abundance column, no single numerical figure for abundance was provided with the record

Bird				
Alauda arvensis	Skylark	1	2010 - 2010	Protected, Priority
Cyanistes caeruleus	Blue Tit	1	2009 - 2009	Protected
Erithacus rubecula	Robin	1	2009 - 2009	Protected
Falco tinnunculus	Kestrel	2	1998 - 1998	Protected, Priority
Parus major	Great Tit	1	2009 - 2009	Protected
Passer domesticus	House Sparrow	1	2009 - 2009	Protected, Priority
Periparus ater	Coal Tit	1	2009 - 2009	Protected
Phylloscopus trochilus	Willow Warbler	1	2010 - 2010	Priority
Prunella modularis	Dunnock	1	2009 - 2009	Protected, Priority
Streptopelia decaocto	Collared Dove	1	2009 - 2009	Protected, Priority
Turdus merula	Blackbird	1	2009 - 2009	Protected
Turdus philomelos	Song Thrush	1	2003 - 2003	Protected, Priority
Tyto alba	Barn Owl	2	1997 - 1997	Protected, Local Priority
Conifer				
Pinus radiata	Monterey Pine	1	2014 - 2014	Non-Native
Flowering Plant				
Acer pseudoplatanus	Sycamore	3	1989 - 2014	Non-Native
Bromus sterilis	Barren Brome	1	2010 - 2010	Non-Native
Buddleja davidii	Butterfly-bush	1	2014 - 2014	Non-Native
Calluna vulgaris	Heather	1	1997 - 1997	Priority
Capsella bursa-pastoris	Shepherd's-purse	1	1989 - 1989	Non-Native
Carex echinata	Star Sedge	1	1997 - 1997	Priority
Carex pulicaris	Flea Sedge	1	1997 - 1997	Priority
Castanea sativa	Sweet Chestnut	1	1989 - 1989	Non-Native
Claytonia sibirica	Pink Purslane	1	2010 - 2010	Non-Native

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<i>Crocsmia pottsii</i> x <i>aurea</i> = <i>C. x crocosmiiflora</i>	Montbretia	2	1989 - 2007	Protected, Non-Native
<i>Epilobium brunnescens</i>	New Zealand Willowherb	1	1989 - 1989	Non-Native
<i>Epilobium ciliatum</i>	American Willowherb	1	1989 - 1989	Non-Native
<i>Erica tetralix</i>	Cross-leaved Heath	1	1997 - 1997	Priority
<i>Eriophorum angustifolium</i>	Common Cottongrass	1	1997 - 1997	Priority
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	3	1989 - 2007	Non-Native
<i>Hyacinthoides non-scripta</i>	Bluebell	6	1989 - 2019	Protected
<i>Juncus tenuis</i>	Slender Rush	3	2007 - 2014	Non-Native
<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>	n/a	1	2014 - 2014	Protected, Non-Native
<i>Matricaria discoidea</i>	Pineappleweed	2	1989 - 1997	Non-Native
<i>Myrica gale</i>	Bog-myrtle	2	1966 - 1997	Priority
<i>Oxalis acetosella</i>	Wood-sorrel	1	1993 - 1993	Priority
<i>Pentaglottis sempervirens</i>	Green Alkanet	1	1989 - 1989	Non-Native
<i>Persicaria wallichii</i>	Himalayan Knotweed	1	1989 - 1989	Non-Native
<i>Petasites fragrans</i>	Winter Heliotrope	1	2007 - 2007	Non-Native
<i>Polygala serpyllifolia</i>	Heath Milkwort	1	1997 - 1997	Priority
<i>Potentilla erecta</i>	Tormentil	1	2019 - 2019	Priority
<i>Rhododendron ponticum</i>	n/a	2	1989 - 2007	Protected, Non-Native
<i>Senecio aquaticus</i>	Marsh Ragwort	1	1989 - 1989	Priority
<i>Silene flos-cuculi</i>	Ragged-Robin	1	1997 - 1997	Priority
<i>Veronica hederifolia</i>	Ivy-leaved Speedwell	3	2007 - 2014	Non-Native
<i>Veronica officinalis</i>	Heath Speedwell	1	1989 - 1989	Priority
<i>Veronica persica</i>	Common Field-speedwell	1	2007 - 2007	Non-Native
<i>Viola palustris</i> subsp. <i>juressi</i>	n/a	1	1997 - 1997	Priority

Insect - Moth

<i>Nymphula diminutalis</i>	Small Brown China-mark	1	2014 - 2014	Non-Native
<i>Psychoides filicivora</i>	Fern Smut	1	1998 - 1998	Non-Native

Insect - True Fly (Diptera)

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Platycheirus immarginatus	n/a	1	1992 - 1992	Priority, Local Priority
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Lichen

Usnea articulata	n/a	1	2010 - 2010	Protected, Priority
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Moss

Campylopus pyriformis	Dwarf Swan-neck Moss	1	1966 - 1966	Local Priority
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Leucobryum glaucum	Large White-moss	1	1966 - 1966	Protected
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Plagiothecium denticulatum var. denticulatum	n/a	1	1966 - 1966	Local Priority
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Terrestrial Mammal

Erinaceus europaeus	Hedgehog	1	2002 - 2002	Protected, Priority, Local Priority
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Mustela erminea	Stoat	2	1988 - 1996	Protected
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Rattus norvegicus	Brown Rat	1	2005 - 2005	Non-Native
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Sciurus carolinensis	Grey Squirrel	1	2010 - 2010	Protected, Non-Native
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Terrestrial Mammal - Bat (Chiroptera)

Chiroptera	Bat	8	1994 - 1997	Protected, Priority
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Myotis mystacinus	Whiskered Bat	3	2016 - 2016	Protected, Local Priority
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Pipistrellus pipistrellus	Common Pipistrelle	3	2016 - 2016	Protected, Local Priority
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Plecotus	Long-eared Bat species	1	2012 - 2012	Protected
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Rhinolophus hipposideros	Lesser Horseshoe Bat	2	2007 - 2007	Protected, Priority, Local Priority
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