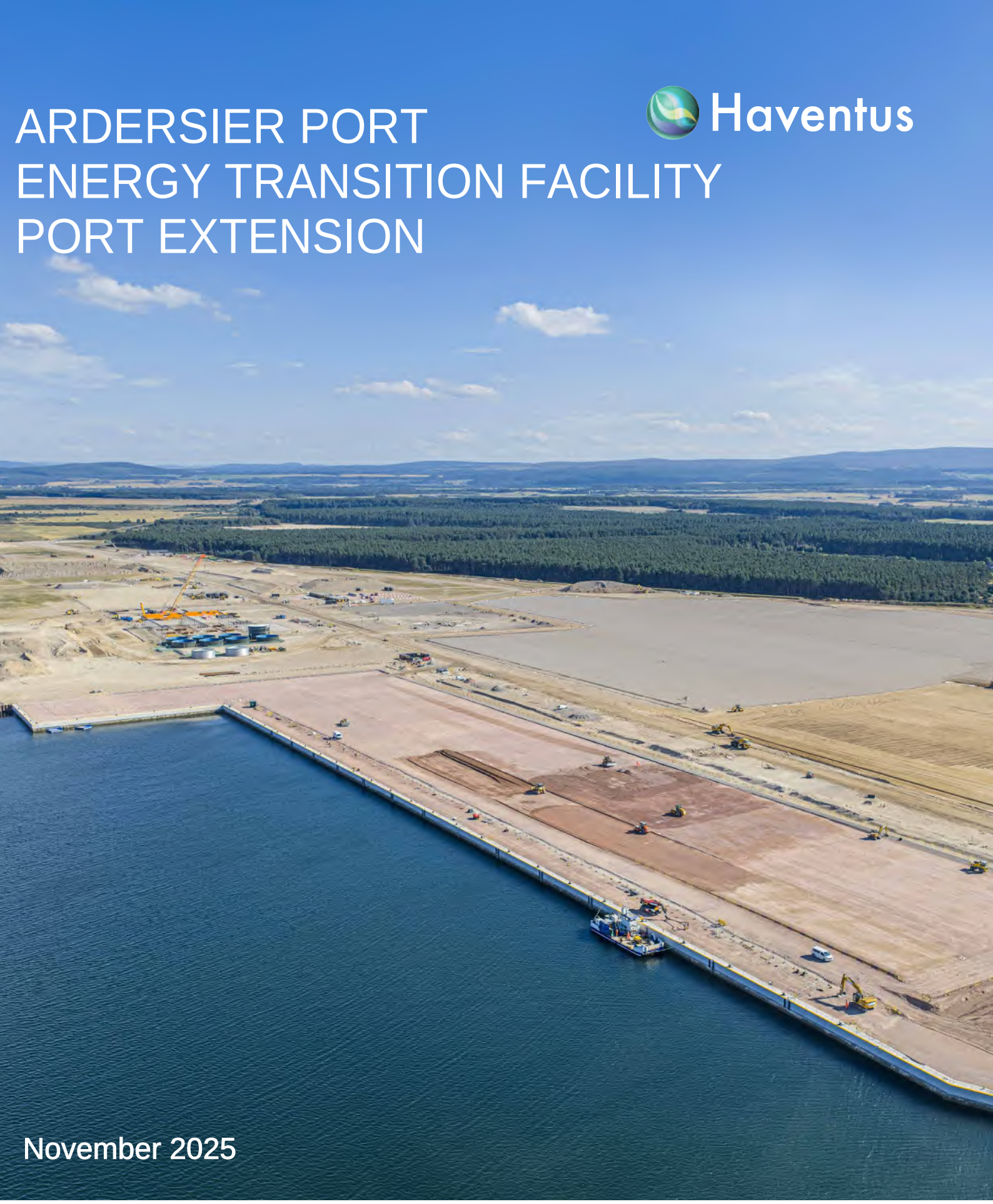
ARDERSIER PORT ENERGY TRANSITION FACILITY PORT EXTENSION

Haventus



November 2025

Appendix 12.11 Reptile Report

Haventus Ardersier Port

Technical Appendix 09: Reptiles

JULY 2025 FOR HAVENTUS

Highland Ecology and Development Limited, Office 1, Mayfield Building, Dingwall, IV15 9ST. Tel 01381 610313, E mail: admin@hedltd.com Web: www.hedltd.com

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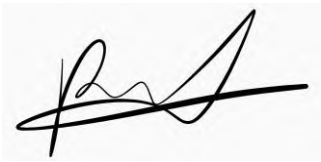

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Contents

1.0 Background

This technical appendix is commissioned by Haventus in respect of proposals for the expansion of the Ardersier Port redevelopment area. As part of a package of ecological baseline studies, reptile surveys were undertaken to establish the presence of reptiles within the site and map areas of potential refugia/hibernacula within the existing site and proposed clearance area. The findings from the reptile surveys are intended to inform a comprehensive assessment of the predicted impact on reptiles principally by habitat loss associated with the proposed development.

2.0 Methodology

2.1 Reptile Survey

The reptile surveys were carried out during the optimal survey period (late March – May). The purpose of the surveys was to map areas of suitable habitats to support reptiles, then use artificial cover objects (ACOs) to encourage reptiles to shelter beneath, where upon the ACOs could be manually checked in order to establish reptile presence in the area.

The ACOs selected for this survey were 50cm x 50cm roofing felts which were deployed at density of 1 per ha within approximately 100ha of suitable habitat present within the existing site and proposed clearance area, in line with industry recommendations (Catherine., 2024).

All ACOs and suitable habitats were recorded and georeferenced using the mobile application *Avenza Maps* and later mapped digitally using QGIS (*version 3.36.1*), the results of survey are detailed in Figure 1 and Table 1 below.

2.2 Limitations

Ecological surveys are limited by several factors that affect the presence of flora and fauna (weather, climate, animal behaviour, etc). Evidence of protected species and/or invasive species is not always found during a survey; this does not confirm that species are absent from an area or will not be present in the future.

3.0 Results

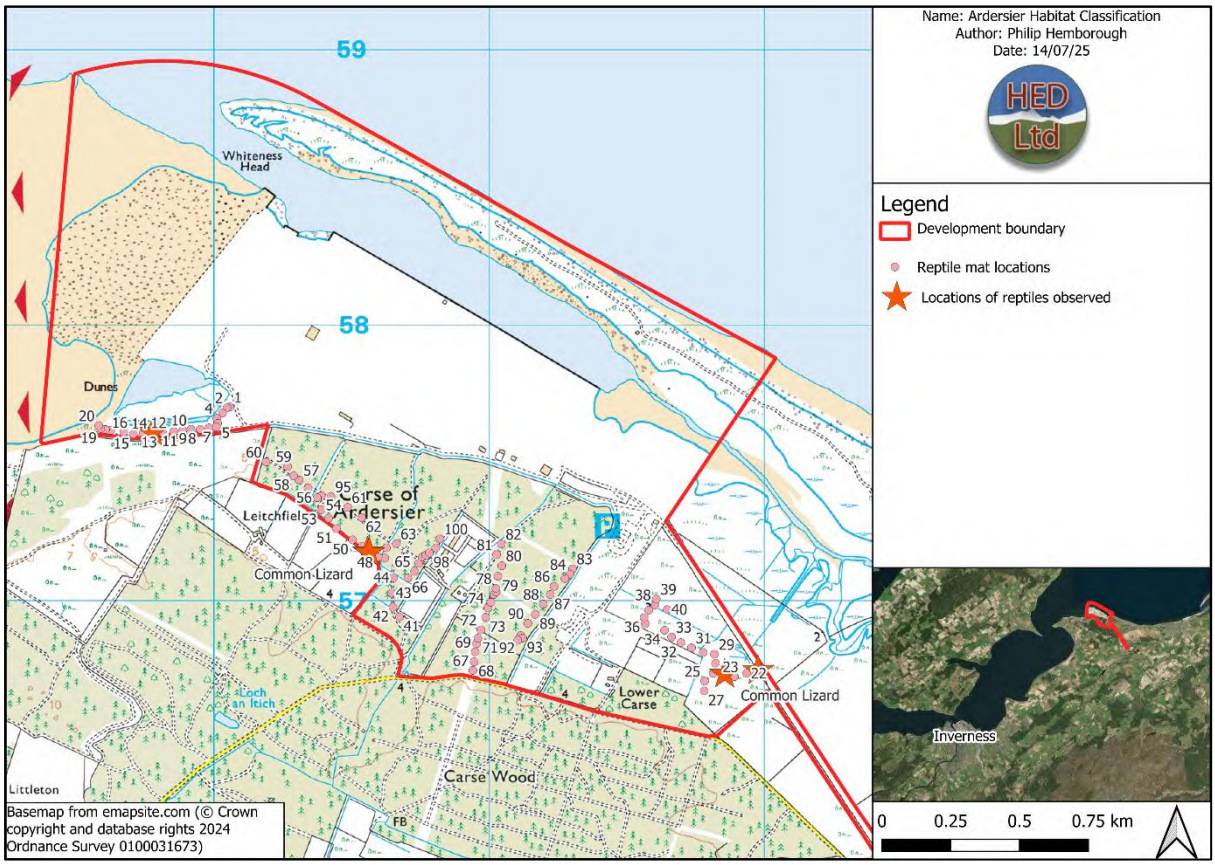

Figure 1: Map of proposed development area with locations of reptile mats and reptile observations.

Table 1: Detailing the reptiles observed over the course of the survey period.

Target Note	Description	Grid Reference
001	Adult common lizard observed basking on refugia (log pile) near ACO-137	NH 80564 57171
002	Adult common lizard observed beneath ACO 110	NH 81976 56742
003	Common lizard observed beneath ACO-113	NH 81856 56732
004	Common lizard observed beneath ACO-102	NH 79778 57609
005	Adult common lizards x3 observed beneath ACO-110	NH 81976 56742
006	Adult common lizards x2 observed beneath ACO-137	NH 80564 57171

007	Common toad observed under ACO-159	NH 80948 56814
008	Common toad observed under AC0-120	NH 81735 56829
009	Common lizard observed under ACO-113	NH 81858 56731

4.0 Conclusion and Recommendations

Over the course of the survey, ten common lizards (Zootoca vivipara) were observed using the ACOs over the course of seven visits. These observations were not limited to a single area but were also not spread out uniformly across the survey area; this suggests that although there is much suitable habitat, a limited population of reptiles are likely to be present across the site.

Due to the large amount of suitable habitat and confirmed reptile presence, there are some recommendations to be taken into account when planning for removal of said habitats of the proposed development scheme.

Firstly, any refugia/hibernacula should be left in place if possible to do so, however if these structures are to be removed, it should be done softly by machine or by hand with an ecological clerk of works (ECoW) supervising. This should be done between the months of April – September Cathrine, C. (2024) in order to avoid disturbing hibernating reptiles.

Secondly, any habitat removal should be done under the supervision of a suitably trained ecologist and within the months afore mentioned in order to minimise the risk to hibernating reptiles.

5.0 Survey Images

Target Note	Description	Image
001	Adult common lizard observed basking on refugia (log pile) near ACO-137	
003	Adult common lizards x2 observed beneath ACO-137 (1 photographed).	

6.0 References

Froglife (1999) Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

Cathrine, C. (2024). ARG UK Advice Note 10: Reptile Survey and Mitigation Guidance for Peatland Habitats. Version 2. Amphibian and Reptile Groups of the United Kingdom.

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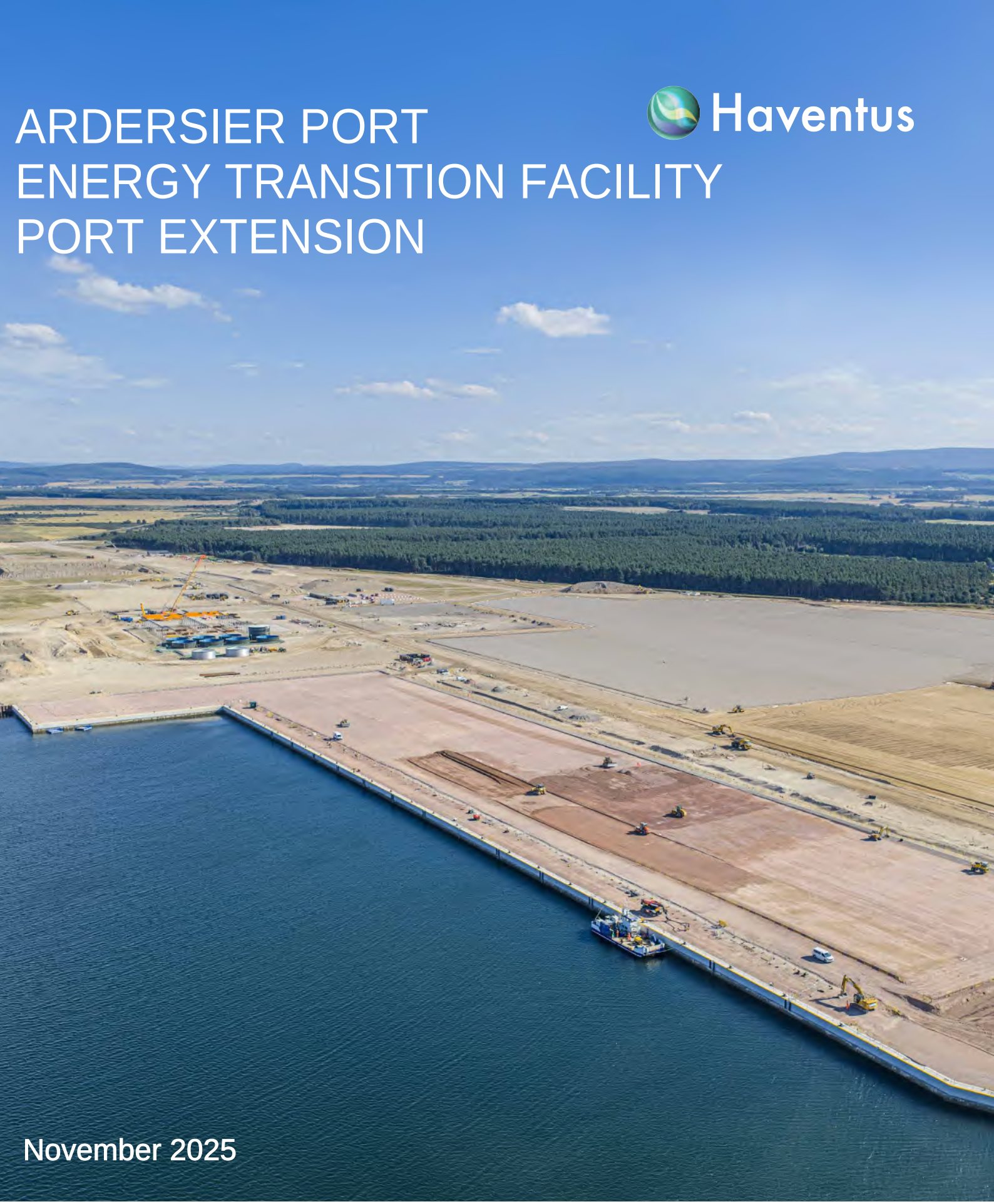

November 2025

Appendix 12.12 Water Vole Report

Haventus Ardersier Port

Technical Appendix: Water Vole

JULY 2025 FOR HAVENTUS

Highland Ecology and Development Limited, Office 1, Mayfield Building, Dingwall, IV15 9ST. Tel 01381 610313, E mail: admin@hedltd.com Web: www.hedltd.com

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Document prepared by:

Mhairi Duncan BSc (Hons)

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Contents

1.0 Background

This Technical Appendix was commissioned by Haventus in respect of proposals for the expansion of the Ardersier Port redevelopment area. As part of a suite of Protected Species Surveys (PSS), a water vole survey was carried out to establish the presence of water vole within the proposed expansion area and waterbodies up to 250m out with, displayed in Figure 1 below. The purpose of this survey was to provide updated baseline data to inform a comprehensive assessment of the predicted impact on water voles during the construction and operation phases of the facility. The survey findings are provided within this document along with industry-approved guidance on licensing requirements, recommended mitigation and compensation initiatives.

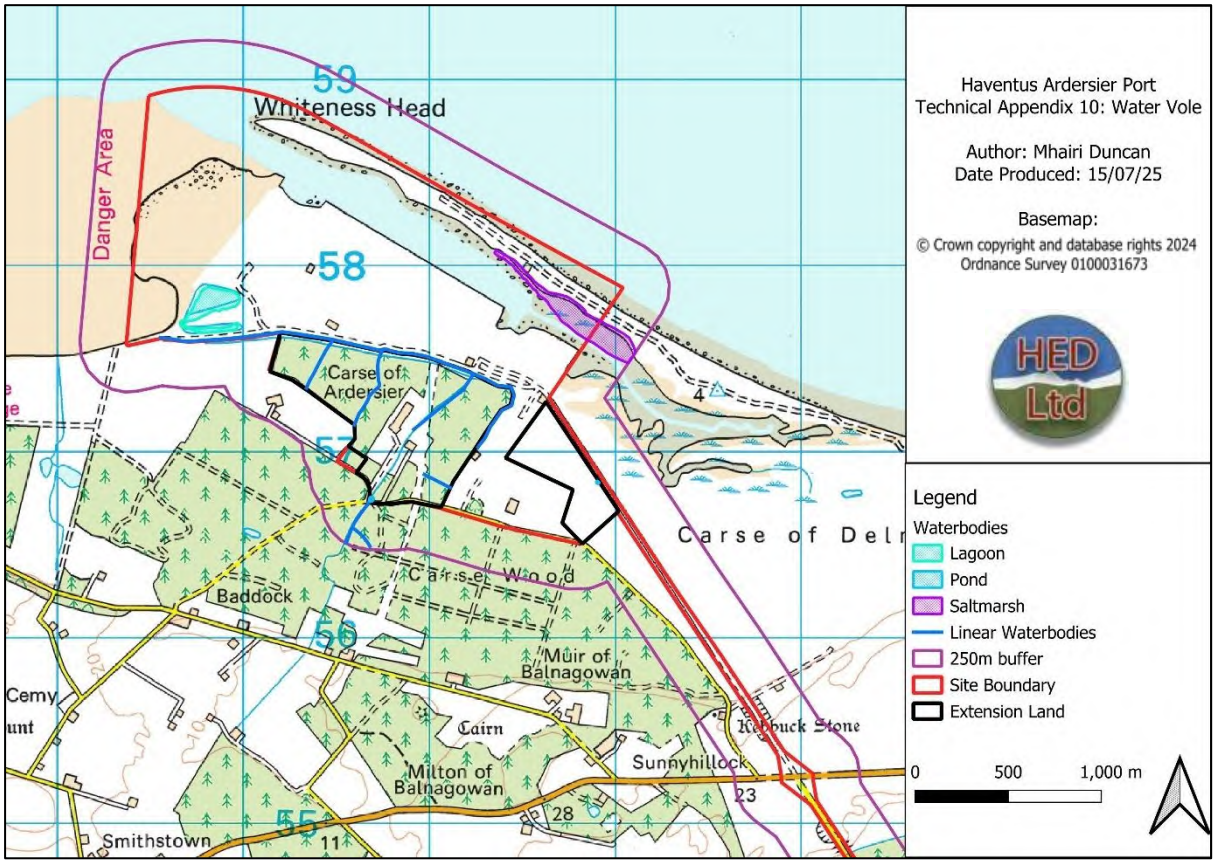

Figure 1: Water Vole Survey Area

2.0 Methodology

2.1 Water Vole Survey Methodology

This survey adopted industry approved methods by Dean et al., 2016 involving a walkover of the site boundary and a suitable buffer out with, where safe access allowed (250m buffer allocated). The survey was undertaken by experienced ecologists from HED Ltd over 2 days between May and July 2025 under fair weather conditions avoiding periods of heavy rainfall.

A field survey was undertaken involving 2no. surveyors walking along the banks of waterbodies (up to 10m from toe, where safe access allowed) within the survey area. During the survey, the suitability of the habitat to support water voles and field signs indicative of water vole activity were searched for using binoculars, hand lenses and measuring implements. Habitat suitability was assessed based on the following factors: availability and connectivity of waterbodies; bank profile; presence of suitable above-water nesting/burrowing substrate; depth, flow and fluctuation of watercourse; and availability of herbaceous vegetation for foraging and sheltering purposes. Field signs searched for included burrows, above-ground nests, latrines, feeding remains, prints and trails. Field signs of key predators were also recorded, in line with industry guidance. All field signs identified were recorded and georeferenced using the mobile application *Avenza Maps* and later mapped digitally using QGIS (*version 3.36.1*).

2.2 Limitations

Ecological surveys are limited by several factors that affect the presence of flora and fauna (weather, climate, animal behaviour, etc). Evidence of protected species and/or invasive species is not always found during a survey. This does not confirm that species are absent from an area or will not be present in the future. Sections of the ditches within the plantation woodland could not be accessed within 5m of the toe of the ditch due to dense gorse cover. It is not anticipated that this significantly impacted the overall assessment of the ditches.

3.0 Results

3.1 Water Vole Survey

The survey area presented a number of distinct aquatic habitats including lagoon, pond, saltmarsh and tidal ditches. The lagoon, saltmarsh and tidal ditches were suspected to be brackish due to their proximity and connectivity with the shoreline as well as the presence of salt-tolerant plant species. The waterbodies surveyed presented moderate suitability to support water voles, based on their slow-flow rate, gradually sloped embankments, suitable burrowing/nesting substrate and moderate herbaceous vegetation cover.

Despite there being suitable resting, foraging and commuting habitats present, no field signs evident of water voles were observed during the surveys. Evidence of key predators included plucks, recent and historic nests, and incidental sightings of raptors (Buzzards), in addition to anecdotal evidence of cats and pine marten within the survey area. In support of these findings, there have been no historic records of water vole within a 1km radius of the proposed expansion area according to online databases.

4.0 Survey Images

Table 1: Examples of water vole habitat surveyed.

Ref	Description	Image
1	Overview of saltmarsh environment located Northeast of proposed expansion area. Photograph taken at low tide.	
2	Overview of lagoon located on Northwestern corner of site. Suitable bank-side and in-channel herbaceous vegetation cover, slow flowing waterbody with suitable burrowing substrate.	
3	Tidal ditch running across edge of proposed expansion area and site haul road. Suitable bank substrate for burrowing, moderate herbaceous vegetation over.	

4	Tidal ditch cutting through proposed expansion area (plantation woodland). Bank substrate suitable for burrowing, low-moderate herbaceous vegetation cover.	
5	Freshwater pond located within scrubland area East of proposed expansion area.	

5.0 References

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.

NatureScot, (2024). Standing advice for planning consultations – Water Voles. Available at: Standing advice for planning consultations - Water Voles | NatureScot [Accessed 09.07.25]

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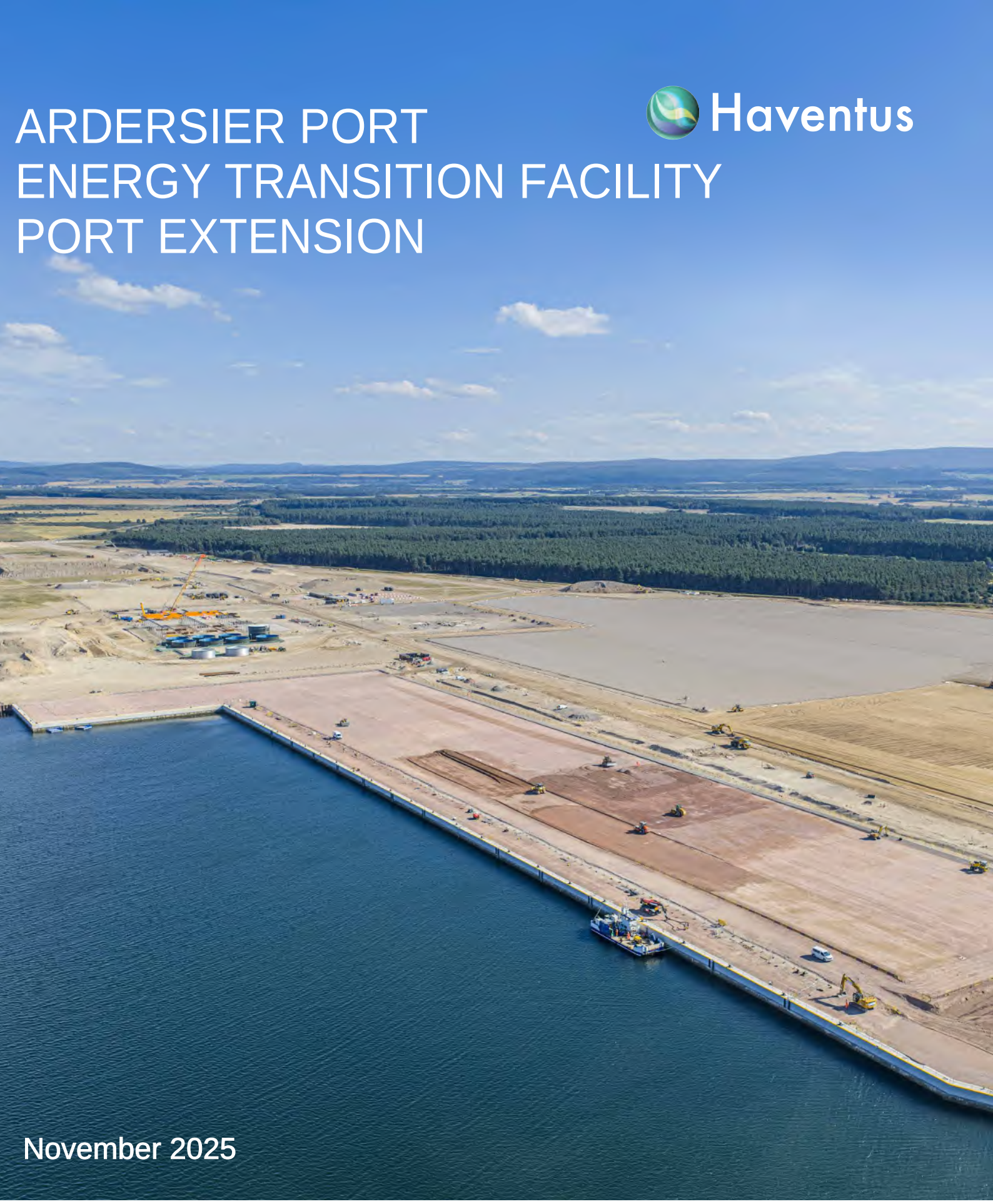

November 2025

Appendix 12.13 Phase 1 and Habitat Condition Assessment

Haventus Ardersier Port

Technical Appendix: Phase 1 and Habitat Condition Assessment

JULY 2025 FOR HAVENTUS

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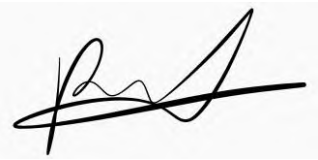

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Contents

1.0 Background

This Technical Appendix is commissioned by Haventus in respect of proposals for the expansion of the Ardersier Port redevelopment area. As part of a suite of surveys, a Phase 1 Habitat Survey and Habitat Condition Assessments were undertaken across the site in order to establish a habitat baseline prior to development.

2.0 Methodology

2.1 Phase 1 Habitat Survey

In order to establish which habitats are present within the proposed development boundary, a habitat survey and condition assessment was undertaken using the UK Habitats (UKHabs) classification system version 2.0 (UKHab Ltd., 2023). The UKHabs system is based upon the physical characteristics of a habitat and on the plant species found there, with several habitat types categorised by specific identifier species. The habitat survey took place over several days, through April and May, in order to sufficiently cover the various habitats. During the survey, habitat parcels and plants species lists were mapped and noted using the application *Avenza Maps 5.4.2* and then digitally mapped using *QGIS 3.38.3*, the results are shown in figure 1.

2.2 Habitat Condition Assessment

In conjunction with the habitat survey, a Habitat Condition Assessment was carried out in order to assess the quality of various habitat parcels. The condition assessment used the Statutory Biodiversity Metric Condition Assessment methodology (DEFRA, 2024), where set criterion for each habitat must be reached in order achieve the various levels of condition. This metric is used as a standard way to assess the perceived quality of a habitat relative to the ideal conditions for that habitat. The results of the condition assessment are shown in figure 2 and table 1.

2.3 Limitations

Ecological surveys are limited by several factors that affect the presence of flora and fauna (weather, climate, animal behaviour, etc). Evidence of protected species and/or invasive species is not always found during a survey; this does not confirm that species are absent from an area or will not be present in the future. These surveys were undertaken in favourable weather conditions and at a time of year when most flowering plants were in bloom in order to assist with their identification.

3.0 Results

3.1 Habitat Survey

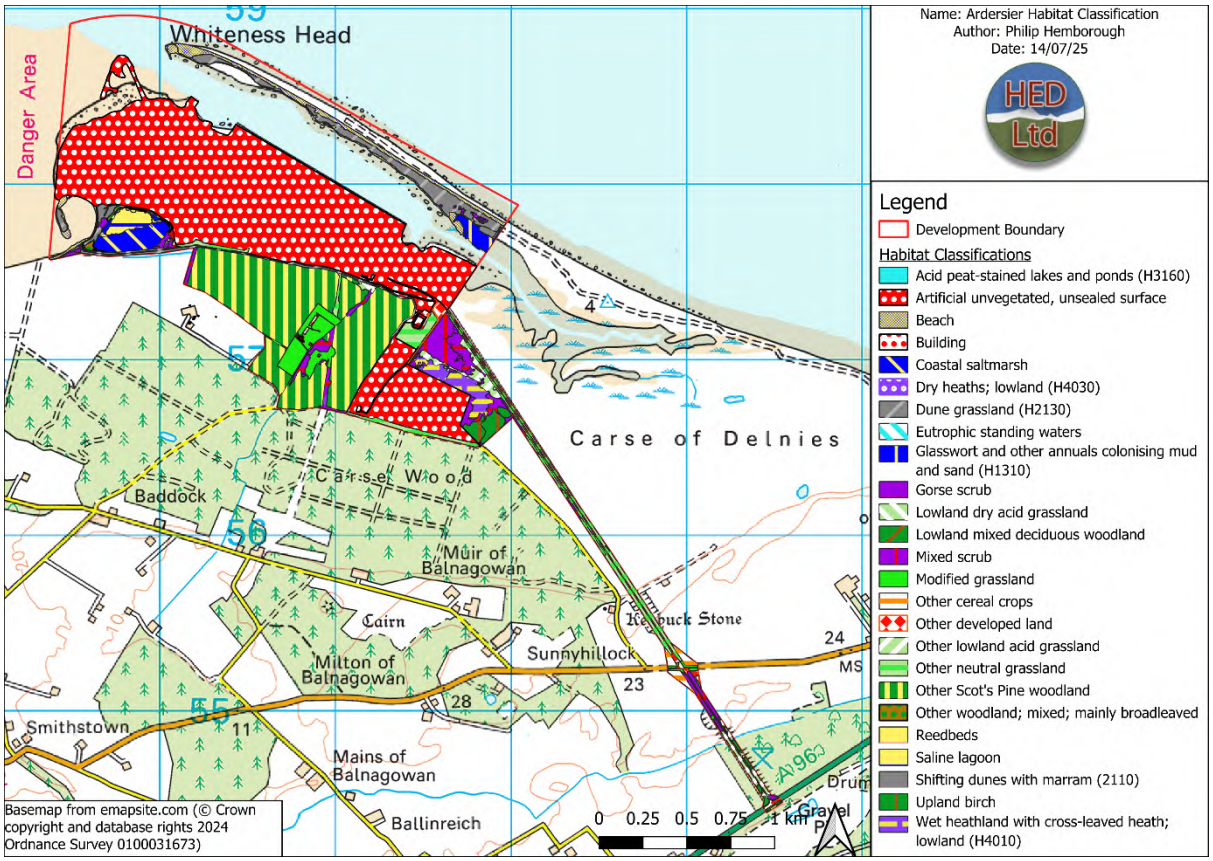

Figure 1: Map showing the habitat classifications of the area within the proposed development boundary.

3.2 Habitat Condition Assessment

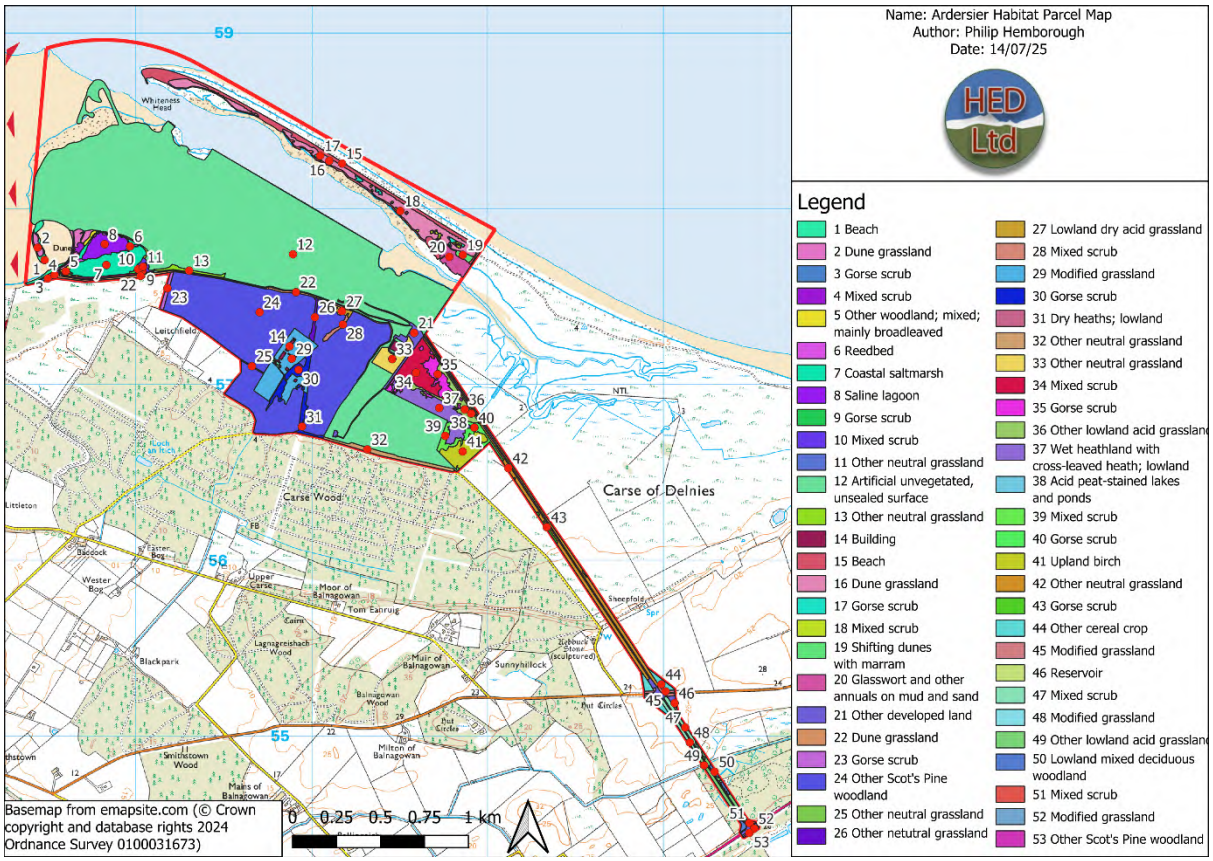

Figure 2: Map detailing the layout of distinct habitat parcels of the proposed development at Ardersier green port.

Table 1: A summary of habitats and associated results of condition assessment.

Parcel Number	Habitat Classification	Habitat Condition
1	Beach	Good
2	Dune grassland	Poor
3	Gorse scrub	Moderate
4	Mixed scrub	Moderate
5	Other woodland; mixed; mainly broadleaved	Moderate
6	Reedbed	Good
7	Coastal saltmarsh	Good
8	Saline lagoon	Good
9	Gorse scrub	Moderate
10	Mixed scrub	Moderate
11	Other neutral grassland	Poor
12	Artificial unvegetated, unsealed surface	N/A
13	Other neutral grassland	Poor

14	Building	N/A
15	Beach	Good
16	Dune grassland	Poor
17	Gorse scrub	Poor
18	Mixed scrub	Poor
19	Shifting dunes with marram	Moderate
20	Glasswort and other annuals on mud or sand	Good
21	Other developed land	N/A
22	Dune grassland	Poor
23	Gorse scrub	Moderate
24	Other Scot's Pine woodland	Poor
25	Other neutral grassland	Poor
26	Other neutral grassland	Moderate
27	Lowland dry acid grassland	Moderate
28	Mixed scrub	Moderate
29	Modified grassland	Poor
30	Gorse scrub	Moderate
31	Dry heaths; lowland	Good
32	Other neutral grassland	Poor
33	Other neutral grassland	Poor
34	Mixed scrub	Good
35	Gorse scrub	Good
36	Other lowland acid grassland	Moderate
37	Wet heathland with cross-leaved heath; lowland	Good
38	Acid peat-stained lakes and ponds	Fairly Poor
39	Mixed scrub	Good
40	Gorse scrub	Good
41	Upland birchwood	Moderate
42	Other neutral grassland	Moderate
43	Gorse scrub	Moderate
44	Other cereal crop	N/A
45	Modified grassland	Poor
46	Reservoir	N/A

47	Mixed scrub	Moderate
48	Modified grassland	Poor
49	Other lowland acid grassland	Good
50	Lowland mixed deciduous woodland	Moderate
51	Mixed scrub	Good
52	Modified grassland	Poor
53	Other Scot's Pine woodland	Poor

Below is given a summary of each habitat classification observed during the survey as detailed in Figure 1.

Acid peat-stained lakes and ponds (r1c7) - A small, shallow, nutrient-poor freshwater body typically found in heathland or bog landscapes. The water is darkly stained with humic acids leached from surrounding peat soils, giving it a brown or tea-colored appearance. These ponds are usually acidic (pH < 6), with low conductivity and sparse aquatic vegetation adapted to low-nutrient, acidic conditions.

Beach (t2h) - A dynamic coastal habitat comprising unconsolidated sediments such as sand, shingle, pebbles, or cobbles, shaped by tidal and wave action. Beaches are typically found between high and low tide marks and can range from steep, coarse shingle shores to flat, sandy expanses.

Coastal saltmarsh (t2a) - A low-lying, vegetated intertidal habitat found on sheltered coasts, estuaries, and behind barrier systems, regularly flooded by saline or brackish tidal waters. Saltmarshes develop on fine sediments like silts and clays and are characterised by zoned vegetation with species adapted to saline conditions.

Dry heaths: lowland (h1a5) - A nutrient-poor, acidic habitat found on free-draining, sandy or gravelly soils in lowland areas, typically below 300 m altitude. Dominated by dwarf shrubs such as *Calluna vulgaris* (heather), *Erica cinerea* (bell heather), and *Ulex spp.* (gorse), often with a mosaic of grasses, mosses, and lichens.

Dune grassland (s3a7) - A semi-natural habitat found on stabilized sand dunes, typically located inland from mobile foredunes along the coast. Characterised by species-rich grassland on calcareous or neutral sandy soils, dune grasslands support a diverse flora including Festuca, Galium, Lotus, and Carex species, along with lichens and mosses.

Glasswort and other annuals on mud or sand (t2a5) - A pioneer coastal habitat found on intertidal mudflats and sandflats, particularly in estuaries and sheltered bays. It is dominated by salt-tolerant annual plants such as *Salicornia* spp. (glasswort), *Suaeda maritima* (annual sea-blite), and other halophytes that colonise bare, often waterlogged sediments. This habitat typically occurs at the lower margins of saltmarshes and represents an early stage in saltmarsh succession.

Gorse scrub (h3e) - A dense, spiny shrub-dominated habitat typically found on nutrient-poor, acidic soils in lowland heaths, grasslands, and upland fringes. Dominated by *Ulex* species (commonly *Ulex europaeus* or *Ulex gallii*), often mixed with other shrubs like *Cytisus scoparius* (broom) or young trees.

Lowland dry acid grassland (g1a) - A species-rich grassland habitat found on free-draining, nutrient-poor, acidic soils in lowland areas, often associated with heaths, commons, and sandy or gravelly substrates. Dominant grasses typically include *Festuca ovina* (sheep's fescue), *Agrostis capillaris* (common bent), and *Anthoxanthum odoratum* (sweet vernal grass), with characteristic herbs such as *Galium saxatile* and *Rumex acetosella*.

Lowland mixed deciduous woodland (w1f) - A broadleaved woodland habitat found across lowland Britain, typically on base-poor to neutral soils. It features a mix of native tree species such as *Quercus robur* (pedunculate oak), *Betula* spp. (birch), *Fraxinus excelsior* (ash), and *Acer campestre* (field maple), often with a well-developed understorey of shrubs like *Corylus avellana* (hazel) and *Crataegus monogyna* (hawthorn).

Mixed scrub (h3h) - A transitional habitat dominated by a variety of native and non-native woody shrubs, often including *Crataegus monogyna* (hawthorn), *Prunus spinosa* (blackthorn), *Rosa* spp., *Corylus avellana* (hazel), and sometimes young trees such as *Betula* spp. or *Quercus robur*. Found on a range of soils in lowland and upland fringe areas, mixed scrub often develops through natural succession on abandoned grassland, heathland, or disturbed ground.

Modified grassland (g4) - Grassland habitats that have been significantly altered by agricultural management, fertilisation, reseeding, or drainage, resulting in reduced species diversity and often dominated by productive grasses and herbs such as *Lolium perenne* (perennial ryegrass) and *Trifolium repens* (white clover). These grasslands typically occur in lowland pastoral or arable landscapes and support fewer specialist or conservation-important species compared to semi-natural grasslands.

Other lowland acid grassland (g1d) - A broad category encompassing various acidophilous (acid-loving) habitats found in lowland areas on acidic, nutrient-poor soils. This includes

habitats such as acid grasslands, heathlands, and acid woodlands that do not fall neatly into more specific classifications. These habitats are characterised by low pH soils, supporting specialised plant communities adapted to acidic conditions, including ericaceous shrubs, acid-tolerant grasses, and mosses. They often occur on sandy, gravelly, or peat soils and provide important refuges for acid-adapted flora and fauna.

Other neutral grassland (g3c) - Grassland habitats found on well-drained, neutral to slightly acidic soils that do not fit into the main semi-natural grassland types like MG (mesotrophic) communities. These grasslands often have a moderate species diversity and can include both improved and semi-improved swards with grasses such as *Agrostis capillaris* (common bent), *Holcus lanatus* (Yorkshire fog), and herbs like *Plantago lanceolata* (ribwort plantain). They occur in a variety of lowland and upland fringe locations, often as part of pastoral or mixed farming landscapes, and may act as transitional or secondary habitats between more defined grassland types.

Other Scot's Pine woodland (w2b) - Woodland dominated by *Pinus sylvestris* (Scot's pine) occurring outside of the primary native Caledonian pinewood areas, often planted or secondary in origin. These woodlands typically grow on acidic, well-drained soils in upland or lowland settings and may include a mixture of native and non-native understorey species such as heather (*Calluna vulgaris*), bilberry (*Vaccinium myrtillus*), and grasses.

Other woodland; mixed; mainly broadleaved (w1h5) - Woodland dominated by a mix of broadleaved tree species, often including native and planted trees such as *Quercus robur* (oak), *Acer pseudoplatanus* (sycamore), *Fagus sylvatica* (beech), and *Fraxinus excelsior* (ash). These woodlands occur on a range of soil types and can be semi-natural or managed plantations. The understorey and ground flora vary widely but typically include shrubs like *Corylus avellana* (hazel) and herbs adapted to the local conditions.

Reedbed (f2e) - A wetland habitat dominated by dense stands of common reed (*Phragmites australis*), typically found in shallow, nutrient-rich standing or slow-flowing freshwater such as lakes, rivers, and estuaries.

Saline lagoon (t2g5) - A coastal waterbody separated from the sea by a barrier such as sand or shingle but retaining some saline influence through seepage or occasional tidal exchange. Saline lagoons have variable salinity levels, often brackish to hyper-saline, creating unique conditions that support specialized plant, invertebrate, and bird communities. Typical vegetation includes salt-tolerant algae and submerged plants, while fauna may include rare crustaceans, molluscs, and overwintering or breeding waterfowl.

Shifting dunes with marram (s3a6) - A dynamic coastal habitat characterised by mobile sand dunes dominated by *Ammophila arenaria* (marram grass), which stabilises the sand and facilitates dune formation.

Upland birchwood (w1e) - Woodland dominated primarily by *Betula pubescens* (downy birch) and/or *Betula pendula* (silver birch), typically found in upland areas on acidic, often peaty or mineral soils.

Wet heathland with cross-leaved heath; lowland (h1a7) - A semi-natural heathland habitat found on acidic, poorly drained, nutrient-poor soils, often waterlogged for much of the year. Dominated by *Erica tetralix* (cross-leaved heath) alongside *Calluna vulgaris* (heather) and various sedges (*Carex* spp.), wet heathlands support a mosaic of bog pools, wet hummocks, and wetter hollows.

3.3 Invasive Non-Native Species

During the course of the survey, several locations containing invasive non-native plant species (INNS) were noted and are shown in Figure 3 below.

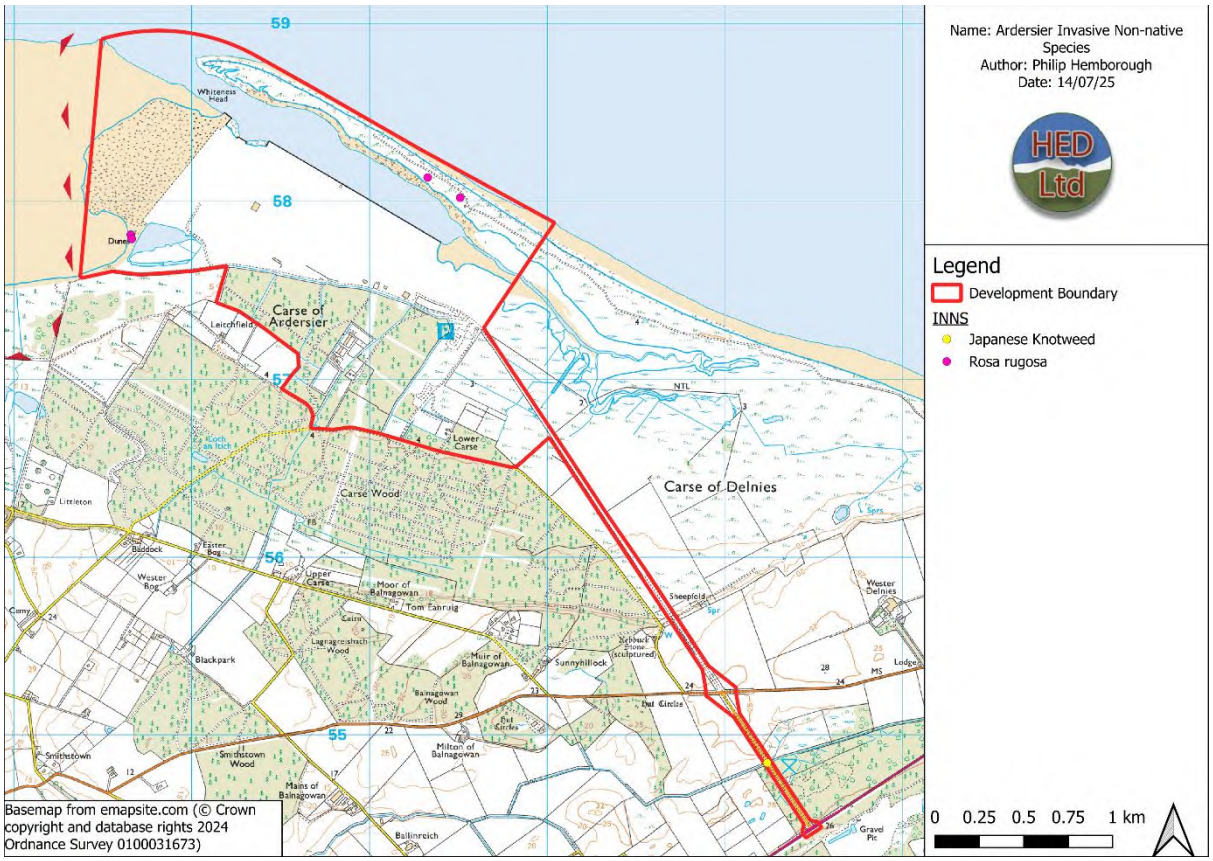

Figure 3: Map detailing the locations of observed invasive non-native species within the proposed development site boundary.

4.0 Summary

The results of the habitat survey show that there are 25 habitat types across the surveyed area, separated into 53 separate habitat parcels. The habitat condition assessment suggests that most of these habitats are in low to moderate states of condition, with a several being in good condition, mostly where they have been left alone to recover from human activities in the recent past.

5.0 References

UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at https://www.ukhab.org)

DEFRA (2024). The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology.