Scottish & Southern Electricity Networks

APPENDIX C – PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

LT491 Dundee Network Rail Substation

Preliminary Ecological Appraisal Report

SSEN

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Delivering a better world

Quality information

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Executive summary

AECOM Limited (AECOM) was commissioned by SSEN to conduct a Preliminary Ecological Appraisal (PEA) for the proposed construction of a Network Rail Substation in Dundee (the 'Proposed Development'). The Proposed Development will be at a disused industrial site in Dundee (approximate central Ordnance Survey (OS) grid reference NO4168230842).

The PEA included a desk study and a field survey. The field survey comprised a habitat survey and assessment of potential for protected/important species as detailed further in this Report.

The PEA identified that the Proposed Development could potentially impact the following important ecological features:

- European sites;
- Non-statutory designated sites;
- Protected and/or notable species namely bats and nesting birds; and,
- Invasive non-native species (INNS).

Based on the findings of the PEA, the following recommendations are made for further work or specific mitigation:

- a Construction Environment Management Plan (CEMP) to safeguard East Dock Street/Broughty Ferry LINCS;
- a bat emergence survey of structure within the bat active bat season (May – August) prior to submission of the planning application should the Low suitability structure be illuminated or removed;
- standard measures to protect nesting birds. If any clearance is required during March to August, an ecologist must be present to check all vegetation or structures to be removed prior to removal. Site preparations to make the buildings unsuitable/inaccessible for nesting should be planned to take place, as far as possible, outside the general breeding bird season prior to the construction works commencing; and,
- removal of INNS from the Site and implementation of basic biosecurity measures to ensure that INNS do not spread. Such measures should be outlined in a Method Statement or Biosecurity Management Plan.

With regard to Scottish biodiversity policy, the following initial avoidance/mitigation and biodiversity enhancement recommendations are also given:

- installation of living roofs on new roofs may provide nesting and foraging opportunities for birds and may also be used by pollinating insects;
- the creation of species-rich grassland to compensate for loss of areas of modified grassland. Any such meadow creation/enhancement should use an appropriate seed mix as advised by an ecologist (a seed mix imitating National Vegetation Classification (NVC) type MG5 is likely to be appropriate);
- planting native broadleaved tree species suitable to the locality (as advised by an ecologist), for example at the edge of the woodland area to increase its total size, or at the edge of the Site to provide screening;
- installation of bat boxes at suitable locations (e.g. on woodland edge habitat);
- installation of bird boxes or bird nesting bricks suitable for a range of species. For example, swift bricks can be easily incorporated into the structure of new buildings, and house sparrow nesting structures can be installed on the outside; and,
- targeted removal of INNS (e.g. removal of large areas of butterfly-bush and treatment of giant hogweed). These species are likely to be widespread in the area and may reinvade, and ongoing monitoring and a long-term programme of removal would likely be necessary.

1. Introduction

1.1 Background

AECOM Limited (AECOM) was commissioned by SSEN to conduct a Preliminary Ecological Appraisal (PEA) for the proposed construction of a Network Rail Substation in Dundee. The approach applied when carrying out the PEA followed the *Guidelines for Preliminary Ecological Appraisal* published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017).

Throughout this document, species are given their common and scientific names when first referred to and their common names only thereafter (except where a common name does not exist or is not well-known, in which case only the scientific name is used, such as for bryophytes). Nomenclature for vascular plants follows Stace (2019) and for bryophytes, Smith (2004) and Paton (1999). All distances are cited as the shortest distance 'as the crow flies', unless otherwise specified.

1.2 Description of the Site

The red line boundary of the Proposed Development (hereafter referred to as the 'Site') is shown in Plate 1 and is approximately centred on Ordnance Survey (OS) grid reference NO4168230842.

The Site is a currently disused industrial site in Dundee. The Site is dominated by sealed surfaces, buildings and structures associated with the former use of the Site. A retaining wall (Photograph 1) separates the Site between north and south, with the northern part of the Site (formerly a cattle market) the more elevated of the two (Photograph 2). The south of the Site is the disused Nynas site, which mainly comprises large cylindrical oil storage tanks (Photograph 3). East of this, across the now overgrown Roodyards Road, is an area of the Site now in use by Scotriders for motorbike training (Photograph 4). To the west and south there are similar industrial areas, with the A92 road immediately to the south and east. The Site is bound to the north by the Broughty Ferry road, beyond which lies existing residential areas.

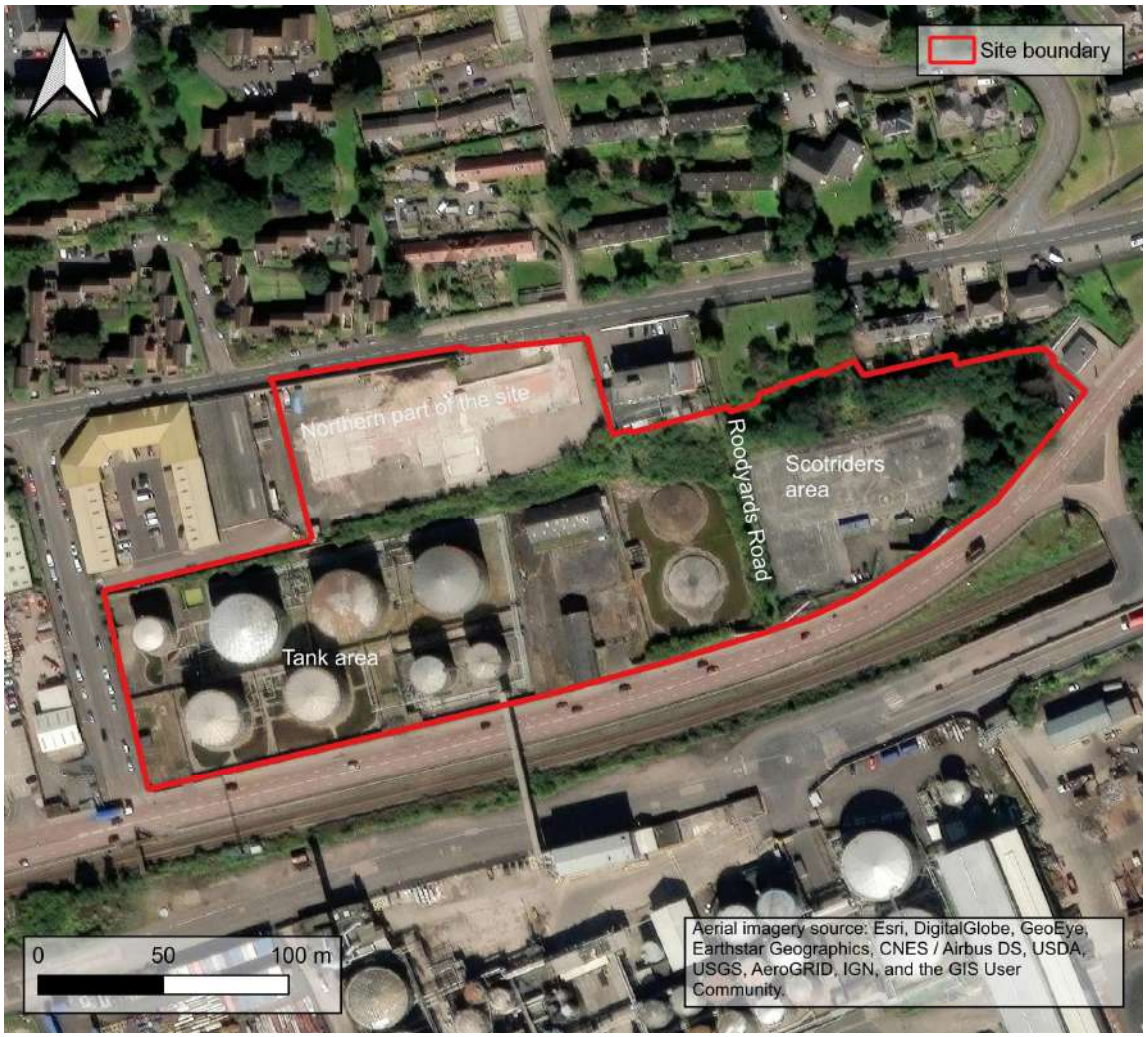

Plate 1: Site boundary

1.3 Important ecological features

Ecological features comprise sites designated for nature conservation, habitats, species, and ecosystems (including ecosystem function and processes).

Although all ecological features identified by the PEA were recorded, the primary focus was to determine the presence, or potential presence, of legally protected or otherwise 'important' ecological features. This accords with the CIEEM guidelines on Ecological Impact Assessment (EcIA) which states that "*it is not necessary to carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable*" (CIEEM, 2022a).

For the purposes of this PEA, important ecological features included the following:

- sites designated for nature conservation, including those designated at international, national and local levels;
- the qualifying features of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Wetlands of International Importance (Ramsar sites), and the notified features of Sites of Scientific Importance (SSSIs), where there is connectivity with the Site;
- woodland listed on the Ancient Woodland Inventory (AWI);
- habitats listed on Annex I of the Habitats Directive[1];
- species listed on Annex II of the Habitats Directive;

[1] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, commonly referred to as the 'Habitats Directive'.

- bird species listed on Annex I of the Birds Directive[2];
- species listed on Schedules 2 and 4 of the Habitats Regulations[3];
- species listed on Schedules 1, 5 and 8 of the WCA[4];
- badger *Meles meles*, which is afforded protection under the Protection of Badgers Act 1992 (as amended);
- habitats and species listed on the Scottish Biodiversity List (SBL), which are thus identified as being of principal importance for biodiversity conservation in Scotland;
- all species on the Red List of Birds of Conservation Concern (BoCC) 5 (Stanbury *et al.*, 2021); and,
- invasive non-native species listed on Schedule 9 of the WCA (although this no longer legally applies in Scotland), those considered to be of EU concern under the Invasive Alien Species Regulation[5] and additional species commonly considered to be invasive as listed in Annex B of the NatureScot *Developing with Nature Guidance*[6].

Additional features may be considered to be important, for example due to their inclusion in local biodiversity action plans (LBAP) or in species red data books, based on professional judgment.

Information on the relevant wildlife legislation in the list above and on national and local planning policy relevant to nature conservation is provided in Appendix A.

1.4 Purpose of this document

This Preliminary Ecological Appraisal Report (PEAR) sets out the survey methods adopted during the PEA, the results obtained, and the potential ecological constraints/opportunities associated with the Proposed Development. It provides high-level recommendations for further study/survey work and/or avoidance/mitigation measures as well as opportunities for the Proposed Development to provide biodiversity benefits.

The purpose of the PEA was to:

- record and assess all habitats within the Site plus a minimum 50 m buffer, as far as access permitted;
- search for and assess the potential for important ecological features to be present;
- provide a map showing the location of identified important ecological features;
- provide recommendations on any required further detailed ecological study/survey;
- provide advice on any potential ecological constraints which may be faced by the Proposed Development and identify avoidance/mitigation measures which may be required; and,
- identify and suggest opportunities for the Proposed Development to deliver biodiversity benefits.

1.5 Quality assurance

This PEAR, and the desk study and field survey described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). AECOM's IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment and sustainability management. All AECOM staff members are committed to maintaining accreditation to those parts of BS EN ISO 9001:2015 and 14001:2015, as well as BS OHSAS 18001:2021 that are relevant to a consultancy service.

The field survey associated with the PEA was completed by AECOM Ecologist Seanin Maxwell and former AECOM Ecologist Scott McCollum. The desk study and the preparation of this report was competed by Scott McCollum, which was then reviewed by Seanin Maxwell. It was verified by Paul Lynas.

Seanin Maxwell BSc (Hons) MSc ACIEEM is a Consultant Ecologist with over four years' professional experience in ecological consultancy. Seanin has carried out a range of ecological surveys, including roosting bats, bat activity, badger, great crested newt *Triturus cristatus*, reptiles, Phase 1 Habitat, condition assessment for Biodiversity Net Gain assessments, and invasive non-native species (INNS) survey. Seanin has been involved in

[2] Directive 2009/147/EC on the conservation of wild birds, commonly referred to as the 'Birds Directive'.
[3] Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), commonly referred to as the 'Habitats Regulations'.
[4] The Wildlife and Countryside Act 1981 (as amended) (WCA).
[5] Regulation 1143/2014 on invasive alien species, which is more commonly referred to as the 'Invasive Alien Species Regulation'.
[6] https://www.nature.scot/doc/developing-nature-guidance.

a range of projects including transport, power, government, water, residential and commercial schemes within the UK and Ireland.

Scott McCollum BSc (Hons) was formerly a Consultant Ecologist with AECOM with over six years' professional experience. Scott carried out ecological surveys for a variety of projects including road schemes, railway works, housing and other large-scale private sector developments. Scott has experience conducting a wide variety of ecological surveys including Phase 1 Habitat surveys, bats, badger, otter *Lutra lutra*, birds, smooth newt *Lissotriton vulgaris*, butterflies, reptiles, and INNS.

Verification of the PEAR was carried out by Dr Paul Lynas BSc (Hons) MRes CEnv MCIEEM. Paul is an Associate Director of Ecology at AECOM with over 20 years' professional conservation and consultancy experience in carrying out a range of habitat and protected species surveys. He has worked on numerous development schemes and ecological assessments from small to large scale, incorporating species specific surveys, mitigation design and monitoring.

2. Methods

2.1 Desk study

A desk study was carried out to identify nature conservation designations and records of important habitats and species (as defined in Section 1.3) potentially relevant to the Proposed Development. A stratified approach was taken when defining the desk study area, based on the possible zone of influence (ZoI) of the Proposed Development on different ecological features. Accordingly, the desk study sought to identify:

- SAC, SPA and Ramsar sites within 10 km of the Site (further where there is hydrological or other ecological connectivity);
- SSSIs within 2 km of the Site (further where there is hydrological or other ecological connectivity);
- locally-designated nature conservation sites within 1 km of the Site; and,
- records of protected and/or important habitats and species within 1 km of the Site (within the last ten years).

A range of data sources were used for the desk study, as set out in Table 1.

Table 1. Desk study data sources

Data source	Date accessed	Data obtained
Ordnance Survey (OS) 1:25,000 maps and aerial photography (https://www.bing.com/maps/)	12/06/2024	• Habitats and connectivity relevant to interpretation of planning policy and potential protected/important species constraints.
Dundee City Council website (https://www.dundeecity.gov.uk/service-area/city-development/local-development-plan) (https://www.dundeecity.gov.uk/service-area/neighbourhood-services/environment/biodiversity)	12/06/2024	• Local Development Plan policies relevant to nature conservation. • Biodiversity Action Plan Dundee.
NatureScot SiteLink webpage (https://sitelink.nature.scot/home)	12/06/2024	• Extents of and information on designated sites, including SPAs, SACs, Ramsar sites and SSSIs.
Scotland's environment map (https://www.environment.gov.scot/maps/scotlands-environment-map/)	12/06/2024	• Ancient Woodland Inventory.
SEPA Water Classification Hub (https://www.sepa.org.uk/data-visualisation/water-classification-hub/)	12/06/2024	• Status of watercourses and standing waters.
Amphibian and Reptile Groups of the UK (ARG UK) and Amphibian and Reptile Conservation (ARC) Record Pool (https://www.recordpool.org.uk/)	12/06/2024	• Amphibian/reptile hectad records.
Saving Scotland's Red Squirrels (scottishsquirrels.org.uk)	12/06/2024	• Red squirrel *Sciurus vulgaris* records.
Mammal Society Species Hub (https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/)	12/06/2024	• Information on protected and important mammals.
Dundee Open Data Dundee Locally Important Nature Conservation Sites (LINCS) | Dundee Locally Important Nature Conservation Sites (LINCS) | Dundee City Council Open Data Portal	12/06/2024	• Mapping of local non-statutory nature conservation designations.
NBN Atlas Scotland (https://scotland.nbnatlas.org/)	12/06/2024	• Commercially-available records of protected and/or important species.

2.2 Field survey

A habitat survey was carried out within of the Site plus a 50 m buffer where safe access was possible, on 16 May 2024 and 17 June 2024 (the area covered by the field survey is hereafter referred to as the Survey Area). Habitats were classified according to the UKHab survey method (UKHab Ltd, 2023). However, notes were also made for each habitat of dominant, typical, and important/notable plants (including INNS), and relevant ecological characteristics, which reflect conditions at the time of survey. All habitats within the Site were assigned a

condition using the condition assessment criteria detailed for the Natural England Biodiversity Metric 3.1[7] (as set out within the SSEN Transmission Biodiversity Net Gain Toolkit[8],[9]).

The habitat survey was 'extended' to include general assessment of the potential for habitats to support protected and/or important species and to note evidence (where found) of such species. In accordance with guidelines published by the Bat Conservation Trust (BCT) (Collins, 2023), this included a Daytime Bat Walkover (DBW) to assess the suitability of habitats for roosting, commuting and foraging bats. A Preliminary Roost Assessment (PRA) of structures and Ground Level Tree Assessment (GLTA) was also completed on Site at the same time as the DBW. Following Collins (2023), structures were assigned a suitability category based on the presence of Potential Roost Features (PRF), as set out in Table 2. Trees were assessed as having 'PRF-I', where they contained features suitable only for individual or very small numbers of bats, or 'PRF-M', where they had suitability for use by multiple bats (including maternity colonies).

PRFs searched for included suitable holes, cracks or splits in trees, and any possible ingress points to buildings or structures. Where such features existed, searches were made for evidence of bat use such as droppings, staining, foraging remains, auditory evidence and the presence of live or dead bats.

Table 2. Bat habitat suitability categories (from Collins (2023))

Suitability	Description of roosting habitats (in structures)	Description of commuting and foraging habitat
None	No habitats on Site likely to be used by any roosting bats at any time of year (i.e., a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on Site likely to be used by any commuting or foraging bats at any time of year (i.e., no habitats that provide continuous lines of shade/protection for flight lines, or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on Site likely to be used by roosting bats. However, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on Site likely to be used for commuting or by foraging bats. However, a small element of uncertainty remains in or der to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e., unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).	Habitat that could be used by small number of bats for commuting such as a gappy hedgerow or unvegetated stream, but isolated (i.e., not very well connected to the surrounding landscape by other habitat). Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat. These structures have the potential to support high conservation status roosts (e.g., maternity or classic cool/stable hibernation site).	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for commuting such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed grassland. Site is close to and connected to known roosts.

All field mapping was carried out using Esri Field Maps on a GPS-enabled tablet with aerial photography, to maximise mapping accuracy. Field data was subsequently refined as necessary in GIS for figure production.

[7] Natural England (2022). Biodiversity Metric 3.1 - Habitat Condition Assessment Sheets
[8] SSE (2022) Biodiversity Net Gain Toolkit User Guide. Revision 2.00. TG-NET-ENV-526.
[9] SSEN Transmission (2022). SSEN Transmission Toolkit

2.3 Limitations

Desk study information is dependent on records having been submitted for the area in question. As such, a lack of records for particular habitats or species does not necessarily mean they are absent. Likewise, the presence of records for a habitat or species does not automatically mean that they still occur or are relevant in the context of the Proposed Development.

Some areas of dense scrub were not accessed. Although this habitat could be clearly seen from outside, one area of scrub was obstructing old stone block walls from view, which therefore could not be fully assessed for PRF. Some parts of the 50 m buffer around the Site were inaccessible, for example industrial and residential areas. These habitats were assessed according to aerial imagery. Due to their developed nature no relevant ecological constraints are likely to be present.

Where habitat edges are sharp and coincide with features on base mapping or aerial photography that are considered correct, their placement is based on the accuracy of that data in GIS. Otherwise, habitat edges are best estimates as judged in the field. Note also that habitat transitions can be gradual without sharp boundaries. Consequently, habitat mapping and any stated habitat areas are approximate and should be verified by measurement on Site where required for design or construction.

Baseline conditions are increasingly liable to change with further elapsed time since field survey. For example, protected species may establish new refuges, or invasive non-native species may colonise. Any conclusions or recommendations in this PEAR are based on the information collected during the described desk study and field surveys. In line with NatureScot guidance, re-survey is recommended if construction or enabling works will take place more than two years since the date of field survey.

3. Baseline conditions, ecological constraints and recommendations

The following sections detail the results of the desk and field-based studies completed as part of the PEA. Where necessary, recommendations for further study/survey and mitigation measures to protect identified ecological features are provided. Opportunities for the Proposed Development to deliver biodiversity benefits are highlighted in Section 4 of this PEAR.

Photographs taken during field survey and referred to in the following sections are presented in Appendix B.

3.1 Designated sites

3.1.1 Desk study information

3.1.1.1 Statutory designations

There are five internationally designated sites within 10 km of the Site, the details which are provided in Table 3. There are no nationally designated sites for nature conservation (including SSSIs) within the search distances specified in Section 2.1. The locations of European sites are shown on Figure 1.

Table 3: Statutory designated sites within the desk study area

Designated site [site code]	Reason(s) for designation	Location and potential relationship to the Proposed Development
Firth of Tay and Eden Estuary SAC [UK0030311]	• estuaries; • mudflats and sandflats not covered by seawater at low tide; • sandbanks slightly covered by sea water at all times; and • harbour seal *Phoca vitulina.*	Located, at closest, approximately 245 m south of the Site. There is no hydrological connection between the Site and the SAC. Intervening land comprises industrial areas and roads.
Outer Firth of Forth and St Andrews Bay Complex SPA [UK9020316]	Contains many sheltered areas, such as firths, inlets and sandy bays, used by seabirds and waterbirds to feed, moult, rest and roost. During the breeding season, the SPA provides feeding grounds for thousands of gannets *Morus bassanus*, kittiwakes *Rissa tridactyla*, puffins *Fratercula arctica* and the largest concentration of common terns *Sterna hirundo* in Scotland. During the winter, the site supports more than 35% of eider *Somataria mollissima* and over 23% of velvet scoter *Melanitta fusca* British wintering populations, along with the largest Scottish concentrations of red-throated diver *Gavia stellata* and little gull *Larus minutus*.	Located, at closest, approximately 1.4 km south-east of the Site. There is no hydrological connection between the Site and the SPA. Intervening land comprises industrial areas and roads.
Firth of Tay and Eden Estuary SPA [UK9004121] and Ramsar Site [UK13018]	A complex of estuarine and coastal habitats. Designated for: • breeding populations of marsh harrier *Circus aeruginosus* and little tern *Sternula albifrons*; • wintering populations of bar-tailed godwit *Limosa lapponica*, redshank *Tringa tetanus*, greylag goose *Anser anser* and pink-footed goose *Anser brachryehynchus*; and • an internationally important assemblage of birds in the non-breeding season, with the area regularly supporting 48,000 individual waterbirds including cormorant *Phalacrocorax carbo*, shelduck *Tadorna tadorna*, eider *Somataria mollissima*, long-tailed duck *Clangula hyemalis*, common scoter *Melanitta nigra*, velvet scoter, goldeneye *Bucephala clangula*, red-breasted merganser *Mergus serrator,* goosander *Mergus merganser,* oystercatcher *Haematopus ostralegus*, grey plover *Pluvalis squatarola*, sanderling *Calidris alb*a, dunlin *Calidris alpina*, and black-tailed godwit *Limosa limosa islandica*.	The boundaries of the SPA and Ramsar site are coincident. They are, at closest, approximately 2.9 km south-west of the Site. There is no hydrological connection between the Site and the SPA/Ramsar site. Intervening land comprises urban areas of Dundee and the Firth of Tay.
Barry Links SAC [UK0013044]	• Atlantic decalcified fixed dunes (*Calluno-Ulicetea*);	Approximately 9.2 km east of the Site. There is no hydrological connection between the Site and

Designated site [site code]	Reason(s) for designation	Location and potential relationship to the Proposed Development
	• humid dune slacks; • embryonic shifting dunes; • shifting dunes along the shorelines with *Ammophila arenaria* ("white dune"); and • fixed dunes with herbaceous vegetation ("grey dunes").	the SAC. Intervening land comprises urban areas within Dundee and Broughty Ferry.

3.1.1.2 Non-statutory designations

There is a single Locally Important Nature Conservation Sites (LINCS) within 1 km of the Site. This is East Dock Street/Broughty Ferry LINCS, located 21 m east of the Site. The LINCS is designated for linear grassland, tall herb and woodland with several locally rare species. There is no hydrological connection between the Site and the LINCS. The LINCS is separated from the Site by the A92 road. Numerous other LINCs and proposed LINCS are present within Dundee, however, these are located > 1 km from the Site and there are no terrestrial or hydrological connections between the Site and these sites. The locations of non-statutory sites are shown in Figure 2.

3.1.2 Constraints and recommendations

There is no hydrological connection between the Proposed Development Site and any European site (including the closest, Firth of Forth Estuary, located approximately 245 m south of the Site). Habitats on site are not considered likely to be suitable for any QI bird species of Outer Firth of Forth and St Andrews Bay Complex SPA and Firth of Tay and Eden Estuary SPA.

East Dock Street/Broughty Ferry Road LINCS is located approximately 21 m east of the Site. There will be no habitat loss within the LINCS. However, impacts to the LINCS could occur if a construction pollution event affects LINCS habitat. Recommended mitigation is to take cognisance of the LINCS during construction of the Proposed Development. It is recommended that a Construction Environment Management Plan (CEMP) is prepared for the Proposed Development, which will ensure all construction activities are completed within a set of prescribed methods and mitigation measures to minimise and avoid where possible negative impacts to the surrounding environment. A CEMP will have provisions for and ensure that all relevant Scottish Environmental Protection Agency (SEPA) guidance on pollution prevention is adhered to. With the implementation of a CEMP, it is considered that the construction of the Proposed Development will not have a significant impact on any non-statutory designated site.

3.2 Habitats

3.2.1 Desk study information

There are no records of Ancient or Long-established Woodland listed under the AWI within 1 km of the Site. AWI does not pose a constraint to the Proposed Development and is not discussed further in this Report.

3.2.2 Field survey

3.2.2.1 Overview

The Site is a disused industrial site, largely comprised of urban artificial habitats encroached by scrub, grassland and ruderal/ephemeral vegetation. No protected or SBL Priority Species of plants were note during survey. Summary descriptions of habitats within the Site are provided below. Habitats are presented in Figure 3 and illustrative photographs are provided in Appendix B.

3.2.2.2 Grassland

Areas of modified grassland (UKHab = g4) are present in various parts of the Site, growing on hardstanding substrates such as crushed stone (Photograph 5). Grassland has developed due to the disuse of the Site, and generally comprise a short sward. Couch *Elymus* sp. was the most abundant grass species with Yorkshire-fog *Holcus lanatus,* brome *Bromus* sp., and oat *Avena* sp., frequently noted, with perennial rye-grass *Lolium perenne* occasional. Although these areas were typically grass dominated, a mixture of forbs were found throughout, including herb-Robert *Geranium robertianum,* purple toadflax *Linaria purpurea,* wood avens *Geum urbanum,* biting stonecrop *Sedum acre,* dandelion *Taraxacum officinale* agg., hawksbit *Leontodon* sp., common poppy *Papaver rhoeas,* geranium *Geranium* sp., field forget-me not *Myosotis arvensis*, common ragwort *Jacobaea vulgaris,* ivy-leaved toadflax *Cymbalaria muralis,* great willowherb *Epilobium hirsutum*, curled dock *Rumex crispus* and lesser trefoil *Trifolium dubium.* Various mosses were also noted. Additional forbs noted in the Scotriders area at the east of the Site included creeping thistle *Cirsium arvense,* shining crane's-bill *Geranium*

lucidum, cleavers *Galium aparine,* field forget-me-not *Myosotis arvensis*, weld *Reseda luteola,* groundsel *Senecio vulgaris,* and rosebay willowherb *Chamaenerion angustifolium*.

3.2.2.3 Woodland and scrub

An area of broadleaved woodland (UKHab = w1g) is present at the east of the Site (Photograph 4). Canopy trees were noted to be semi-mature, with sycamore *Acer pseudoplatanus* and ash *Fraxinus excelsior* the dominant species. Other species occasionally noted in the canopy comprise hawthorn *Crataegus monogyna* and wych elm *Ulmus glabra*. The shrub layer was noted to be patchy, with butterfly-bush *Buddleja davidii* the dominant species. Young oak *Quercus* sp. and bramble *Rubus fruticosus* agg. were also recorded. Ivy *Hedera helix* carpets the ground flora in areas, with other species including tutsan *Hypericum androsaemum*, bracken *Pteridium aquilinum*, foxglove *Digitalis purpurea*, giant hogweed *Heracleum mantegazzianum* and wood avens. An open area was noted in the centre of the parcel, where diseased trees had previously been felled, and giant hogweed treated. Otherwise, no woodland management was evident.

A large area of scrub (UKHab = h3h) bisect the Site between the northern part of the Site and the Nynas tank area to the south, and between the tanks and the Scotriders area to the east (Photograph 6). Butterfly-bush generally dominates, although wych elm is also frequent in the Roodyards Road area. Other species occasionally noted comprise bramble, wood avens, and guelder rose *Viburnum opulus*.

Some individual trees are present within the scrub (Photograph 7), comprising elm *Ulmus* sp. and downy birch *Betula pubescens*.

3.2.2.4 Urban

Much of the Site is dominated by sealed surfaces (UKHab = u1b6) (Photograph 9). This comprises a mix of concrete and stones, which was noted to support occasional encroaching mosses and ruderal species. Buildings (UKHab = u1b5) and disused industrial infrastructure are also present within the Site (Table 4).

Areas of sparsely vegetated urban land (UKHab = u1f) are present encroaching areas of hardstanding (Photograph 8), with species composition similar to grassland described above, but with vegetation cover under 50%. This includes a large area of rubble and bricks covered with ivy-leaved toadflax located at the north of the Site. Species recorded include willowherb sp., red dead-nettle *Lamium purpureum*, cleavers, purple toadflax, white clover *Trifolium repens*, herb-Robert, ivy, bramble, shining crane's-bill, Yorkshire-fog, false oat-grass *Arrhenatherum elatius*, spear thistle *Cirsium vulgare*, barren brome *Anisantha sterilis*, broad-leaved dock *Rumex obtusifolius*, ribwort plantain *Plantago lanceolata*, tutstan, black medick *Medicago lupulina*, forget-me-not *Myosotis* sp. and ragwort. Sycamore seedlings were noted scattered throughout these areas.

3.2.2.5 Other habitats

Areas of standing water are present within the Site, comprising sealed surfaces flooded with rainwater (UKHab = r1fg) (Photograph 10), a small square pool with railings covered by duckweed *Lemna* sp. (UKHab = r1g) (Photograph 11), and a permanently wet area (UKHab = r1g) between a building and an area of scrub with yellow iris *Iris pseudacorus*, willow *Salix sp*., and common reed *Phragmites australis* (Photograph 12).

A stone retaining wall (UKHab = u1e) separate the Site between north and south. Stone walls covered by scrub separate the Scotriders area to the east from the rest of the Site. A brick wall separates the tanks to the south from nearby buildings. Walls constructed of stone or brick bound much of the Site, with paladin fencing along a portion of the northern boundary along Broughty Ferry Road.

3.2.3 Constraints and recommendations

The habitats on Site are largely artificial, with some areas of encroaching grassland and ruderal vegetation. Areas of scrub are not considered to be high-quality habitat, being dominated by invasive butterfly-bush. Areas of grassland and sparsely vegetated land are generally species-poor and comprise common species of derelict urban sites. Given the limited extent of these, they are not considered to represent Open Mosaic Habitat on Previously Developed Land (OMH), a Priority Habitat on the UK Biodiversity Action Plan (UKBAP) often recorded on brownfield sites (Maddock, 2008). Current plans suggest the substation infrastructure will require the clearance of the majority of buildings, scrub, grassland, sparsely vegetated land and standing open water within the Site. The removal of these habitats is not considered to pose a constraint to the Proposed Development.

The woodland at the east of the Site will be unimpacted by the Proposed Development. It is recommended that retained woodland is enhanced. Opportunities for enhancement will be discussed in the Biodiversity Net Gain report for the Proposed Development.

3.3 Bats

3.3.1 Desk study

The desk study did not return any records of bats within 1 km of the Site.

3.3.2 Field survey

The majority of habitats on Site are of Negligible habitat suitability for foraging and commuting bats, given the predominance of artificial surfaces on Site and in the wider environment. The woodland and scrub habitat on Site provide some limited suitable habitat for foraging and commuting bats, however, there is no connectivity to other suitable habitats within the wider surrounds. Whilst the majority of the Site is un-lit, there is some light spill from street lighting around the Site boundaries. Some of the better areas for commuting and foraging bats include the woodland areas at the edge of the Site to the east, and areas of scrub to the centre of the Site.

Numerous buildings and structures are present within the Site, associated with the former industrial use of the Site. The PRA found the vast majority of structures present to have Negligible bat roost suitability, due to their metal construction and lack of external fittings (such as soffits), loft spaces or other PRF which bats could utilise. A single structure was assessed as having Low bat roost suitability (see Target Note 01, Figure 3), comprising a stone wall along a portion of the north-east boundary of the Site. On the off-site side of the wall, there is a wooden shed. PRF comprise gaps under felt roofing, which is clad over the top of the wall, leading into the internal area of the wooden shed structure. The gaps lead past wooden beams internally. Although gaps were also identified in the stone wall itself, these are superficial and are considered unsuitable for roosting bats. No direct evidence of bats (e.g. droppings, urine staining) was identified.

Photographs of Negligible suitability buildings within the are provided in Plate 2. Photographs of the structure with Low bat roosting suitability are provided in Plate 3.

Plate 2: Buildings and structures on Site with Negligible suitability for roosting bats.

Plate 3: The structure with Low bat roosting suitability.

3.3.3 Constraints and recommendations

Although of Low suitability for roosting bats, there is potential for this structure to support roosting bats and therefore construction works could impact roosting bats. If the structure is to be modified or the area lit, further bat roost survey will be required to determine the presence/likely absence of roosting bats. A single bat emergence survey of identified PRF is recommended to take place during the active season, between May and August, in line with BCT guidance for buildings of Low suitability for roosting bats (Collins, 2023). Given the location of the Site and the absence of suitable vegetation in the surrounding area, the Site is not likely to be important for commuting and foraging bats, and thus commuting and foraging bats do not pose a constraint to the Proposed Development. No further bat activity survey is recommended.

3.4 Other Mammals

3.4.1 Desk study

No records of badger or pine marten *Martes martes* were returned from within 1 km of the Site. Data from Saving Scotland's Red Squirrels suggests that only grey squirrel *Sciurus carolinensis* are present in this area of Dundee.

3.4.2 Field survey

No evidence of badger was recorded on Site. The Site offers limited suitability habitat for foraging badger, whilst the substrate of the majority of the Site (i.e., hardstanding) is considered unsuitable for badger sett creation. The woodland to the east offers some limited suitability for badger, however, the Site offers no connectivity to suitable habitat, being surrounded by further industrial lands and roads. It is considered that the highly urbanised nature of the Site, coupled with the lack of habitat for sett creation and foraging, likely precludes badger from Site.

A grey squirrel was recorded within the woodland at the east of the Site. No evidence of red squirrel, pine marten or hedgehog was identified within the Site. Given the small and isolated nature of the woodland, the woodland is considered unlikely to offer opportunities for these species, and there are no other suitable habitats for these species within the Site.

There is no suitable habitat on site, or records returned in the desk study, for wild cat *Felis silvestris*, polecat *Mustela putorius,* shrews *Sorex* sp., otter, beaver *Castor fiber,* mountain hare *Lepus timidus*, and water vole *Arvicola amphibius*, and no evidence of these species was noted.

3.4.3 Constraints and recommendations

Given the lack of suitable habitat for badger, red squirrel, pine marten and hedgehog, these species are considered likely absent and do not pose a constraint to the Proposed Development. No further survey in respect in respect of protected mammals is required. However, standard measures to protect mammals during construction should be implemented during the construction of the Proposed Development, including:

- ensure excavations are left with a method of escape for any animals that may enter overnight (such as a battered slope sufficient for mammals to walk out), and check them at the start of each working day to ensure no animals are trapped;
- ensure pipes are capped or otherwise blocked at the end of each working day, or if left for extended periods of time, to ensure no animals become trapped; and,
- lighting – as far as possible, carry out works in daylight to minimise the risk of disturbing protected or notable nocturnal species. If any temporary artificial lighting is required for construction works, this should be strongly directional and directed only on to the works area, and be turned off when not required, to minimise light spill and adverse effects on nocturnal wildlife.

3.5 Amphibians and Reptiles

3.5.1 Desk study

Records of grass snake *Natrix natrix* and common frog *Rana temporaria* were returned by the Amphibian and Reptile Groups of the UK (ARG UK) and Amphibian and Reptile Conservation (ARC) Record Pool from the NO43 hectad.

There are no records of smooth newt, palmate newt *Lissotriton helveticus*, great crested newt, common toad *Bufo bufo*, adder *Vipera berus*, slow worm *Anguis fragilis* or common lizard *Zootoca vivipara* within 1 km of the Site.

3.5.2 Field survey

The small areas of standing water within the Site are generally considered suboptimal for breeding amphibians, given the limited amount of water in these and the lack of marginal vegetation. Only one area of standing water was noted to support emergent vegetation, with yellow iris and common reed present (Photograph 12) (see Target Note 02, Figure 3). This pond may offer limited opportunities for breeding by common frog, however, given the lack of other suitable waterbodies and terrestrial habitat, it is considered unlikely to be used by amphibians (Photograph 12).

The grassland on Site has a short sward and so is not suitable for common reptiles. A large rubble mount at the north of the Site could be suitable for use as a refugia (Photograph 2)a, however, given the lack of suitable terrestrial habitat this is considered unlikely.

3.5.3 Constraints and recommendations

Common amphibians and reptiles are considered likely absent from the Site, and do not pose a constraint to the Proposed Development.

3.6 Birds

3.6.1 Desk study

The desk study returned numerous records of bird species within 1 km of the Site. Bird species returned in the data search which are listed in Schedule 1 of the WCA, the UKBAP, the Dundee Biodiversity Action Plan (BAP), the Scottish Biodiversity List, and Red or Amber listed bird species according to Birds of Conservation Concern 5 (BOCC 5) are displayed in Table 4.

Table 4. Bird species returned in the desk study

Common name	Scientific name	Designation
Black-headed gull	*Chroicocephalus ridibundus*	SBL, Amber list
Common sandpiper	*Actitis hypoleucos*	Amber list
Dunnock	*Prunella modularis*	SBL, Amber list, BAP, UKBAP
Greenfinch	*Chloris chloris*	Red list
Herring gull	*Larus argentatus*	SBL, BAP, Red list
House sparrow	*Passer domesticus*	SBL, UKBAP, BAP, Red list
Lesser black-backed gull	*Larus fuscus*	Amber list
Lesser redpoll	*Acanthis cabaret*	Red list, BAP
Oystercatcher	*Haematopus ostralegus*	Amber list
Pink-footed goose	*Anser brachyrhynchus*	Amber list
Red-breasted merganser	*Mergus serrator*	Amber list
Redshank	*Tringa totanus*	Amber list
Ringed plover	*Charadrius hiaticula*	Red list
Shag	*Gulosus aristotelis*	Red list
Song thrush	*Turdus philomelos*	SBL, BAP, UKBAP, Amber list
Starling	*Sturnus vulgaris*	SBL, UKBAP, Red list
Swift	*Apus apus*	SBL, BAP, Red list
Tree sparrow	*Passer montanus*	SBL, UKBAP, Red list
Woodpigeon	*Columba palumbus*	Amber list

Other bird species returned by the desk study comprise Blackbird *Turdus merula*, blackcap *Sylvia atricapilla*, blue tit *Cyanistes caeruleus* carrion crow *Corvus corone*, coal tit *Periparus ater*, robin *Erithacus rubecula,* mute swan *Cygnus olor,* cormorant and Eurasian treecreeper *Certhia familiaris.*

3.6.2 Field survey

Few birds were noted during the survey, with some small passerines recorded in the vicinity of the scrub and woodland. Herring gull, a species returned in the desk study were recorded using the tank area at the south of the Site. This area is infrequently accessed and is considered to offer suitable habitat for nesting. There was some indication that nesting may be taking place on top of the tanks. A pair of mallard *Anas platyrhynchos* (Amber listed) were noted on a large puddle within the tank area. There is suitable nesting habitat for other common bird species within the scrub, woodland, individual trees, buildings and structures on Site.

3.6.3 Constraints and recommendations

Active nests of all wild birds are protected under the WCA, and birds listed on Schedule 1 of the WCA are specially protected from disturbance.

Bird species are likely to use scrub and woodland for feeding and foraging, as well as buildings and wall crevices for nest creation. Scrub clearance and building demolitions will be required to facilitate the Proposed Development, which should take place outside the breeding bird season (March to August, inclusive). If any clearance is required during March to August, a suitably experienced ecologist must be present to check all vegetation to be removed prior to clearance. If any active nest(s) are found, the ecologist should establish suitable species-specific exclusion zones from which works and personnel are excluded until the breeding attempt(s) have finished. Since this may result in significant construction delays if active bird nest(s) are found, it is far preferable to clear nesting bird habitat outside the breeding season. If any buildings requiring demolition are used by nesting birds, mitigation to exclude them should similarly be undertaken outside the breeding bird season, and if nesting sites are lost replacements should be installed nearby.

3.7 Other protected species

The habitats within the Site are unlikely to support a large diversity of invertebrates owing to its low botanical diversity. The habitat within the Site is not likely to support protected or notable invertebrates. There is no suitable habitats for protected crustaceans or fish. These protected species do not pose a constraint to the Proposed Development and are not further considered in this report.

3.8 Invasive non-native species

3.8.1 Desk Study

The desk study returned one record of the INNS giant hogweed, from within 1 km of the Site.

3.8.2 Field survey

The field survey identified four INNS plant species, giant hogweed (20 stands), butterfly-bush (45 stands), Spanish bluebell *Hyacinthoides hispanica* (two stands), and cherry laurel *Prunus laurocerasus* (one stand). Approximate locations of INNS stands are shown on Figure 4.

Butterfly-bush was widespread across the Site, at different levels of maturity. Most of these stands were relatively young or small, (B2-B7, B10-B12, B15-B17, B19, B24, B25, B27, B31-B35, B37-B40, B42-B45). Extensive, more mature stands are also present, such as B1, B18, and B26 within the centre of the Site, and B22 and B23 at the east of the Site. Some stands are of transitional maturity and intermediate size (B13, B14, B20, B21, and B4) . Stands B8, B9, B28-B30, and B36 are comprised of young plants scattered throughout an area that is mostly hardstanding.

Giant hogweed is found scattered around the edge of the Scotriders area at the east of the Site, and five small stands were recorded within a border at the north of the Site. The giant hogweed in the Scotriders area has been treated, however a few of the plants were still opening out into flower. The most extensive stands were on the in the woodland (GH10-12, GH13, GH17, GH18), but many of the smaller plants were just leaves.

Spanish bluebell (HY1, HY2) was contained in a verge border at the north of the Site, which was likely managed as an area of landscaped planting until several years ago.

The single cherry laurel plant was located within the woodland and was noted to be about 1 m in height.

3.8.3 Constraints and recommendations

In Scotland, the WCA as amended by the WANE Act makes it an offence to cause any plant to grow in the wild outside of its native range. If charged with committing an offence, it is a defence against prosecution to prove that all reasonable steps were taken, and due diligence exercised, in attempting to avoid causing the spread of such species.

If any of the INNS shown on Figure 4 are likely to be disturbed or removed then, in accordance with best practice, simple biosecurity measures should be implemented to avoid their spread off-Site (which may include spread into ‘the wild’), and ideally to avoid spread within the Site also. Such measures should be outlined in a Method Statement or Biosecurity Management Plan (BMP) or similar document. Measures would likely include ensuring

cleaning of machinery and PPE involved in works in the vicinity of INNS, and ideally retention of all soil and INNS material on Site rather than exporting off-Site. The BMP/Method Statement would be the responsibility of the client and it should be produced by an appropriately qualified ecologist. The implementation of the measures suggested in such a document should be undertaken by a suitably experienced and qualified INNS contractor.

Some treatment of giant hogweed has already been started, and this should be continued. Given the possible requirement to produce and adhere to a BMP or Method Statement, INNS are considered a minor constraint, but the mitigation required is likely to be straightforward to implement.

4. Opportunities for ecological enhancement

National Planning Framework 4 (NPF4) includes the following statements of policy intent: "*To protect, restore and enhance natural assets making best use of nature-based solutions*" and "*To protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks*". Wherever possible and proportionate to the scale and nature of the project, the Proposed Development should therefore seek to deliver benefits for biodiversity, in addition to protecting existing biodiversity. NPF4 also states that major development will only be supported where nature networks "*are in a demonstrably better state than without intervention*" using best practice and including future monitoring and management where appropriate.

This section therefore highlights potential opportunities for ecological enhancements, based on the current Proposed Development details and likely ecological impacts. The detail of these would need to be developed following further surveys (where required), confirmation of areas of habitat loss caused by the Proposed Development, and landscaping requirements.

Numerous potential enhancements are also detailed in the NatureScot *Developing with Nature Guidance*, produced in support of NPF4.

Given the urban nature of the Site, many opportunities for ecological enhancement exist. The following measures are suggested:

- installation of living roofs on new roofs may provide nesting and foraging opportunities for birds and may also be used by pollinating insects;
- if space is available on Site, the creation of grassland to compensate for areas of modified grassland to be lost. This could include sowing of species-rich meadow on newly prepared soil to create a species-rich meadow. Any such meadow creation/enhancement should use an appropriate seed mix as advised by an ecologist (a seed mix imitating National Vegetation Classification (NVC) type MG5 is likely to be appropriate);
- planting native broadleaved tree species suitable to the locality (as advised by an ecologist), for example at the edge of the woodland area to increase its total size, or at the edge of the Site to provide screening;
- any landscape planting should use native species of local provenance;
- installation of bat boxes at suitable locations (e.g. on woodland edge habitat);
- installation of bird boxes or bird nesting bricks suitable for a range of species. For example, swift bricks can be easily incorporated into the structure of new buildings, and house sparrow nesting structures can be installed on the outside; and,
- targeted removal of invasive non-native plants (e.g. removal of large areas of butterfly-bush and treatment of giant hogweed). These species are likely to be widespread in the area and may reinvade, and ongoing monitoring and a long-term programme of removal would likely be necessary.

If some of the above suggestions are implemented, the Proposed Development would likely be considered to align with the above planning policy seeking biodiversity benefits from new developments. Any such measures that are taken forward should be confirmed and detailed (including, as relevant, designs, establishment procedure and subsequent inspect or maintenance requirements) in a document such as a Biodiversity Enhancement Strategy.

A separate Biodiversity Net Gain report is being produced for this Site, and whilst there is currently no formal requirement in national/local policy or legislation to conduct Biodiversity Net Gain (BNG) assessments for development in Scotland (as there is in England), SSEN have committed to delivering a 10% biodiversity net gain on all projects. A BNG assessment will be carried out using the SSEN Transmission Biodiversity Net Gain Toolkit[9] to quantity habitat losses and inform the Biodiversity Enhancement Strategy, in order to offset losses and to achieve, if feasible, biodiversity gains.

5. References

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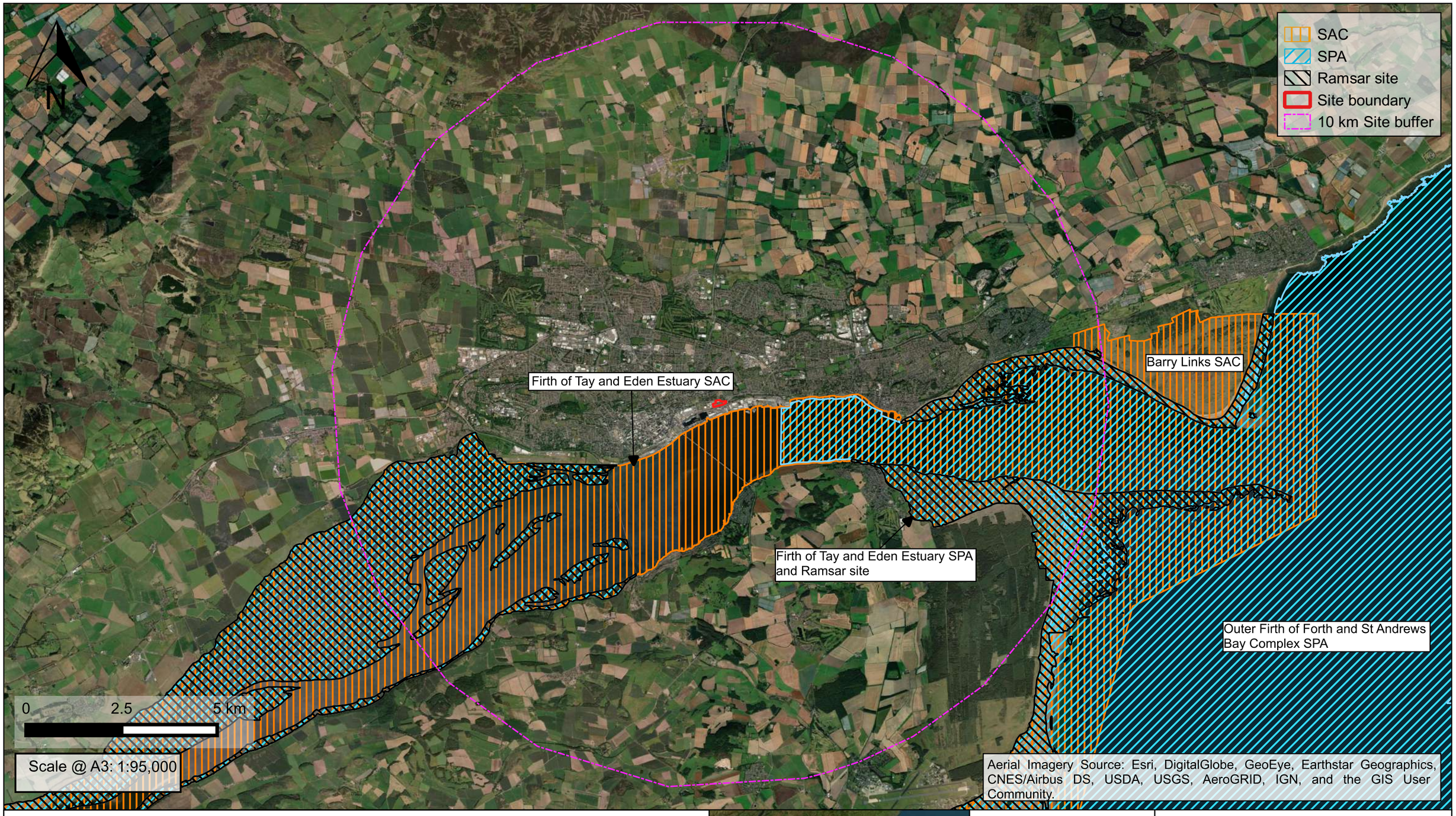
6. Figures

Figure 1. European sites within 10 km of the Site

Figure 2. LINCS within 1 km of the Site

Figure 3. Habitat survey results

Figure 4. Invasive non-native species survey results



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Project:	LT491 Dundee Network Rail Substation
Figure No.:	1
Client:	SSEN

Project No.:	60727222
Date:	September 2024
Drawn By:	SMcC
Checked By:	SM
Approved By:	PL

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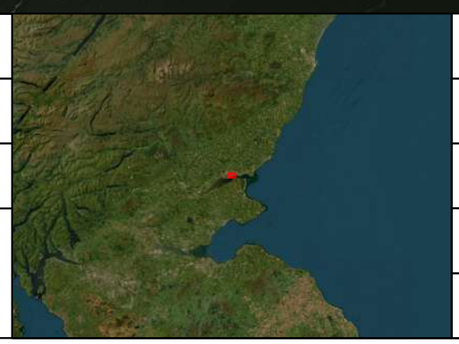
Project:	LT491 Dundee Network Rail Substation
Figure No.:	2
Client:	SSEN



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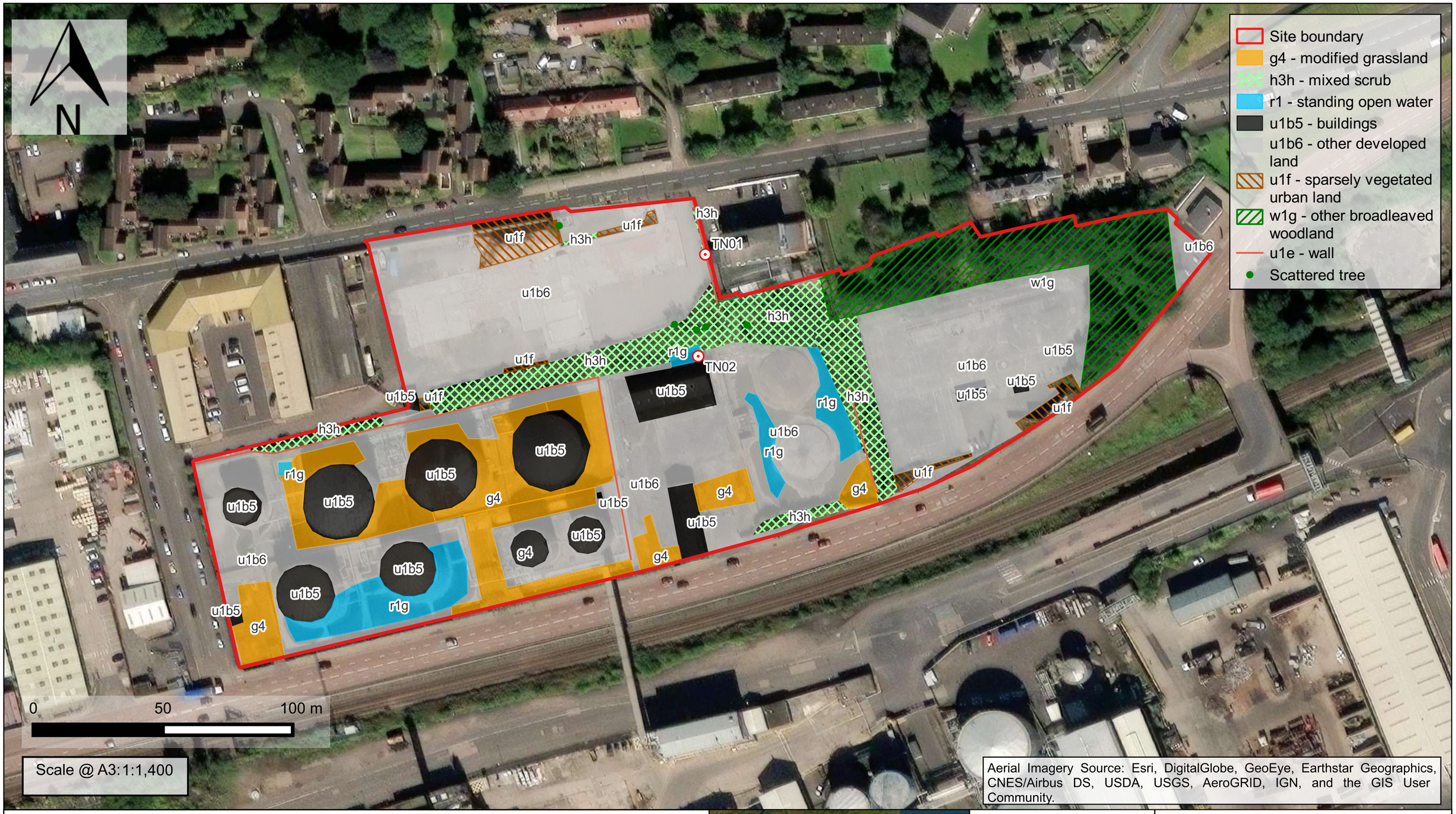

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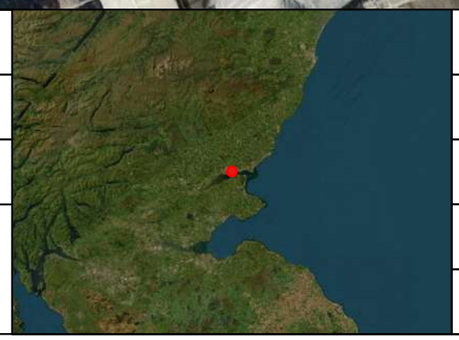

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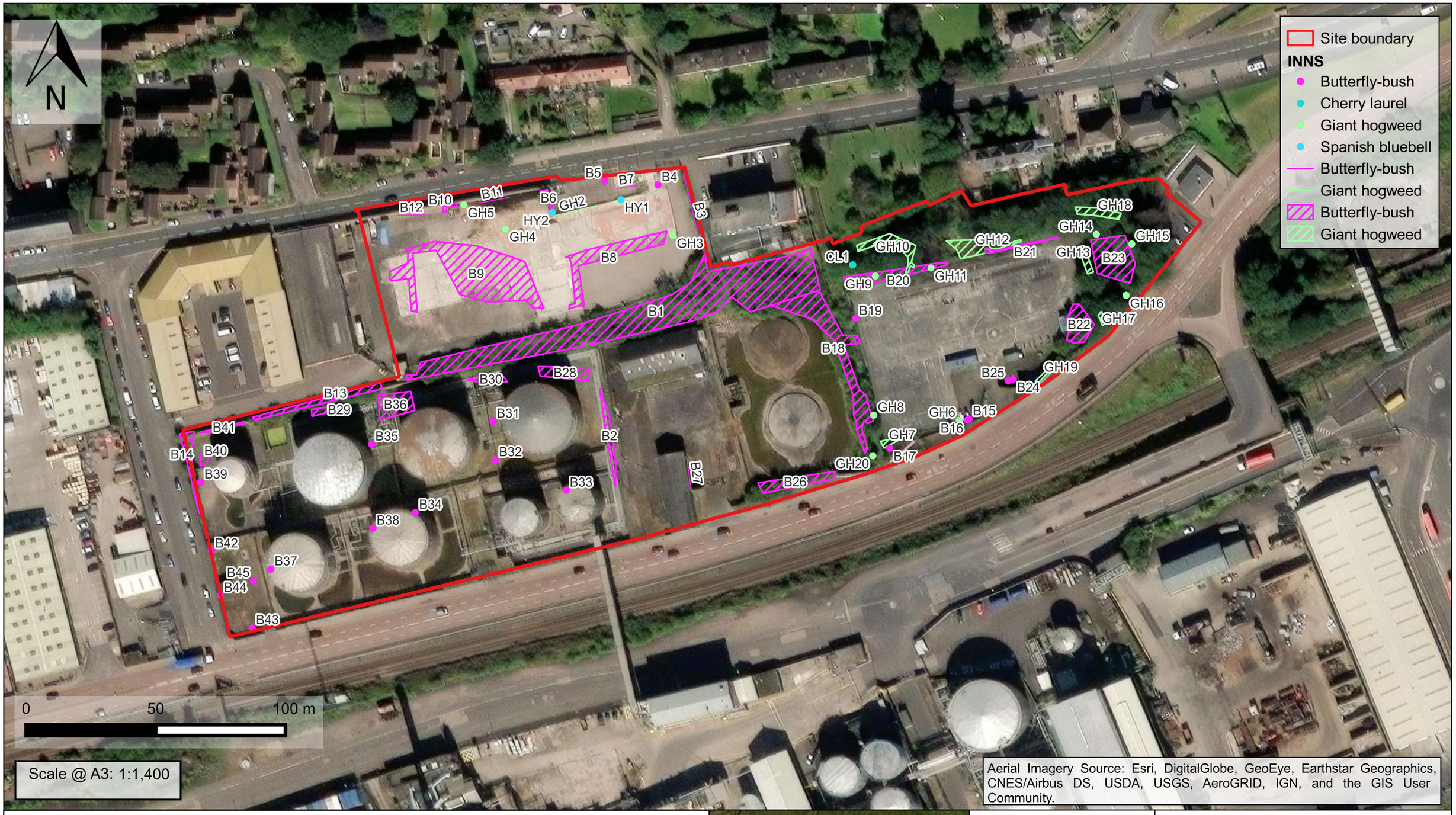

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Figure No.:	4
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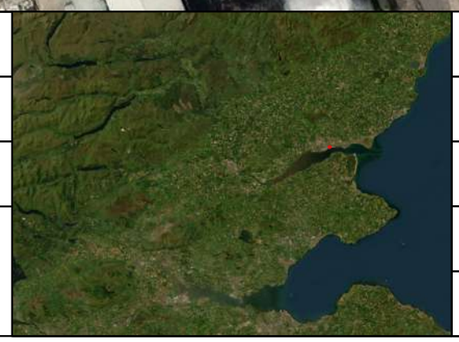

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Appendix A Relevant legislation and planning policy

A.1 Designated sites

European sites

The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (the 'Habitats Regulations') have been amended (by The Conservation (Natural Habitats, &c.) (EU Exit) (Scotland) (Amendment) Regulations 2019) so that they continue to operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate national authorities. All other processes or terms in the Habitats Regulations remain unchanged and existing guidance is still relevant.

Prior to the UK's exit from the European Union (EU), Scotland's Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) were part of a wider European network of such sites known as the 'Natura 2000 network'. They were consequently referred to as 'European sites'. Now that the UK has left the EU, Scotland's SACs and SPAs are no longer part of the Natura 2000 network but form part of a UK-wide network of designated sites referred to as the 'UK site network'. However, it is current Scottish Government policy to retain the term 'European site' to refer collectively to SACs and SPAs[10].

Habitats Regulations Appraisal (HRA) must be undertaken by the relevant Competent Authority before undertaking, or giving consent, permission or other authorisation to, any works where there may be a likely significant effect on a European site. The HRA may not need to proceed further than screening if likely significant effects can be clearly excluded, or may need to proceed to further detailed Appropriate Assessment particularly if mitigation would be required to avoid an adverse effect on site integrity. If the latter cannot be concluded beyond reasonable scientific doubt, the project (or plan) cannot proceed unless it can be adequately demonstrated that: a) there is a valid Imperative Reason of Overriding Public Importance (IROPI), b) there is no alternative solution, and, c) sufficient compensation is possible, in which case it must be secured and functioning before the project or plan proceeds.

Ramsar sites

'Ramsar sites' are international wetland sites designated under the Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (the 'Ramsar Convention'). Whilst in England these sites are treated as having the same level of protection as European sites, that is not the case in Scotland. However, most Ramsar sites are encompassed by SACs or SPAs and would normally be protected indirectly by the strict protection afforded to European sites. Where not encompassed by SACs or SPAs, habitat within Ramsar sites is often likely to constitute functionally-linked habitat for qualifying SAC/SPA species which would require consideration during HRA. In the unlikely case that a Ramsar site was not encompassed by an SAC or SPA and did not constitute functionally-linked habitat for qualifying SAC/SPA species, the international status of Ramsar sites dictates that impacts upon them should be considered.

Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSI) are designated under the Wildlife and Countryside Act 1981 (as amended) (the 'WCA') and are nature conservation sites of national importance. It is an offence to carry out or permit to be carried out any operation likely to damage a SSSI without authorisation from NatureScot. Such operations are provided by NatureScot with the SSSI notification in an Operations Requiring Consent (ORC) document.

Owners, occupiers, public bodies and statutory undertakers must give notice and obtain the appropriate consent under S.28 of the Wildlife and Countryside Act 1981 (as amended), before undertaking operations likely to damage a SSSI.

National Nature Reserves and Local Nature Reserves

National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) are both established by local authorities under the National Parks and Access to the Countryside Act 1949.

Most NNRs are also underpinned by SSSIs and are therefore protected by the measures for SSSIs detailed above. For NNRs not underpinned by SSSIs, it is still an offence to carry out or permit to be carried out any

[10] Scottish Government (2020). EU Exit: The Habitats Regulations in Scotland. December 2020. Available from: https://www.gov.scot/publications/eu-exit-habitats-regulations-scotland-2/.

potentially damaging operation. Local Nature Reserves are given protection through policies in a Local Development Plan. The local authority must control LNR land, either through ownership, a lease or an agreement with the owner.

Non-statutory Local Sites

Locally-designated nature conservation sites in Scotland occur under various names. The preferred term is Local Biodiversity Site (LBS), although the following terms are also used: Local Nature Conservation Site (LNCS), Site of Importance for Nature Conservation (SINC) and Local Wildlife Site (LWS). They are selected for their nature conservation interest by the Local Planning Authority, and commonly incorporated into Local Development Plan maps. They are often specified as green network assets and/or afforded protection through local policies specifically concerning local biodiversity sites or general biodiversity.

Information on such sites is often sparse or absent, however in those cases an indication of their interest can be gained from a judgement on the habitats within them. They can include, for example, semi-natural woodland (sometimes listed in the Ancient Woodland Inventory), key rivers and riparian habitat, waterbodies or peatland. They are most common in the Central Belt, and are typically not identified in more mountainous and wild regions where doing so would serve little purpose (these being continuous large-scale tracts of high biodiversity value).

A.2 Species

Bats, otter, beaver, wildcat, great crested newt and natterjack toad

These species, known as European Protected Species (EPS), are protected through listing on Schedule 2 of the Habitats Regulations. There is no change to the protection of EPS as a result of EU Exit. For EPS, it is an offence to deliberately or recklessly:

- capture, injure, kill or harass an animal;
- disturb an animal while at a place used for shelter/protection, or whilst rearing/caring for its young;
- obstruct access to or deny an animal use of a breeding site or resting place;
- disturb an animal such that local species distribution/abundance is likely to be significantly affected;
- disturb an animal such that its ability to survive, breed or rear/care for young is likely to be impaired;
- disturb an animal whilst migrating or hibernating; and,
- take or destroy its eggs (in Scotland, relevant only to great crested newt and natterjack toad);

It is also an offence for EPS, whether or not carried out deliberately or recklessly, to damage or destroy a breeding site or resting place used by an animal, whether occupied or not.

Where development works are at risk of causing one or more of the offences listed above, a mitigation licence from NatureScot can be obtained to facilitate the works that would otherwise be illegal. However, for a licence to be obtained, evidence must be provided that there is: a) a licensable purpose (one of the purposes specified in regulation 44(2) of Habitats Regulations), b) no satisfactory alternative, and, c) no detriment to maintaining the species at favourable conservation status. Satisfactory survey information and a species protection plan incorporating proportionate mitigation and/or compensation are also required.

Red squirrel and pine marten

Red squirrel and pine marten and their resting places are protected under Schedule 5 of the WCA. For red squirrel and pine marten it is an offence to intentionally or recklessly:

- kill, injure or take an animal;
- damage, destroy or obstruct access to a place used for shelter or protection; and,
- disturb an animal in such a place.

This protection does not apply to areas where red squirrels only feed, and protection of pine marten dens from disturbance does not apply to dens inside a dwelling house.

It is possible to obtain a licence to permit works that would otherwise be offences where: a) the licensed activity will contribute to significant social, economic or environmental benefit, b) there is no satisfactory alternative, and, c) there is no significant negative impact on the conservation status of the species. Satisfactory survey

information and a species protection plan incorporating proportionate mitigation and/or compensation are also required.

Water vole

The water vole receives partial protection under Schedule 5 of the WCA. In Scotland, this protects places of shelter or protection used by water vole but not the animal itself. It is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place used by water voles for shelter or protection. Water voles are however protected against disturbance while using such structures.

When development work is proposed in or near an area known or likely to contain water voles, the developer should implement suitable mitigation to prevent impacts on water voles. The preferred mitigation option is to leave water voles *in situ*, with the development adopting avoidance measures.

It is possible to obtain a licence to permit works that would otherwise be offences where: a) the licensed activity will contribute to significant social, economic or environmental benefit, b) there is no satisfactory alternative, and, c) there is no significant negative impact on the conservation status of the species. Satisfactory survey information and a species protection plan incorporating proportionate mitigation and/or compensation are also required.

NatureScot advise that trapping and translocation, rather than displacement, is the better option when clearing an area of ground which has water voles. Translocation of water voles requires a licence, for which evidence must be provided for matters such as the provenance of the water voles to be released and the carrying capacity of the receptor site.

Mountain hare

Mountain hare is listed on Schedule 5 of the WCA. It was added primarily so that control of mountain hare can only take place under licence for a demonstrable reason, to conserve the species. Whilst it is thus an offence to intentionally or recklessly kill, injure or take a mountain hare, hares are highly mobile (including leverets, which are precocial) and together with standard measures to minimise risk of harm to mammals (such as providing means of escape from excavations) it is unlikely that construction activities would cause such offences.

Inclusion on Schedule 5 also affords protection to places of shelter similarly to other Schedule 5 species. However, refuges of mountain hares are most frequently depressions in dense vegetation (‘forms’), which may not be easily detectable, and each hare would likely have many and not be dependent on any one. Mountain hares occasionally make use of holes, or burrows in peat (particularly leverets, but as noted above leverets are precocial and mobile), however NatureScot do not implement a means of licensing works that might affect such refuges (licensing for mountain hare is for regulating population control activities).

Mountain hare is listed on the Scottish Biodiversity List, and consequently public bodies should have regard to mountain hare when implementing their biodiversity duty under the Nature Conservation (Scotland) Act 2004.

Nesting birds

All wild birds are protected under the WCA. It is an offence to intentionally or recklessly:

- kill, injure or take a bird;
- take, damage, destroy or interfere with a nest while in use or being built;
- obstruct or prevent use of a nest; and,
- take or destroy eggs.

Stricter protection is afforded to birds listed on Schedule 1 of the WCA. For a Schedule 1 species, it is an offence to disturb the bird while building a nest, in or near a nest with eggs/young, or while lekking, or to disturb dependent young. Certain raptors are further protected from intentional or reckless harassment, or damaging or interfering with a nest at any time.

There are no licensing purposes that cover development activities affecting wild birds. Development activities that could result in offences should take place outside the breeding season. For vegetation clearance, and depending on the individual case, it can be possible for an ecologist to carry out nest checks in the breeding season, however if nests are found or suspected then the work could not legally proceed until the breeding attempt had finished. For a very few common species, such as feral pigeon *Columba livia domestica*, and only for certain

purposes listed by NatureScot (such as preservation of public health), some actions that would offences can be possible under a 'general licence'.

Common species of reptile (common lizard, slow worm and adder)

Common species of reptile have limited protection against intentional or reckless killing and injury under Schedule 5 of the WCA. There is no requirement for a licence where development works affect common species of reptiles. Instead, where common reptiles are present they should be protected from harm during development works through appropriate mitigation. All common reptiles are, however, priority species through listing on the Scottish Biodiversity List.

Freshwater pearl mussel, marsh fritillary and white-clawed crayfish

Freshwater pearl mussel and marsh fritillary *Euphydryas aurinia* (and some other invertebrates) are fully protected under Schedule 5 of the WCA, with the same protection as afforded to other fully-protected Schedule 5 species (see red squirrel and pine marten above). For these invertebrates, it is possible to obtain a licence to permit works that would otherwise be offences, if the same criteria can be satisfied as given above for red squirrel and pine marten, and suitable survey information and a species protection plan will be required. Note that survey for freshwater pearl mussel must itself be carried out by licensed personnel.

White-clawed crayfish *Austropotamobius pallipes* is only partially protected, from taking or selling, under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). However, this species is under threat of global extinction and is on the Scottish Biodiversity List.

Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended). This makes it an offence to wilfully kill, injure or take a badger; or to intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in a sett. It is also an offence to knowingly cause or permit an act that would cause any of these offences.

It is not illegal to carry out disturbance activities near setts that are not occupied (i.e., those that do not show signs of current use). Guidance on determining current use is given by NatureScot and requires appropriate surveys, and it should be noted that an inactive sett might not remain so, and that new setts can be quickly established.

Where required, licences for development activities involving disturbance of badgers or sett interference (including temporary or permanent closure) are issued by NatureScot. However, it is not possible to licence direct removal of badgers, of killing of badgers, for development purposes.

In general, NatureScot consider that works within 30 m of a sett entrance could result in disturbance or interference, extending this distance for severe works (e.g., pile driving or blasting). Licences are not issued in the breeding season (December-June, inclusive) unless adequate evidence is provided that the sett is not being used for breeding. When assessing the need for a development licence, guidance indicates that badgers are relatively tolerant of moderate levels of noise and activity around their setts, and that a low or moderate level of apparent disturbing activity at or near to badger setts does not necessarily disturb the badgers occupying those setts.

Invasive non-native species

Under the WCA, as amended in Scotland by the Wildlife and Natural Environment Act 2011, it is an offence to plant or otherwise cause to grow any plant species in the wild outside its native range. Definitions of 'in the wild' and 'native range', and guidance on due diligence and reasonable steps that should be taken, are given by the Scottish Government[11].

As part of 'retained EU legislation' (see start of this Appendix), EU IAS Regulation 1143/2014 lists Invasive Alien Species of Union concern, requiring action on pathways of unintentional introduction, measures for early detection and rapid eradication, and management of species that are already widespread.

If charged with committing an offence under the above legislation, it is a defence against prosecution to prove that all reasonable steps were taken and all due diligence exercised in attempting to avoid committing the

[11] Definitions of 'in the wild' and 'native range' are given in the Scottish Government Code of Practice on Non-native Species.

offence. To reduce the potential for prosecution, a management plan should be put in place for invasive non-native species, and land managers should be able to show that they are following it.

It is not illegal to have invasive non-native native species on a property. However, even when growing on managed land, the spread of the species should be kept under control such that the species is not having an appreciable adverse impact on habitats and their native biodiversity.

A.3 Scottish Biodiversity List

Under the Nature Conservation (Scotland) Act 2004, public bodies in Scotland have a duty to further the conservation of biodiversity when carrying out their normal functions. The Scottish Biodiversity List (SBL) is a list of habitats and species that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. It is intended that public bodies have regard to these habitats and species in implementing their duty to further the conservation of biodiversity.

Some of the SBL priority habitats correspond to or include Annex I habitats listed under the Habitats Directive. Annex I habitats may be of particular note, depending on factors such as condition, size, natural range and regional extent, although it should be noted that the purpose of the Annex I habitat list was specifically to indicate habitats for which the EU required protection through designation of SACs.

A.4 National Planning Framework 4

National Planning Framework 4 (NPF4) was formally adopted by Scottish Ministers on 13 February 2023. NPF4 includes the following statements of policy intent: "*To protect, restore and enhance natural assets making best use of nature-based solutions*" and "*To protect biodiversity, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks*". Wherever possible and proportionate to the scale and nature of the project, development should therefore seek to deliver benefits for biodiversity, in addition to protecting existing biodiversity. NPF4 also states that major development will only be supported where nature networks "*are in a demonstrably better state than without intervention*" using best practice and including future monitoring and management where appropriate.

A.5 Local planning policy

Relevant local planning policies are stated in the Dundee Local Development Plan (LDP), adopted in 2019. Table below list those LDP policies relevant to nature conservation (for full policy text, refer to the LDP at Local Development Plan | Dundee City Council).

Table 6. Summary of relevant policies within the Dundee LDP

Planning policy	Relevant purpose
Policy 32: National and International Nature Conservation Designations	Outlines the steps required if a development could have effects on National and International Nature Conservation Designations.
Policy 33: Local Nature Conservation Designations	Outlines the steps required if a development could have effects on Local Nature Conservation Designations.
Policy 34: Protected Species	Summarises the legal requirements for protected species that developments are expected to comply with.
Policy 35: Trees and Urban Woodland	A policy about ensuring the survival of woodland, hedgerows and individual trees, with compensatory planting and woodland management where required.
Policy 39: Environmental Protection	Developments must show the can be accommodated without an unsatisfactory level of disturbance on the surrounding area, e.g. from noise, vibration, odour, emissions to air, dust or light pollution.

6.1.1 Biodiversity action plan

The Biodiversity Action Plan for Dundee includes several priority habitats and a list of priority species for local conservation, as well as the action plan. The habitats and species are unlikely to occur on this site. A key topic that it raises relevant to this project is INNS.

Appendix B Photographs

Photograph 1. Wall bisecting the Site between north and south.

Photograph 2. The northern part of the Site, showing a large, vegetated rubble mound.

Photograph 3. The disused storage tank area.

Photograph 4. The Scotriders area with woodland beyond.

Photograph 5. Area of grassland growing on hardstanding.

Photograph 6. An area of scrub on Site.

Photograph 7. Individual trees are present in the scrub.

Photograph 8. Sparsely vegetated urban land.

Photograph 9. Much of the Site is developed land – sealed surface.

Photograph 10. Area of hardstanding permanently flooded with rainwater.

Photograph 11. Area of standing water behind building.

Photograph 12. Wet area behind building.

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