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Preliminary Ecological Appraisal

Park Gerry

November 2022

A report by

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Report details

Site name:	Park Gerry
Site address:	Park Gerry, Camborne, Cornwall, TR14 8NF
Grid reference:	SW652406
Survey date:	29th November 2022
Report date:	5th December 2022
Report author:	Alexander Stuart BSc (Hons), MSc
Report reviewer:	Colin Hicks BSc (Hons), MCIEEM

Report no: WOR-3393

Declaration of compliance

BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of practice for planning and development.

Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Validity of survey data and report

The findings of this report are valid for 12 months from the date of survey. If work has not commenced within this period, an updated survey by a suitably qualified ecologist will be required.

Table of contents

Non-technical summary

Western Ecology has been commissioned to complete a preliminary ecological appraisal of Park Gerry, Camborne, Cornwall, TR14 8NF. It is proposed that a football pitch, a Mixed Use Games Area (MUGA), and a skate park be constructed, in addition to provision of extra parking and access, planting of trees and vegetation, and landscaping.

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to habitats:

Cornish Hedgebank with Hedgerow

Under current proposals, no hedgebank habitat is to be lost. Any Cornish hedgebank with hedgerow that might be impacted by the construction phase should be protected from accidental damage by suitable fencing providing a 2 metre protection zone.

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to species:

Badgers and other mammals

Badgers and hedgehogs likely use the site and its hedgerow vegetation for foraging. Simple RAMs are recommended.

Bats

Precautionary mitigation in relation to light-spill and night works should be adopted to allow bats, and any light-averse species which may be present, to continue to use site boundaries.

Birds

Nesting birds are likely present in the boundary hedgerow, scrub, and trees. Any activities affecting potential nesting habitats (such as trees and shrubs) should be completed during the period September to February inclusive, outside the accepted bird nesting season. If this is not practicable, prior to the start of works these habitats should be thoroughly inspected by a suitably qualified person prior to disturbance or removal. If nesting birds are found, all activities likely to damage the immediate area should be delayed until chicks have fledged.

Invasive Non-Native Plants

Wall cotoneaster and Variegated yellow archangel were observed along the southern and northern site boundaries, respectively. If these areas are likely to be disturbed, there is a risk of causing them to spread. Mitigation should involve the excavation of all plant material (including corms) and surrounding soil, prior to construction activities taking place. All excavated plant material and soil will be regarded as controlled waste and will need to be disposed of at a properly licensed facility.

Biodiversity net gain

Features for biodiversity net gain are recommended within this report.

1. Introduction

Western Ecology has been commissioned to complete a preliminary ecological appraisal of Park Gerry, Camborne, Cornwall, TR14 8NF. It is proposed that a football pitch, MUGA, and a skate park be constructed, in addition to provision of extra parking and access, planting of trees and vegetation, and landscaping.

1.1. Survey aims

The survey and this report identify features of conservation importance that could constitute a constraint to any future proposals for this site. Where appropriate, recommendations for impact avoidance, mitigation and possible post-development enhancement are made to ensure compliance with wildlife legislation and relevant planning policy.

This survey has been prepared in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017).

1.2. Site location

The Site comprises a tree and hedge-lined park, surrounded on all sides by urban residential areas, in the centre of the town of Camborne, Cornwall. The city of Truro is located approximately 16km to the east.

2. Survey methodology

2.1. Desktop survey

A desktop survey collated existing biological records for the site and adjacent areas and identified any nature conservation sites that may be affected by the proposals. This comprises an important part of the assessment process, providing information on ecological issues that may not be apparent during the site survey.

Consultees for the data search included:

- Environmental Records Centre of Cornwall and Isles of Scilly provided biological records for protected/notable species and non-statutory sites within 1km of the site.
- Natural England - GIS dataset of SSSI Impact Risk Zones, statutory nature conservation sites, priority habitats and granted European Protected Species license applications.

The location of nature conservation sites was examined to determine their ecological and landscape relationships with the proposed site. An assessment was then made of how the sites may be affected by the proposal, taking into account these relationships, and the species and/or habitat types for which the nature conservation site was chosen.

SSSI Impact Risk Zones are areas where the change to the environment could either create significant damage to a local SSSI, or might require additional planning and consultation in order to avoid impacting such sites. The assessments are made according to the particular sensitivities of the features for which the SSSI is notified, and specifies the types of development that have the potential for adverse impacts.

In compliance with the terms and conditions relating to its commercial use, the full desk study data is not provided within this report.

2.2. Field survey

A Preliminary Ecological Appraisal of the site was completed by Alexander Stuart BSc (Hons), MSc.

The survey was undertaken at 10:00 on 29th November 2022. Weather conditions during the survey were mild, with an air temperature of 12ºC and light wind.

Habitats were classified using the Phase 1 Habitat Survey methodology developed by the Joint Nature Conservation Committee (JNCC, 2010) and modified by the Institute of Environmental Assessment (IEA, 1995). The main plant species were recorded and broad habitat types mapped. Habitats encountered are described within the Results section, with a map included within the report. Plant species were identified according to Stace (1997).

2.3. Method for valuation of habitats

The ecological value of habitats present is provided in line with Guidelines for Ecological Impact Assessment (CIEEM, 2018), and those which are important in terms of legislation or policy are identified.

The nature conservation value, or potential value, of the habitat is determined within the following geographic context:

- International importance (e.g. internationally designated sites such as Special Areas of Conservation, Special Protection Areas, Ramsar sites);
- National importance (e.g. nationally designated sites such as Sites of Special Scientific Interest or species populations of importance in the UK context);
- County importance (e.g. SNCI, habitats and species populations of importance in the context of Cornwall);
- Local importance (e.g. important ecological features such as old hedges, woodlands, ponds);
- Site importance (e.g. habitat mosaic of grassland and scrub which may support a diversity of common wildlife species);
- Negligible importance. Usually applied to areas such as built development or areas of intensive agricultural land.

The examples are not exclusive and are subject to further professional ecological judgment.

2.4. Survey constraints

All areas of the site were readily accessible. Although some plant species would have not been visible during the survey period, within relatively simple site comprising common and widespread habitat types, the timing of this survey is not a significant constraint to a robust initial site assessment.

It should be noted that habitats, and the species they may support, change over time due to natural processes and because of human influence. In line with current guidelines, the survey on which this report is based is valid for one year, after which time it will need updating. This report is valid until 29th November 2023.

2.5. Study area

The study area for the desktop survey is within 1km. The study area for the Preliminary Ecological Appraisal was the likely footprint of any future proposed development, hereafter referred to as the ‘Site’, and its immediate boundaries. This is the area included within the line described as “Survey area” within the legend of Map 1.

3. Results

3.1. Site description

The Site comprised a core of amenity grassland, separated into three compartment fields by Cornish hedgebank and treelines. Scrub-lined walls and Cornish hedgebanks with hedgerows are present across the centre and around the eastern boundaries of the Site.

3.2. Phase 1 habitats

Habitats have been classified using the Phase 1 Habitat Survey methodology and are described below and detailed in Map 1. Habitats which are important in terms of legislation or policy are identified. Plant species that characterise each of these habitats are identified, although this is for descriptive purposes, and comprehensive inventory is not provided. Images and a species list are found within Appendix 2 and 3, respectively.

Table 1: Habitat description, biodiversity value and extent.

Habitat	Description	Biodiversity value
Amenity Grassland	This habitat within the Site was dominated mainly by cocksfoot and Yorkshire fog, with frequent red fescue, common nettle, dock, ribwort plantain, creeping buttercup, dandelion, common hogweed, and creeping thistle also present. See Image 3.	Site
Cornish Hedgebank with species-rich hedgerow	This habitat, dominated by hawthorn, was present dissecting the Site east to west. Other species present included blackthorn, oak, cherry, elder, privet, and silver birch. Understory species included lords and ladies, hedge bedstraw, nettles, brambles, bracken, and dock. See image 5. This hedgerow has the potential of being classified as an 'important' hedgerow under the Hedgerow Regulations, 1997.	Local Habitat of Principal Importance (JNCC & Defra, 2012) Local Biodiversity Action Plan priority habitat
Cornish Hedgebank with species-poor hedgerow	This habitat was present along the eastern boundary of the site. Species present included holly, ash, sycamore, ivy, lords and ladies, nettles, bracken, hedge bedstraw, brambles, and dock. See image 6. A stand of variegated yellow archangel (target Note 1, image 1) was present within the northern half of this habitat.	Local Habitat of Principal Importance (JNCC & Defra, 2012) Local Biodiversity Action Plan priority habitat
Scattered Trees	Broadleaved trees ran along the eastern boundary and down through the centre of the northern half of the Site. These were mostly sycamore and ash, with lime, elm, oak, and hawthorn. See Image 4.	Local
Scrub	This habitat type and was present around the boundaries of the site to the north (image 7) and south (image 8). The scrub along the northern boundary was dominated by dense ivy, while in the south by dense brambles. Other species included goat willow saplings, nettles, buddleia, bear's breaches, ivy, and winter heliotrope.	Site

	A stand of wall cotoneaster (target Note 2, image 2) was present within the southern boundary scrub, escaping from the neighbouring garden adjacent.	

3.3. Desktop survey

The biological records search found a number of notable species within 1km of the Site (Table 2). Due to the broad scale of many records, it is not possible to determine if they relate to the Site. A total of 2659 notable species records were recovered over the last 20 years.

Table 2. Notable and protected species records within 1km

Taxon	Species	Scientific Name	No. of records
Amphibian	Common Toad	*Bufo bufo*	2
Bird	Sparrowhawk	*Accipiter nisus*	22
	Sedge Warbler	*Acrocephalus schoenobaenus*	1
	Skylark	*Alauda arvensis*	3
	Mallard	*Anas platyrhynchos*	21
	Meadow Pipit	*Anthus pratensis*	4
	Swift	*Apus apus*	35
	Grey Heron	*Ardea cinerea*	4
	Scaup	*Aythya marila*	1
	Stone-curlew	*Burhinus oedicnemus*	1
	Lapland Bunting	*Calcarius lapponicus*	5
	Greenfinch	*Chloris chloris*	131
	Black-headed Gull	*Chroicocephalus ridibundus*	1
	Dipper	*Cinclus cinclus*	3
	Stock Dove	*Columba oenas*	2
	Woodpigeon	*Columba palumbus*	285
	Rook	*Corvus frugilegus*	51
	Whitethroat	*Curruca communis*	8
	House Martin	*Delichon urbicum*	2
	Merlin	*Falco columbarius*	1
	Peregrine	*Falco peregrinus*	5
	Kestrel	*Falco tinnunculus*	7
	Snipe	*Gallinago gallinago*	31
	Moorhen	*Gallinula chloropus*	12
	Wryneck	*Jynx torquilla*	1
	Herring Gull	*Larus argentatus*	57
	Common Gull	*Larus canus*	47
	Lesser Black-backed Gull	*Larus fuscus*	1
	Iceland Gull	*Larus glaucoides*	2
	Linnet	*Linaria cannabina*	29
	Grasshopper Warbler	*Locustella naevia*	4
	Red Kite	*Milvus milvus*	6
	Grey Wagtail	*Motacilla cinerea*	6

	House Sparrow	*Passer domesticus*	450
	Honey-buzzard	*Pernis apivorus*	1
	Black Redstart	*Phoenicurus ochruros*	5
	Yellow-browed Warbler	*Phylloscopus inornatus*	5
	Willow Warbler	*Phylloscopus trochilus*	34
	Dunnock	*Prunella modularis*	161
	Bullfinch	*Pyrrhula pyrrhula*	106
	Water Rail	*Rallus aquaticus*	2
	Woodcock	*Scolopax rusticola*	1
	Garganey	*Spatula querquedula*	1
	Siskin	*Spinus spinus*	2
	Collared Dove	*Streptopelia decaocto*	443
	Starling	*Sturnus vulgaris*	62
	Green Sandpiper	*Tringa ochropus*	2
	Wren	*Troglodytes troglodytes*	173
	Redwing	*Turdus iliacus*	18
	Song Thrush	*Turdus philomelos*	90
	Ring Ouzel	*Turdus torquatus*	2
	Mistle Thrush	*Turdus viscivorus*	59
	Barn Owl	*Tyto alba*	1
Crustacean		*Porcellionides pruinosus*	1
Fern	Maidenhair Fern	*Adiantum capillus-veneris*	1
Flowering Plant		*Betula pubescens subsp. pubescens*	3
	Heather	*Calluna vulgaris*	25
		Calystegia sepium subsp. roseata	3
	Field Mouse-ear	*Cerastium arvense*	1
	Musk Stork's-bill	*Erodium moschatum*	8
		Euphrasia arctica subsp. borealis	6
	Common Eyebright	*Euphrasia nemorosa*	3
	Wild Strawberry	*Fragaria vesca*	1
	Bloody Crane's-bill	*Geranium sanguineum*	1
	Sheep's-bit	*Jasione montana*	5
	Field Scabious	*Knautia arvensis*	2
	Dwarf Cherry	*Prunus cerasus*	1
	Balm-leaved Figwort	*Scrophularia scorodonia*	3
	Ragged-Robin	*Silene flos-cuculi*	2
	Corn Spurrey	*Spergula arvensis*	2
	Devil's-bit Scabious	*Succisa pratensis*	1
	Common Vetch	*Vicia sativa subsp. segetalis*	13
Fungus	Cobalt Crust	*Terana coerulea*	1
Insect	Dingy Skipper	*Erynnis tages*	5
	Migrant Hawker	*Aeshna mixta*	3
	Scarce Blue-tailed Damselfly	*Ischnura pumilio*	1
	Grey Dagger	*Acronicta psi*	1

	Small Square-spot	*Diarsia rubi*	1
	Shoulder-striped Wainscot	*Leucania comma*	1
	White Ermine	*Spilosoma lubricipeda*	2
	Buff Ermine	*Spilosoma lutea*	1
	Dark-barred Twin-spot Carpet	*Xanthorhoe ferrugata*	1
	Unarmed Stick-insect	*Acanthoxyla prasina subsp. inermis*	18
		Didea fasciata	2
	Hornet Hoverfly	*Volucella zonaria*	1
		Xylota tarda	3
Lichen		*Acarospora anomala*	1
		Lecidea auriculata	1
Liverwort	Entire Threadwort	*Cephaloziella calyculata*	4
	Lobed Threadwort	*Cephaloziella integerrima*	2
	Greater Copperwort	*Cephaloziella nicholsonii*	31
Mollusc	Iberian Threeband Slug	*Ambigolimax valentianus*	1
	Worm Slug	*Boettgerilla pallens*	2
Moss	Nicholson's Beard-moss	*Didymodon nicholsonii*	1
	Gravel Thread-moss	*Pohlia andalusica*	5
	Tongue-leaf Copper-moss	*Scopelophila cataractae*	7
Reptile	Common Lizard	*Zootoca vivipara*	2
Terrestrial Mammal	West European Hedgehog	*Erinaceus europaeus*	33
	Eurasian Badger	*Meles meles*	25
	Harvest Mouse	*Micromys minutus*	1
	Eurasian Common Shrew	*Sorex araneus*	2
	Eurasian Pygmy Shrew	*Sorex minutus*	1
Terrestrial Mammal - Bat	Common Pipistrelle	*Pipistrellus pipistrellus*	3
	Soprano Pipistrelle	*Pipistrellus pygmaeus*	3
	Brown Long-eared Bat	*Plecotus auritus*	1
	Grey Long-eared Bat	*Plecotus austriacus*	1

Statutory Nature Conservation Sites (SNCS)

There is one SNCS located within 1km of the Site, with details below.

West Cornwall Byrophytes Site of Special Scientific Interest (SSSI)

This SNCS is located approx. 0.8km south-east of the Site. The site is designated for its notable population of nationally rare liverworts and mosses.

SSSI Impact Risk Zones

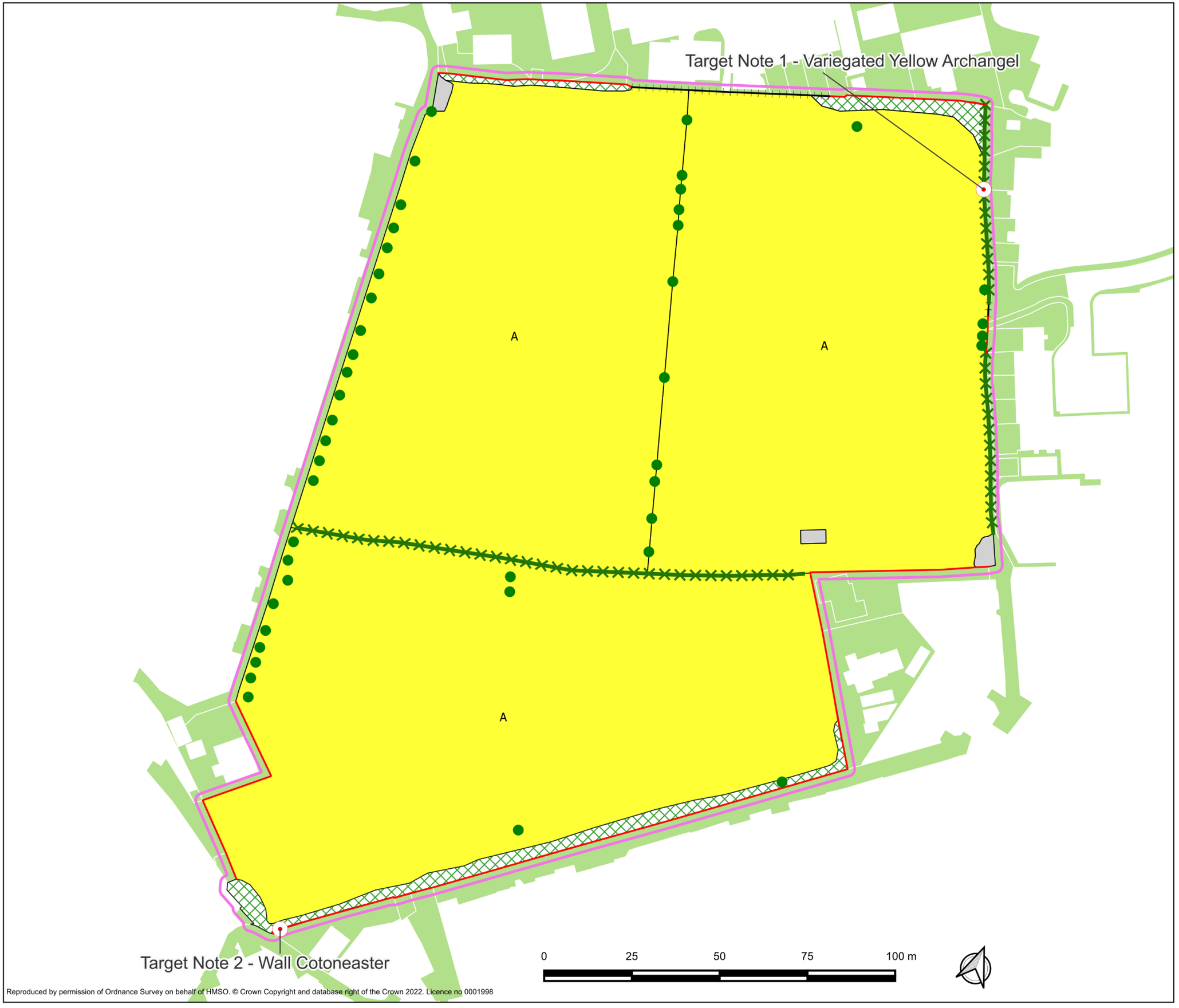
The Site is not within an area identified as a SSSI Impact Risk Zone for this type of development.

Non-statutory Nature Conservation Sites (NNCS)

There is one NNCS located within 1km of the Site, with details below.

Unnamed Cornwall Roadside Verge Inventory (CRVI)

This NNCS is located approx. 0.9km south-east of the Site.



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Legend

- Target note
- Scattered trees
- Fence
- Wall
- Cornish hedgebank with hedgerow
- Hardstanding
- A — Amenity grassland
- Scrub

Title: Map 1. Phase 1 habitats

Project: Park Gerry, Camborne, Cornwall

Checked by: CDH Version: 01
Date: 02/12/2022

3.4. Potential for species of nature conservation importance

Habitats have been assessed from the results of the field survey for their potential to support protected species (Table 3). Where there is no potential for a species or species group to be present within the site, or where habitats with the potential to support this species or species group will not be impacted by the proposals, they may be scoped out at this stage.

Table 3. Potential for species of nature conservation importance

Species	Assessment	Likely value
Amphibians	Habitats within the Site do not provide potential for breeding amphibians. No ponds are present within 500m of the Site and great crested newt are not known to be present in the area. These species do not need to be considered further.	Negligible
Badgers	There was no evidence of any badger setts within the Site, or signs of badger activity in general (i.e., snuffle holes, mammal trails, or disturbed ground). However, the fields and hedgerows provide foraging opportunities for this species.	Some potential (foraging)
Bats	None of the boundary trees presented visible potential roosting features. Roosting bats do not need to be considered further.	Roosting: Negligible
	The Site itself has some suitability for foraging and commuting bats, however it is relatively isolated within its urban surroundings and few avenues of vegetation link the Site to the wider greenspace, reducing the likelihood of large numbers of bats utilising it. Of the Site, the linear nature of the vegetated boundaries and tree-lines in particular provide some suitable foraging and commuting habitat for bats.	Foraging: Low
Birds	The boundary trees and hedgerow provide nesting opportunities for a range of common passerine bird species.	High
Common Dormouse	The habitat onsite is largely unsuitable for dormouse due to the managed nature of the hedgerows and lack of preferred species of shrub such as hazel. The Site is also isolated from the wider hedgerow and woodland network due to its location within an urban area. The presence of cats in the area also reduces the likelihood of dormice, in addition to the lack of records within 1km of the Site. This species does not need to be considered further.	Negligible
Hedgehog	The hedgerow and grassland provide potential refuge and/or foraging opportunities for hedgehogs.	Moderate
Reptiles	The habitat onsite is largely unsuitable for reptiles and the likelihood of their presence is negligible due to the Site being isolated from the wider hedgerow and woodland network, and due to the presence of predatory cats. This species does not need to be considered further.	Negligible
Otter	No suitable watercourses were associated with the Site. This species does not need to be considered further.	Negligible
Water Vole	No suitable watercourses were associated with the Site. This species does not need to be considered further.	Negligible
Notable invertebrates	Habitats at this Site are likely to support common and widespread invertebrates, although priority invertebrate habitats such as flushes, suitable brown-field land, and soft rock cliffs are absent from the Site. These species do not need to be considered further.	Negligible
Notable plants	Habitats within the Site provide little potential for notable or rare plants and they do not need to be considered further.	Negligible

Invasive non-native Species (INNS)	Variegated yellow archangel (Target Note 1, Image 1) and Wall cotoneaster (Target Note 2, Image 2), both Schedule 9 (WCA 1981) listed INNS, were observed along the north-eastern and southern boundary, respectively.	Confirmed

4. Evaluation of ecological features and potential impacts

4.1. Introduction

Ecological features that have the potential to be present have been assessed in light of current nature conservation policy, planning policy and wildlife legislation by an experienced ecologist (see Appendix 1). Where necessary, the ecological value of an ecological feature is given along with the potential effect of a proposed development.

If it is considered that a proposed development is likely to have no effect on features that have been identified as present, or potentially present, they may be scoped out at this stage.

4.2. Habitats of nature conservation importance

Protected habitats

Habitats are protected under international and national legislation including The Conservation of Habitats and Species Regulations 2017, and Wildlife and Countryside Act 1981 (as amended). These have been formulated into policy measures, with many examples protected under formal site designations such as SSSIs and SACs.

No habitats of European Community Importance as defined within The Conservation of Habitats and Species Regulations 2017 were present within this site. Protected habitats of this type are not a consideration for this project.

Notable habitats

Sixty five habitats are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these habitats to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. These habitats are the subject of National and Local Biodiversity Action Plans.

Hedgerows are given particular protection under the Protection of Hedgerows Act 1997.

Cornish Hedgebank with Hedgerow

The native hedgerow habitats associated with the Site qualifies as a Habitat of Principal Importance (JNCC & Defra, 2012) and as a Local Biodiversity Action Plan (CBI, 2011). The supported species-rich hedgerow present along the centre of the Site may also qualify as 'Important' for the purposes of the Hedgerow Regulations 1997.

Under current proposals, no hedgebank habitat is to be lost. However, If any hedgerow habitat is to be adversely impacted by the development, mitigation would be required.

4.3. Species of Nature Conservation Importance

Overview

Many native wild plants and animals are protected by law with the two main legal instruments being the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. The latter consolidates amendments to the Conservation (Natural Habitats, &c) Regulations 1994 which transposed into UK Law the EU Habitats Directive.

1150 species of fungi, plant or animal are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these species to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. These species are the subject of National and Local Biodiversity Action Plans.

Badgers

Badgers are protected from persecution or ill-treatment under the Protection of Badgers Act 1992. Under the Act, it is an offence to:

- wilfully kill, injure or take, or attempt to kill, injure or take, a badger;
- damage a badger sett or any part of it;
- destroy a badger sett;
- obstruct access to, or any entrance of, a badger sett;
- cause a dog to enter a badger sett; or
- disturb a badger when it is occupying a badger sett.

Badger populations are likely to be present in the nearby surroundings.

There may be potential for Badgers to get trapped within the Site during the construction phase. Precautionary mitigation is recommended.

Bats

Bat species and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), and The Conservation of Habitats and Species Regulations 2017. They are identified as European Protected Species. Under these laws it is an offence to:

- capture, kill, disturb or injure bats (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (even accidentally);
- obstruct access to their resting or sheltering places (on purpose or by not taking enough care); or
- possess, sell, control or transport live or dead bats, or parts of them.

Seven species of bat are listed as species "of principal importance for the purpose of conserving biodiversity".

The grassland and boundary habitats of the Site provides some limited foraging habitat due to supported insect prey. Linear habitats present at the boundaries, such as tree-lines and hedgerows, are likely to provide some commuting opportunities.

Mitigation related to increased light-spill is recommended.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) from being killed, injured or captured whilst their nests and eggs are protected from being damaged, destroyed or taken. Birds which are listed under Schedule 1 of the Act are given additional protection against disturbance.

Fifty-nine species of bird are listed as species “of principal importance for the purpose of conserving biodiversity”.

It is likely that common and widespread birds nest within boundary hedgerow, scrub, and trees. Vegetation management has potential to impact nesting birds and mitigation is recommended.

Hedgehog

Hedgehogs are partially protected under the Wildlife & Countryside Act and may not be trapped without a licence from Natural England. Hedgehogs are listed as a species “of principal importance for the purpose of conserving biodiversity”.

There is potential that Hedgehogs are active within boundary vegetation and grassland contained within the Site. There is potential for hedgehog to harmed during vegetation clearance. Precautionary mitigation is recommended.

Invasive Non-Native Species

Several plant species in the UK are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) which makes it illegal to allow them to spread.

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), relates to the introduction of plant and animal species that are not native to the UK. It is an offence to ‘cause to grow in the wild’ and spread any plant that is listed under this Schedule. This includes the variegated yellow archangel and wall cotoneaster that is growing within the Site (see TN1 and TN2, Map 1, respectively). Control of these plants is recommended.

4.4. Statutory Nature Conservation Sites

There is one SNCS located within 1km of the Site.

West Cornwall Byrophytes SSSI

This SNCS is located approx. 0.8km south-east of the Site. Due to the separation distance between this SNCS and the Site, no mitigation is required.

Natural England has assessed the potential for various development types to impact nearby statutory nature conservation sites when they created SSSI Impact Risk Zones. The proposed development type is not of a type that Natural England judges to be a risk to statutory nature conservation sites. No mitigation is required and there is no requirement to consult Natural England on the potential impact on these sites.

4.5. Non-statutory Nature Conservation Sites

There is one NNCS located within 1km of the Site.

Unnamed Cornwall Roadside Verge Inventory (CRVI)

This NNCS is located approx. 0.9km south-east of the Site. Due to the separation distance to this NNCS, it is unlikely that the proposed development would adversely impact the species and habitats for which this site has been selected. No Mitigation is required.

5. Recommendations for mitigation and further surveys

5.1. Mitigation

Where there is potential that a proposed development will have a significant[1] effect on a valued ecological feature of nature conservation interest, recommendations for mitigation are made based on the mitigation hierarchy suggested in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance;

> Avoidance –significant harm to wildlife species and habitats should be avoided through design.
> Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design, or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations.
> Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, this should be properly compensated for by measures to provide for an equivalent value of biodiversity.

Where the detail of a proposal is unknown, such as in outline planning applications, general mitigation will be suggested. This should be re-addressed once final plans are known.

Further survey work

Where further survey work is not recommended, this is because it is the professional judgement of the ecologist that adequate information is already available and further surveys would not make any material difference to the assessment provided.

Where the information within this report is insufficient to allow a full description of the nature conservation features of the site along with a robust assessment of the potential effects on these features, further survey work will be recommended.

5.2. Habitats of nature conservation importance

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to habitats:

Cornish Hedgebank with Hedgerow

Under current proposals, no hedgebank habitat is to be lost. However all retained Cornish hedgebank with hedgerow habitat should be protected from accidental damage during the construction phase by a 2m buffer zone. This protection zone should be delineated by a suitable fence and maintained for the duration of the works, and there should be no access, storage of materials, ground disturbance, burning or contamination within the fenced areas.

[1] For the purposes of this report, a practical approach has been taken to define the term 'significant'. If an effect is sufficiently important to be given weight in the planning process or to warrant the imposition of a planning condition, it is likely to be 'significant' in the context of the level under consideration (BSI, 2013).

5.3. Protected species and species of nature conservation importance

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to species:

Badgers and other mammals

To prevent any restriction of movement and animals becoming trapped during the construction phases of a development, the following is recommended:

- Site security fencing along the boundaries should leave a gap of at least 2 metres wide between the fence and any woodland, hedgerow or scrub;
- Any trenches left open at night should have some means of escape for Badgers, such as the placement of a scaffolding board at one end;
- Any site security fences should have a gap at each corner sufficient to allow Badgers to exit the Site should they gain entry.

Bats

It is possible that bat species, some maybe light-averse (e.g. brown long eared) might be active along vegetated Site boundaries, especially the hedgebank, and tree-lines.

It is recommended that excessive additional light spill is to be avoided in order to reduce degradation of natural habitats, such as the vegetative boundaries of the Site, which have potential value to commuting bats.

There is also potential that night-time works during construction could impact bat species, and the following should be adopted:

- No external night-time works will occur during the works, unless in the winter months.

This mitigation is considered to be sufficient to meet the requirement of demonstrating minimal new external lighting, and avoidance of light spill onto habitats used by bats and other wildlife, such as the hedgebanks and tree-lines.

Birds

It is likely that common bird species nest within the scrub, trees, and hedgebank.

Any activities affecting these habitats should be completed during the period September to February inclusive, outside the accepted bird nesting season. If this is not practicable, prior to the start of works these habitats should be thoroughly inspected by a suitably qualified person prior to disturbance or removal. If nesting birds are found, all activities likely to damage the immediate area should be delayed until chicks have fledged.

Hedgehogs

There is potential that hedgehog may become trapped within any construction site during the construction phase. To prevent this, the following is recommended:

- Any site security fencing along the boundaries should leave a gap between the fence and any other boundary such as hedgerow or tree line;

- Any trenches left open at night should have some means of escape for hedgehog, such as the placement of a scaffolding board at one end;
- Any site security fences should have a gap at each corner sufficient to allow hedgehog to exit the Site should they gain entry.

It is recommended that any new boundaries (including fences) that might impact movement through the landscape for Hedgehog, have 13x13cm holes included at ground level.

Invasive Non-native Species

Variegated yellow archangel and Wall cotoneaster are growing within the boundary vegetation of the north-east and south, identified at Target Notes 1 and 2 (Map 1), respectively. If these areas are likely to be disturbed, there is a risk of causing them to spread.

Control and/or mitigation may include mechanical or chemical measures:

- Mechanical methods comprise pulling up young seedlings and excavating the roots mass. Any material from the INNS/containing INNS waste must be either chipped/burnt on site, or removed to licensed landfill as controlled waste.
- Chemical methods include spraying plants with a suitable herbicide and treating stumps of larger plants to prevent regrowth.

5.4. Summary of net gains and losses

Table 4 provides a summary of net gains and losses to biodiversity resulting from the proposed development with mitigation, but without biodiversity enhancement.

Table 4. Summary of net gains and losses to biodiversity

Nature conservation feature	**Potential impact**	**Proposed mitigation**	**Outcome/Comments**
Cornish Hedgebank with hedgerow	Accidental damage to hedgebank during construction phase.	Adoption of a suitable protection zone with fencing.	Impact avoided.
Badgers	Becoming trapped within the site during the construction phase	Access along boundaries; trenches with escape mechanisms; gaps at the corners of any security fences.	Impact avoided
Bats: foraging and commuting	Degraded commuting and foraging habitat due to light spill	Precautionary mitigation in relation to night works (unless in winter) and additio0nal light spill on boundaries.	Impact minimised.
Nesting Birds	Harm during vegetation management	Any activities affecting nesting habitats should be completed during the period September to February inclusive, outside the accepted bird nesting season.	Direct harm and injury avoided.
Invasive non-native species of plant	Possible spread across Site and wider area.	Herbicide application and removal	Impact avoided and positive gain

6. Further survey work

Information within this report is sufficient to allow a robust assessment of the majority off potential effects on the ecological features associated, or potentially associated, with this site.

No further survey work is recommended.

7. Biodiversity enhancement

In line with the Environment Act 2021, the majority of Local Planning Authorities (LPA) are now requiring suitable enhancements for wildlife within minor developments, with the aim of securing net gain. Although applying a measurable net gain does not apply to permitted development, change of use, or alterations to buildings and housing extensions, the LPA will likely seek proportionate enhancements for wildlife from these developments. Depending upon the LPA's requirements, this might include bat box/brick/tubes, bird box/bricks and bee bricks. If structurally inappropriate to the design, the use of alternative, but equivalent, wildlife features is possible.

Creating new habitats, enhancing existing habitats or providing new wildlife features, can all contribute towards biodiversity enhancement, and helping to rebuild habitat networks in the wider area improves ecological resilience and adaptation to climate change.

Enhancements are additional to any measures necessary to deal with potential impacts on site, as they are an opportunity to provide new benefits for biodiversity as a consequence of the proposals being implemented.

For this development, we recommend:

- Five bat boxes within retained trees;
- Five bird nest boxes within retained trees

7.1. Bats

New roosting opportunities for bats can be created with the installation of bat boxes. Additional bat roosting opportunities would serve to enhance the ecological function of the retained trees within the Site. Two bat boxes could be fitted to trees, at least 3m above the ground, and with a clear flight path. These should be fitted under the guidance of a suitably qualified ecologist.

Figure 1. Schwegler 2F bat box

A design such as the Schwegler 2F (Figure 1) provides roosting opportunities for cavity dwelling species which are likely to be active in the local area such as Pipistrelles, Brown Long-eared and Myotids and provides ideal ambient conditions for summer and maternity roosts.

7.2. Bird Boxes

New nesting opportunities could be provided for birds on the Site, through the provision of birdboxes such as the Vivara Pro Seville 32mm WoodStone Nest Box. These are highly durable and long lasting, and offer nesting opportunities for a variety of species such as Blue Tits, Great Tits and Nuthatches, which are likely to be present within the habitat surrounding the Site.

Figure 3. Vivara Pro Seville WoodStone Nest Box

8. References

BSI, 2013. *British Standard 42020: 2013. Biodiversity – Code of practice for planning and development.* British Standards Institution, London.

CIEEM, 2016. *Guidelines for Ecological Impact Assessment: Terrestrial, Freshwater and Coastal. Technical Guidance Series.* Chartered Institute of Ecology and Environmental Management, 43 Southgate Street, Winchester, Hampshire.

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Joint Nature Conservation Committee, 2010. Reprinted by JNCC, Peterborough

JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), 2012. *UK Post-2010 Biodiversity Framework*. July 2012.

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9. Appendix 1:

Legislation and Policy used to assess habitats and species:

European Habitats and Species Directive (CEC, 1992)

The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance.

European Red Data lists (IUCN, 2000)

International Union for Conservation of Nature (IUCN and the European Commission have been working together on an initiative to assess around 6,000 European species according to IUCN regional Red Listing Guidelines. Through this process they have produced a European Red List identifying those species which are threatened with extinction at the European level so that appropriate conservation action can be taken to improve their status.

European Council Birds Directive (CEC, 1979)

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. An important part of this Directive is the identification and classification of Special Protected Areas (SPAs) to protected vulnerable bird species listed in Annex 1 of the Directive and regularly occurring migrating species.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

This Act is the primary legislation that protects animals, plants and certain habitats in the UK.

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 consolidate and update the Conservation of Habitats and Species Regulations 2010, and transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and elements of Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") in England, Wales, and to limited extent, Scotland and Northern Ireland.

The objectives of the Habitats Directive is to protect biodiversity through the conservation of natural habitats and species of wild fauna and flora. The Directive lays down rules for the protection, management and exploitation of such habitats and species.

The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species. These sites form a network termed Natura 2000 and include Special Areas of Conservation and Special Protection Areas.

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 consolidated and improved previous legislation. Under the Act it is an offence to kill, injure or take a Badger, or to damage or interfere with a sett used by a Badger unless a licence is obtained from a statutory authority.

The Hedgerow Regulations 1997

The Hedgerows Regulations 1997 protect certain hedgerows from being removed (uprooted or destroyed) if they meet certain criteria.

The Countryside and Rights of Way (CRoW) Act 2000

This Act increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation.

Circular 06/2005 Biodiversity and geological conservation – statutory obligations and their impact within the planning system

This circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the national planning policy in the National Planning Policy Framework and the Planning Practice Guidance.

Natural Environment and Rural Communities Act 2006

The Act made amendments to the both the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way (CROW) Act 2000. For example, it extended the CROW biodiversity duty to public bodies and statutory undertakers.

UK Post-2010 Biodiversity Framework, 2012

The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeds the UK BAP and 'Conserving Biodiversity – the UK Approach', and is the result of a change in strategic thinking.

National Planning Policy Framework, 2019

The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It contains a number of policies relating to ecology including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".

The natural choice: securing the value of nature (2011) (Natural Environment White Paper)

This White Paper outlines the Governments vision for the future of landscape and ecosystem services.

Biodiversity 2020

This is a national strategy for England's wildlife and ecosystem services based on the White Paper.

Appendix 2:

Photographs:

Image 1. Variegated yellow archangel (TN1)

Image 2. Wall Cotoneaster (TN2)

Image 3. Amenity grassland fields

Image 4. Scattered trees/tree lines

Image 5. Species-rich Cornish hedgebank

Image 6. Species-poor Cornish hedgebank

Image 7. Scrub (north)

Image 8. Scrub (south)

Appendix 3:

Species List:

Common Name	Scientific Name
Ash	*Fraxinus excelsior*
Bear's breaches	*Acanthus spp.*
Blackthorn	*Prunus spinosa*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus*
Cherry	*Prunus spp.*
Cleavers	*Galium aparine*
Common hogweed	*Heracleum sphondylium*
Common nettle	*Urtica dioica*
Cotoneaster, wall	*Cotoneaster horizontalis*
Creeping buttercup	*Ranunculus repens*
Daisy	*Bellis perennis*
Dandelion	*Taraxacum officinale*
Dock	*Rumex spp*
Elder	*Sambucus nigra*
Elm	*Ulmus spp.*
Geranium, dove's foot crane's bill	*Geranium molle*
Harts tongue fern	*Asplenium scolopendrium*
Hawthorn	*Crataegus monogyna*
Hedge bedstraw	*Galium album*
Hedge bindweed	*Calystegia sepium*
Hedge woundwort	*Stachys sylvatica*
Holly	*Ilex aquifolium*
Ivy	*Hedera helix*
Lime	*Tilia spp.*
Lords and Ladies	*Arum maculatum*
Oak	*Quercus robur*
Privet	*Lingustrum spp.*
Red fescue	*Festuca rubra*
Ribwort plantain	*Plantago lanceolata*
Silver birch	*Betula pendula*
Sycamore	*Acer pseudoplantantus*
Variegated yellow archangel	*Lamium galeobdolon subsp. argentatum*
White clover	*Trifolium repens*
Willow	*Salix spp.*
Yorkshire fog	*Holcus lanatus*