

ARDERSIER PORT ENERGY TRANSITION FACILITY PORT EXTENSION



November 2025

Appendix 15.1 Potential Enhancements

BIODIVERSITY ENHANCEMENT – PLANTING FOR POLLINATORS

Biodiversity Enhancement Summary	
Project Name	Access Road Planting
Objectives	<ul style="list-style-type: none"> Pollinator and Invertebrate benefits Enhancement of existing NVC community
Timescales	TBC
Habitat Retained, Created, or Enhanced	<p>Retained: Vegetated verge</p> <p>Created: N/A</p> <p>Enhanced: MG1 semi-natural grassland</p>
Species Affected	<p>Positive: native vegetation species, pollinators, invertebrates</p> <p>Negative: Gorse & broom scrub, undesirable native vegetation</p>
Constraints	<ul style="list-style-type: none"> Underground & overground services Perceived aesthetics Neighbouring farmland Badger sett Invasive non-native species
Review / Updated dates	DRAFT updated 23/09/2025



Location History and baseline summary

The verges along the access road have been classified as NVC community MG1, *Arrhenatherum elatius* (false oat grass) neutral grassland.

The MG1 NVC community broadly describes ungrazed or unmown tall grass communities on neutral soils, which are commonly found in marginal habitats, verges and field edges.

Earth works to install underground services in a 2 metre strip along the full length of the verge occurred in 2025. Further earthworks in this area may be required in the future.

A strip along the edge of the road is regularly mown to a short sward for aesthetics and better visibility.

Biodiversity Enhancement Actions

- Establish baseline survey of pollinator species e.g. bees and butterflies.
- Enhancement along roadside verge between top security building (not shown on map) and lower security box
- Single feature trees and shrubs planted using suitable native species e.g. elder, alder, rowan, birch, willow, dog rose, crab apple, blackthorn, hawthorn, dogwood, juniper. Actual species used will depend on location and local conditions.
- Rank grasses, broom and other scrub species will be removed or mown to facilitate enhancement seeding and planting and expose bare ground.
- Enhancement of the MG1 NVC community in areas that are accessible for planting and long-term management
- MG1 enhancement by planting or seeding suitable native floristic species associated with MG1 habitats. Species may include harebell, ox-eye daisy, creeping thyme, birds foot trefoil, red clover, meadowsweet, meadow grass species.
- A 2 metre mown strip either side of the road will continue to be regularly mown for safety. From 15th April to 15th August this mown strip will be cut no less than 15cm high to maintain low growing flowering species such as clovers & birds foot trefoil.
- Out-with the 2 metre mown strip the majority of vegetation will but cut between September – March inclusive to prevent build-up of rank grasses and vegetation. Areas that are not accessible or are unable to be cut regularly will be left as refuge areas, cut rotationally or utilised for tree and shrub planting.
- Undesirable or invasive and non-native species will be removed.



Left: Aerial photo of access road between security buildings



Right: Aerial photo of access road with indicative location of vegetated verge and MG1 enhancement area.

Baseline and Environmental Information – Planting for Pollinators

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional Information
Statutory / Non-statutory Designated Sites	Whiteness Head SSSI saltmarsh is adjacent to the road	<input checked="" type="checkbox"/>	Use native species to reduce risk of invasive non-native species establishing in the SSSI
Protected and Notable Species	Badger sett located on southern end of the access road	<input checked="" type="checkbox"/>	Area excluded from enhancement
Invasive Non-Native Species (INNS)	Japanese knotweed (<i>R. japonica</i>) stand in verge on southern end of access road	<input checked="" type="checkbox"/>	Currently being chemically treated. This area will be excluded from enhancement.
Biological Records Plan - Sites and Species	Butterfly, beetle and bee species recorded locally on NBN Atlas.	<input type="checkbox"/>	
Baseline Habitats Survey	NVC assessment 2024. No baseline for pollinator or invertebrate species.	<input type="checkbox"/>	Baseline pollinator to be established before enhancement of the verges.
Public Access	No public access	<input type="checkbox"/>	
Climate	Climate changes may affect botanical and invertebrate species composition.	<input type="checkbox"/>	
Geology and Topography	N/A	<input type="checkbox"/>	
Agricultural Land Status	The access road is not agricultural land but is adjacent to fields that are used for livestock grazing	<input checked="" type="checkbox"/>	Ragwort not to be planted and any established plants to be removed along the access road before they seed.
Soils and Substrates	Not tested	<input checked="" type="checkbox"/>	Plant and tree choice will need to be suitable for soil conditions
Contaminated Land	N/A	<input type="checkbox"/>	
Hydrology and Drainage	Potentially some saltwater influence at high spring tides at bottom of banks.	<input type="checkbox"/>	Utilise wetter or drier areas to increase species diversity by planting appropriately. Allow any saltwater influenced areas to vegetate naturally.
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	N/A	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	
Other – please specify	Underground services running 2 metres either side of the road. Overhead services near boundary fence. Link to Bumblebee Conservation B-lines project, running along A96	<input checked="" type="checkbox"/>	No trees to be planted within 4 metres from the edge of the road. Potential for further works within the underground services, any planting should take account of this and be easily replaceable. Trees will not be planted along the boundary near overhead services.

Monitoring Program – Planting for Pollinators

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
Vegetation community	NVC survey and condition assessment. Walk-over monitoring for ragwort, undesirable species and invasive non-native species	NVC survey and condition assessment every 3 years. Walk-over monitoring for ragwort, invasive non-native species etc annually
Bees & butterfly species	TBC. Suitable methodology may include Standard UKBMS butterfly and/or bee transects of entire verge, UK Pollinators Monitoring (POMS) or timed counts at selected areas.	TBC. Interval dependant on survey method. Likely to be weekly March - September annually.
Other Invertebrate or pollinator species	Appropriate method for target species.	Ad hoc basis

Habitat and Species Targets – Planting for Pollinators

Target Habitat or Species	Baseline Condition	Targeted Condition	Most recent Assessment date	Condition Assessment	Most recent Condition Assessment Comments and events	Previous 5 condition assessments
NVC community	MG1 best match for vegetation present	Characteristic MG1 species & subcommunities present	2024			
Invertebrates & pollinators	Baseline to be established	TBC				

Notable events and assessment comment summary log
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Risk and Issues Log with Remedial Actions – Planting for Pollinators

Risk Identification Date	Risk	Trigger for Action	Preventative Action	Remedial Measure
July 2025	2 metre mown strip is mown to close or inappropriately between 15 th April and 15 th August	Short sward observed, majority of flower heads, removed, or strip is wider than 2 metres	Ensure staff and contractors carrying out maintenance work are aware of mowing requirements	Remind staff and contractors of mowing requirements, mark 2 metre mown area, supervise maintenance works.
July 2025	Accessibility of some areas prevents seeding or vegetation management of MG1	Risk identified and assessed	Identify inaccessible areas and practical long-term management before finalising planting.	Leave inaccessible areas as they currently are or consider alternative enhancement to MG1 seeding such as tree or shrub planting.
July 2025	Seeding or planting fails to establish	No evidence of seeded or planted species establishing after 2 years	Select species suitable for soil and micro-climate conditions	Reassess species suitability, replant with alternative species.
July 2025	Ragwort or invasive non-native species become established	Species identified	No planned planting of ragwort, non-native or invasive species.	Remove species by appropriate method.
July 2025	Underground service maintenance, installation or damage	Need for further installation or earthworks identified.	Tree or deep-rooted species are planted 2 metres away from underground services. No slow growing or difficult to replace species to be grown above underground services or within the 2 metre mown strip.	Trees and shrubs removed and relocated or replaced in an alternative location. Areas re-seeded and replanted with an suitable seed mix and plants when earthworks have been completed.

BIODIVERSITY ENHANCEMENT: INVERTEBRATES & BROWNFIELD PLANTS

This enhancement will, in part, opportunistically utilise long-term features on sites, e.g. screening bunds and embankments, as such it is not possible to identify the location and concept design on this enhancement until the site development plan has been finalised. Thus, a reduced draft plan has been produced for this enhancement.

Biodiversity Enhancement Summary	
Project Name	Butterfly & Bee banks
Objectives	<ul style="list-style-type: none"> Creation of habitat suitable for invertebrates and pollinators Support the local small blue butterfly population
Timescales	TBC pending site development opportunities.
Habitat Retained, Created, or Enhanced	<p>Retained: None</p> <p>Created: Butterfly & Bee banks</p> <p>Enhanced: Suitable long-term features on site</p>
Species Affected	<p>Positive: Butterfly & other invertebrates. Brownfield and open ground botanical species.</p> <p>Negative: Potential loss of botanic species.</p>
Constraints	<p>Site planning and layout.</p> <p>Location of badger setts</p> <p>Locations of invasive non-native species</p>
Review / Updated dates	Draft updated 22/09/2025

Location History and baseline summary

There currently no baseline record for lepidoptera on site but notable butterfly species have been observed on site or recorded locally including:

- Dingy skipper (*E. tages*) – Action required, Scottish Biodiversity list
- Grayling (*H. semele*) – Endangered, GB red list 2022
- Small heath (*C. pamphilus*) – Vulnerable, GB red list 2022
- Small blue (*C. minimus*) – Endangered, GB red list 2022

The open and gravelly nature of the site prior to development likely would have supported invertebrates and specialist botanical species that benefited from the open and extensive bare ground that is associated with brownfield sites

No specific location for the butterfly and bee banks have been established at this stage. It envisioned that long-term features on site such as bunds and screens will be utilised as well as creation of specific features where the site layout allows.

Biodiversity Enhancement Actions

- Establish baseline for butterflies, moths and other invertebrates.
- Creation of ‘butterfly and bee banks’ to provide food plants, refuge areas and provide ‘stepping stone’ connectivity with Whiteness Head SSSI and the small blue butterfly population at Ardiersier Common.
- Banks will be made, predominantly, from on-site materials. The sand and gravel may provide a benefit to brownfield plant species that favour sparsely vegetated and open ground and potentially retains a local seed bank.
- The preferred method of vegetating the butterfly banks is natural regeneration from existing seed bank and, if appropriate, transplanting botanical species from development areas to the banks
- If the banks do not naturally vegetate appropriately a native seed mix or plug plants of native species including kidney vetch, birds foot trefoil and grasses including fescues, bents and *Poa* species will be used.

Monitoring Program – Invertebrates and Brownfield Plants

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
Butterfly species	TBC depending on the size and location of banks. It is anticipated that a standard UKBMS transect method or timed counts at each butterfly bank will be used.	Transects/Timed counts: weekly 1 st April – 1 st September Annually
Vegetation	Species composition. Percentage cover for flowering plants, grasses on DAFOR scale (dominant, abundant, frequent, occasional, rare) for each bank	Once in June-July annually. Additional surveys as required.
Bare ground	Percentage cover per bank	Assessed during vegetation surveys
Other invertebrates	Appropriate surveys on an ad hoc basis	Ad hoc

Baseline and Environmental Information – Invertebrates and Brownfield Plants

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional Information
Statutory / Non-statutory Designated Sites	Site adjacent to Whiteness Head SSSI. Risk of non-native or ornamental plants seeding on the SSSI	<input checked="" type="checkbox"/>	Use of native species only. Remove any ornamental species that grow
Protected and Notable Species	Common Lizard (<i>Z. vivipara</i>) and Badger (<i>M. meles</i>) within the site	<input checked="" type="checkbox"/>	Common lizard may benefit by providing basking areas. Banks will be located away from Main badger sett.
Invasive Non-Native Species (INNS)	Japanese knotweed (<i>R. Japonica</i>). New Zealand Pygmyweed (<i>C. Helmsii</i>). Japanese rose (<i>R. Rugosa</i>)	<input checked="" type="checkbox"/>	<i>R. Rugosa</i> and Japanese Knotweed currently being chemically controlled.
Biological Records Plan - Sites and Species	Records from NBN Atlas and observation on-site show notable species on site or present locally	<input checked="" type="checkbox"/>	Target key species by focusing on larval food plants for these species.
Baseline Habitats/Species Survey	No baseline survey for butterflies or pollinators	<input type="checkbox"/>	
Climate	Climate change may result in changes in invertebrate and species composition.	<input type="checkbox"/>	Consider planting for incoming climate change species in the long term
Geology and Topography	N/A	<input type="checkbox"/>	
Soils and Substrates	Suitable sandy materials available on site.	<input checked="" type="checkbox"/>	Use site won materials by preference
Contaminated Land	N/A	<input type="checkbox"/>	
Hydrology and Drainage	N/A	<input type="checkbox"/>	
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	N/A	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	
Other	Similar features have been created locally through 'Rocking the blues' Species on the Edge Project.	<input type="checkbox"/>	

BIODIVERSITY ENHANCEMENT – BIRD ROOSTING AND NESTING AREA

Biodiversity Enhancement Summary	
Project Name	Tern Island Expansion
Objectives	<ul style="list-style-type: none">• Increase breeding area for terns• Increase roosting area for waders
Timescales	TBC
Habitat Retained, Created, or Enhanced	Retained: 'Tern island' Created: Island expanded by Approx 10,000m ² of new habitat Enhanced: N/A
Species Affected	Positive: Breeding terns, waders & seabirds Negative: Waders and seabirds during construction
Constraints	<ul style="list-style-type: none">• SPA seasonal constraints• Consents
Review / Updated dates	DRAFT updated 23/09/2025



Location History and baseline summary

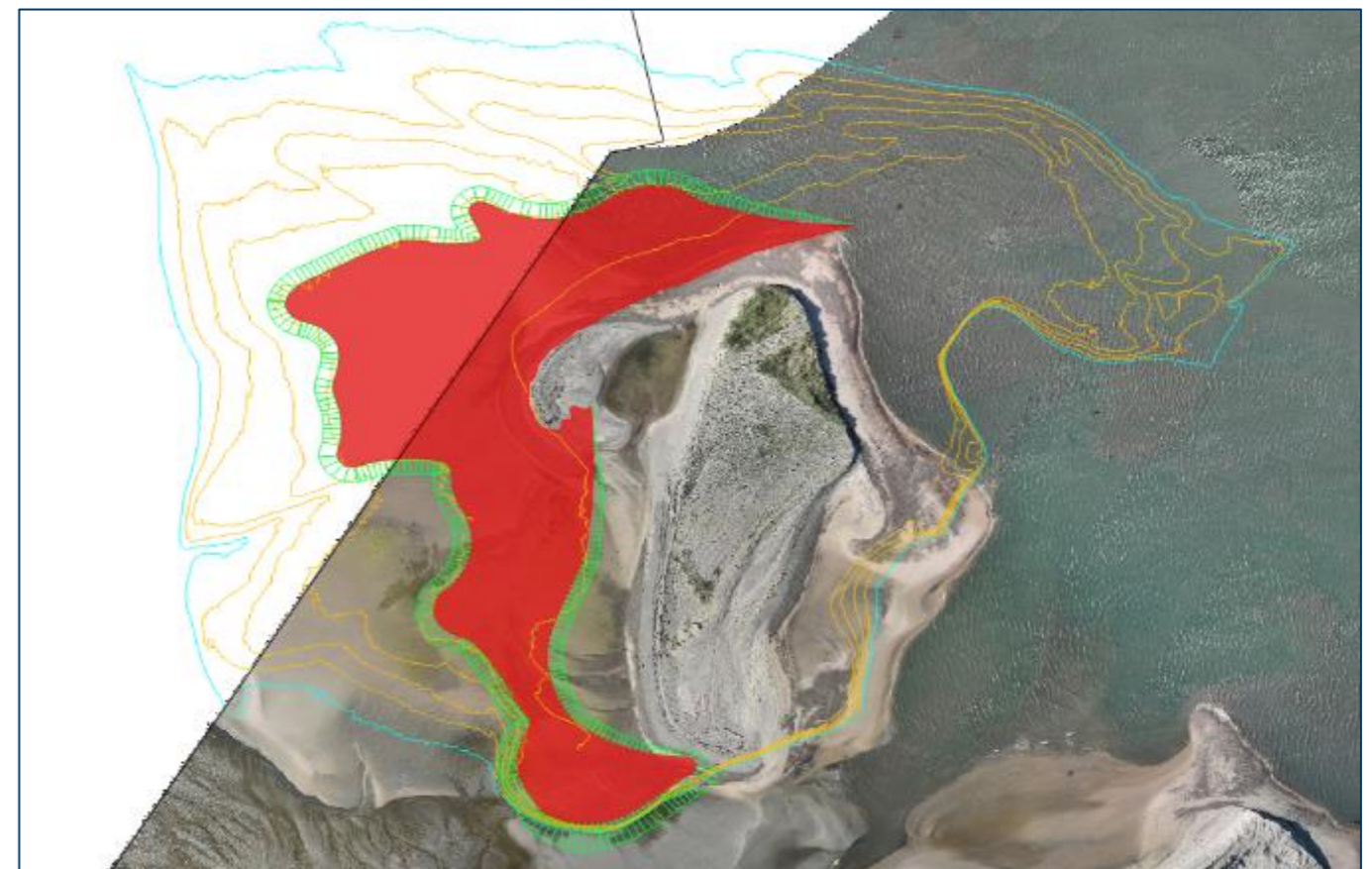
'Tern island' was created by dredge operations in 2023, which decapitated the end of the Whiteness Head spit that had been accreting since 2001 when dredging ceased due to the closure of the McDermotts yard.

Little and Common tern historically attempted to breed on Whiteness Head but had generally been unsuccessful due to disturbance and predation. During 2025 both species bred successfully on the island, other species also used the island for nesting and roosting.

A section of tern island was lost due to slumping into the dredge slope during the 2025 capital dredge campaign.

Biodiversity Enhancement Actions

- Expand tern Island with approximately 10,000m² of new habitat using materials from dredge activities to increase nesting and roosting areas for waders, terns and seabirds.
- Capital and subsequent maintenance dredging around the island to maintain a suitable depth and width of channel to reduce the risk of land predators accessing the island.
- As the island develops further enhancements actions including 'chick shelters' to provide tern chicks protection from aerial predators, regular litter removal and vegetation management may be required.



Top: Aerial photo of Tern Island during high tide in August 2025

Below: Indicative plan of a potential expansion option of Tern Island following existing contours. Aerial background dated July 2025 at low tide.

Baseline and Environmental Information – Bird roosting and breeding area

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional Information
Statutory / Non-statutory Designated Sites	Moray Firth SPA, Inner Moray Firth SPA & RAMSAR and Whiteness Head SSSI	<input checked="" type="checkbox"/>	
Protected and Notable Species	<ul style="list-style-type: none"> • Breeding Little Tern (<i>S. Albifrons</i>) – Schedule 1 species • Breeding Common Tern (<i>S. Hirundo</i>) – SPA feature • SPA & RAMSAR non-breeding bird assemblage 	<input checked="" type="checkbox"/>	Island expansion works will need to be planned to minimise impacts on breeding and roosting birds on the island.
Invasive Non-Native Species (INNS)	No terrestrial or Marine INNS are believed to be on the island	<input type="checkbox"/>	
Biological Records Plan - Sites and Species	Little Tern, Common Tern, Ringed Plover and Greater Black-backed gull observed nesting on island.	<input type="checkbox"/>	
Baseline Habitats Survey	High tide roost surveys conducted annually since 2023. Nesting terns monitored daily in 2025.	<input type="checkbox"/>	
Public Access	Public could access tern island under Scottish Outdoor Access Code, however this will be difficult to do without watercraft and is within Harbour Authority Area.	<input type="checkbox"/>	Public accessing the island whilst schedule 1 species are breeding on the island would likely be contradictory to the Wildlife and Countryside Act 1981 as it would cause disturbance to a schedule 1 species.
Climate	Island will be affected by predicted sea level rises and increased storms. Changes in species composition and movements may also occur.	<input type="checkbox"/>	In the long-term tern island and the extension may require additional material and regular maintenance to withstand impacts of climate change.
Geology and Topography	Existing island and sediment accretion provides a naturally raised area and contours that can be utilised to guide a final design to mimic natural processes.	<input checked="" type="checkbox"/>	
Agricultural Land Status	N/A	<input type="checkbox"/>	
Soils and Substrates	Use of site won material through dredging will be a similar substrate to those that have naturally accreted on tern island	<input type="checkbox"/>	
Contaminated Land	N/A	<input type="checkbox"/>	
Hydrology and Drainage	Tidal area	<input checked="" type="checkbox"/>	Annual maintenance may be required depending on the impacts on high spring tides and storm events.
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	N/A	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	
Other – please specify	N/A	<input type="checkbox"/>	

Monitoring Program – Bird roosting and breeding area

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
Nesting terns and other breeding species	TBC. Methodology may include vantage point surveys of island from the site, recording presence, apparently occupied nests (AONs), chicks and fledglings. Nest and chick counting on the island if a schedule 1 licence can be obtained to conduct the survey. Other species present on the island should also be recorded at the time of the survey.	Vantage point surveys annually, 1 day per week 1 st May – 31 st July Nest and chick counts 1 – 2 per month May- July. These surveys should only be conducted in suitable weather conditions for a limited period of time.
SPA non – breeding bird assemblage	Winter roosting surveys, conducted in conjunction with wider site bird surveys	Annually. 1 per month September – March inclusive.

Habitat and Species Targets – Bird roosting and breeding area

Target Habitat or Species	Baseline Condition	Targeted Condition	Most recent Assessment date	Condition Assessment	Most recent Condition Assessment Comments and events	Previous 5 condition assessments
Common tern (<i>Sterna Hirundo</i>)	Breeding	Breeding	2025		2025 – Peak count 146 AONs	
Little Tern (<i>Sternula albifrons</i>)	Breeding	Breeding	2025		2025 – Peak count 12 AONS	
SPA non-breeding bird assemblage	Present	Present	2025			

Notable events and assessment comment summary log
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Risk and Issues Log with Remedial Actions – Bird roosting and Breeding area

Risk Identification Date	Risk	Trigger for Action	Preventative Action	Remedial Measure
July 2025	Slumping or undercutting of island from wave events	Significant loss of island area	Design and modelling of island to identify most robust options	Repair when dredged material becomes available, accept natural loss, armour/structures installed
July 2025	Island eroded during storm events	Significant loss of island area	Design and modelling of island to identify most robust design options	Repair with dredged material from harbour maintenance. Investigate long-term solution if significant erosion persists.
July 2025	Terns do not return to breed after works	No terns present the first year after breeding season	Expansion works not conducted close to breeding season	Assess island for suitability for terns. Use model to attract terns in. Add a substrate known to be attractive to terns e.g. shingle, crushed shells
July 2025	Land predators accessing island	Fox, badger, rat or dogs seen on island	Maintain a channel between mainland and island.	Assess whether channel is present at low tide and if predator can leave island. If possible remove predator from the island. Dredge a deeper channel as soon as practically possible.
July 2025	Public accessing during breeding season	People regularly seen on island	Signage informing public not to access the island April – August.	Request public leave island.
July 2025	Invasive species establish	Invasive species identified	N/A	Remove invasive species, preferably out with breeding season.
August 2025	Litter accumulation	Significant amount of litter observed during surveys or negative impact on birds observed	Adherence to Port Operational Plan for waste	Clearance and suitable disposal of litter. Identify and remedy any on-site sources

BIODIVERSITY ENHANCEMENT – WADER AND WETLAND BIODIVERSITY

Biodiversity Enhancement Summary	
Project Name	Lagoon
Objectives	<ul style="list-style-type: none"> Wetland suitable for waders Eradication of <i>Crassula helmsii</i>
Timescales	Bullet point list of timescales for enhancement, monitoring requirements and reviews
Habitat Retained, Created, or Enhanced	<p>Retained: lagoon area, lichens and dune vegetation</p> <p>Created: Saltmarsh & brackish lagoon</p> <p>Enhanced: Eradication of crassula</p>
Species Affected	<p>Positive: SPA waders & saltmarsh flora</p> <p>Negative: reptiles, dune vegetation, wetland vegetation, waders and ducks during construction</p>
Constraints	<ul style="list-style-type: none"> SSSI, SPA & RAMSAR designation Main badger sett Hydrology
Review / Updated dates	DRAFT updated 24/09/2025



Location History and baseline summary

The lagoon falls within Whiteness Head SSSI and Inner Moray Firth SPA

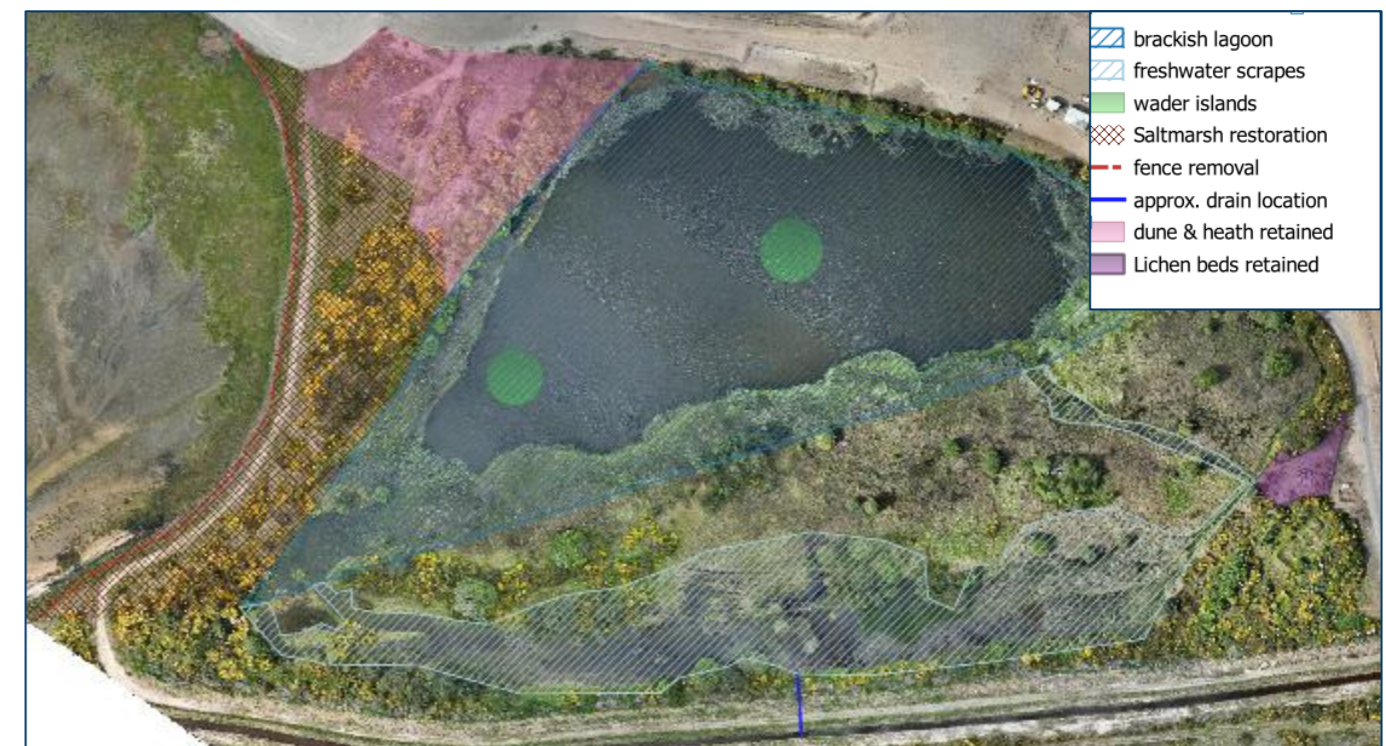
It was artificially created by land reclamation activities between 1972 & 1977, the remaining section has been left to fill in and vegetate naturally. It currently consists of a lagoon fringed with rushes surrounded by scrub and a marshy wetland area.

The lagoon contains invasive New Zealand Pygmyweed (*C. helmsii*).

The lagoon is currently well used by waterfowl and ducks, including tufted duck, goldeneye, teal and widgeon.

Biodiversity Enhancement Actions

- Retention of some dune vegetation and lichen areas with selective removal of scrub and gorse to enhance open habitats.
- Removal or alteration of existing fence to reduce potential barrier effect of the fence on waders.
- Removal of existing bund to allow natural tidal flooding and saltmarsh to establish
- Deepening and expansion of existing lagoon to the estimated edge of new saltmarsh area, it is expected that there will be saltwater input into the lagoon from seepage and spring tides.
- A network of scrapes and pools created at the back of the lagoon, it is anticipated that these will be predominantly freshwater.
- Eradication of *C. helmsii* that is still present after earthworks using saltwater and, if required, chemical treatment.
- Installation of 'wader islands' into the lagoon area to provide additional roosting and nesting areas.
- Re-vegetation of the areas will be assessed after the eradication of *C. helmsii* and the salinity of the brackish lagoon and freshwater scrapes have been established. It is anticipated that natural re-vegetation of the areas will occur, and some supplementary planting of appropriate native species may be required.
- Some removal of trees and scrub may be required to encourage waders to utilise the area.



Top: Lagoon area Aerial photo September 2025

Below: Indicative concept plan of enhancement locations within lagoon area

Baseline and Environmental Information – Wader and Wetland Biodiversity

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional Information
Statutory / Non-statutory Designated Sites	Part of Whiteness Head SSSI and Inner Moray Firth SPA/Ramsar.	<input checked="" type="checkbox"/>	Whilst part of the SSSI and SPA it is not typically representative of the SSSI and SPA habitat. The biodiversity enhancement actions are targeted to provide benefits to SSSI, SPA and RAMSAR ornithological features
Protected and Notable Species	A main badger sett is present adjacent to the lagoon. SPA waders and breeding terns are locally present on Whiteness sands.	<input checked="" type="checkbox"/>	Final design will need to accommodate the main badger sett.
Invasive Non-Native Species (INNS)	New Zealand Pygmyweed (<i>Crassula helmsii</i>) & Japanese Rose (<i>Rosa rugosa</i>)	<input type="checkbox"/>	<i>R. Rugosa</i> is currently being chemically treated. A program for the treatment and disposal of soil infected with <i>C. Helmsii</i> will be required before works commence.
Biological Records Plan - Sites and Species	Local SPA wader species are present locally and do not currently utilise the lagoon area.	<input type="checkbox"/>	Opportunity to enhance lagoon area to benefit waders.
Baseline Habitats Survey	UKhab & condition assessment survey in 2024	<input type="checkbox"/>	
Public Access	No public access.	<input type="checkbox"/>	
Climate	Predicted sea level rise may impact salinity within the lagoons and consequentially impact vegetation and species composition	<input type="checkbox"/>	
Geology and Topography	Natural dips, low points can be utilised for scrapes and pools.	<input type="checkbox"/>	
Agricultural Land Status	N/A	<input type="checkbox"/>	
Soils and Substrates	Historically saltmarsh before the lagoon was created.	<input type="checkbox"/>	
Contaminated Land	No specific surveys have been carried out on the lagoon, potential for waste materials to be present on the lagoon.	<input type="checkbox"/>	
Hydrology and Drainage	Tidal inundation, existing drains and wetland already established	<input checked="" type="checkbox"/>	Modelling required before final design to establish extent of tidal inundation and potential saltmarsh expansion. Drains could be utilised for wetland areas
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	N/A	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	

Other – please specify	N/A	<input type="checkbox"/>	
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Monitoring Program – Wader and Wetland Biodiversity

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
New Zealand Pygmyweed (<i>C. helmsii</i>)	Walkover survey to establish extent.	Once per year before lagoon works, every 6 months post treatment.
Waterfowl and SPA waders/ducks	Species composition and number of individuals.	Once per month Sept – March, tied in with the wider site surveys
Vegetation assemblage	UKhab survey and condition assessment to assess extent and development of habitat	Annually for the first 3 years, then at an appropriate interval as the habitat develops, but not less than 1 every 5 years.
Salinity/hydrology	Salinity & pH tests at specified areas	Monthly

Habitat and Species Targets – Wader and Wetland Biodiversity

Target Habitat or Species	Baseline Condition	Targeted Condition	Most recent Assessment date	Condition Assessment	Most recent Condition Assessment Comments and events	Previous 5 condition assessments
<i>C. helmsii</i>	Present	none				
Saltmarsh extent	TBC	TBC				
Waterbird assemblage	TBC	TBC				

Notable events and assessment comment summary log

Risk and Issues Log with Remedial Actions – Wader and Wetland Biodiversity

Risk Identification Date	Risk	Trigger for Action	Preventative Action	Remedial Measure
September 2025	Saltmarsh fails to extend further	No evidence of suitable vegetation development after 3 years	Suitable height measurement and modelling of the extent of saltwater influence in the lagoon	Encourage alternative suitable habitat based on the conditions
September 2025	Public entering site from beach after fence removal	Public observed in area	Liaise with project team about final design of security fencing.	Reinstate suitable fencing if required.
September 2025	Crassula is not fully eradicated	Crassula extent increases after treatment	Suitable treatment and biosecurity during works	Return to treatment options, aim for containment before eradication.
September 2025	Reduced biodiversity (birds)	Reduction in SPA bird species after 3 years	Ensure habitat requirements are met when planning final designs	Establish likely cause of the decline and take steps to correct, where possible.
September 2025	Poor habitat condition after 3 years	UKhab condition assessment surveys are consistently poor	N/A	Establish cause of poor condition and take remedial action where possible. Habitat may require more time to develop. Consider planting with suitable native species or translocation of turves if necessary.

BIODIVERSITY ENHANCEMENT - WHITENESS HEAD SSSI VEGETATION MANAGEMENT

Biodiversity Enhancement Summary	
Project Name	SSSI scrub removal
Objectives	<ul style="list-style-type: none"> Reduction of gorse and broom Reduction of Rosebay Willowherb (<i>C. angustifolium</i>)
Timescales	TBC
Habitat Retained, Created, or Enhanced	Retained: N/A Created: N/A Enhanced: Whiteness Head SSSI
Species Affected	Negative: gorse, broom, rosebay willowherb. Species reliant on the above for shelter, nesting sites or food sources Positive: dune species, invertebrates, SSSI geomorphological features.
Constraints	<ul style="list-style-type: none"> SSSI designated features Accessibility
Review / Updated dates	DRAFT updated 24/09/2025



Location History and baseline summary

Whiteness Head has been notified as a SSSI for its landforms, coastal habitats and birds. It is a good example of active coastal processes in relation to shingle bars, sand dunes, saltmarsh and its value as a breeding and roosting area for bar-tailed godwit and knot.

Although not a notified SSSI feature the site also supports uncommon and rare lichen species, a variety of invertebrates and notable butterfly species including small blue, grayling and dingy skipper.

The latest condition assessments of the SSSI feature by NatureScot are:

31/03/2005 Bar-tailed Godwit (non-breeding) – Favourable maintained. Negative pressures – ‘Other’ & recreation/disturbance

31/03/2005 Knot (non-breeding) – Unfavourable no change. Negative pressures – ‘Other’ & recreation/disturbance

25/03/2024 Sand dunes – Unfavourable declining- negative pressures – infrastructure, invasive species rosebay willowherb & gorse, under grazing

21/03/2012 Coastal Geomorphology of Scotland – Favourable maintained

25/03/2024 Saltmarsh Unfavourable declining negative pressures Infrastructure

Sandflats – not assessed.

Biodiversity Enhancement Actions

- Cut and removal of 90% gorse and broom present in Whiteness Head SSSI within Ardersier Port control. Selected gorse bushes to be left in situ to provide wind shelter for small blue butterfly and other species. Retained gorse will be cut on rotation.
- Removal of non-native conifer or broad-leaf trees.
- Chemical treatment of tree and gorse stumps to prevent regrowth, if required.
- Hand pulling of rosebay willowherb. Chemical treatment of dense stands of rosebay willowherb where there is very little understory or dune flora, unless a suitably selective chemical treatment is available.



Above: Aerial photo of Whiteness Head SSSI 28th May 2025

Below: Indicative areas of gorse and broom to be removed

Baseline and Environmental Information – Whiteness Head SSSI Vegetation management

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional Information
Statutory / Non-statutory Designated Sites	Whiteness Head SSSI and part of the Inner Moray Firth SPA & RAMSAR.	<input checked="" type="checkbox"/>	Biodiversity actions on the SSSI are aimed at improving the condition of the SSSI that is within Haventus control.
Protected and Notable Species	<ul style="list-style-type: none"> • Lichen species. • Oysterplant (<i>Mertensia maritima</i>) • SPA & SSSI non-breeding waders and seaducks 	<input checked="" type="checkbox"/>	Scrub removal will most likely take place in the winter when SPA non-breeding waders are present
Invasive Non-Native Species (INNS)	Japanese Rose (<i>Rosa Rugosa</i>), Conifer species	<input type="checkbox"/>	<i>R. rugosa</i> currently being chemically controlled
Biological Records Plan - Sites and Species	Small Blue butterfly recorded locally	<input checked="" type="checkbox"/>	Gorse is used as a shelter by Small Blue, and other species. Complete removal may have unintended negative impact so selected areas of gorse will be retained.
Baseline Habitats Survey	NVC & lichen surveys undertaken on SSSI in 2024 – 2025 SSSI condition assessments conducted by NatureScot.	<input type="checkbox"/>	
Public Access	Whiteness Head SSSI is accessible to the public under the Scottish Outdoor Access Code.	<input type="checkbox"/>	
Climate	Changes in storm intensity and sea level rises may impact erosion and accretion of the spit.	<input type="checkbox"/>	
Geology and Topography	Shingle and Sand Dunes are designated SSSI features.	<input checked="" type="checkbox"/>	Digging out roots may damage SSSI features. Hand cutting, clearing saw, chainsaw or tree poppers used to remove and manage scrub to reduce or avoid damaging SSSI features.
Soils and Substrates	N/A	<input type="checkbox"/>	
Contaminated Land	No contaminated land	<input type="checkbox"/>	
Hydrology and Drainage	N/A	<input type="checkbox"/>	
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	N/A	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	
Other – please specify	N/A	<input type="checkbox"/>	

Monitoring Program – Whiteness Head SSSI Vegetation Management

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
Gorse, broom, rosebay willowherb	Aerial survey or GIS ground-based survey to monitor extent of gorse, broom & rosebay willowherb	Initial baseline survey to establish extent then annually during scrub removal, every 3 years once initial scrub removal is completed.
Lichen species	Lichen species survey	Every 5 years from date of last survey

Habitat and Species Targets – Whiteness Head SSSI vegetation management

Target Habitat or Species	Baseline Condition	Targeted Condition	Most recent Assessment date	Condition Assessment	Most recent Condition Assessment Comments and events	Previous 5 condition assessments
Common Gorse <i>Ulex europaeus</i>	TBC	No more than 10% of baseline area				
Rosebay Willowherb <i>Chamerion angustifolium</i>	TBC	TBC				
Conifer/non-native tree species	TBC	No conifer or non-native broad-leaves present				
Sand dune SSSI feature (area within Ardersier Port control)	Unfavourable Declining	Recovering	25/03/2024		Unfavourable declining due to Infrastructure, invasive species (gorse & rosebay willowherb) & under grazing. Assessed by NatureScot	
Shingle SSSI feature (area within Ardersier Port control)	Unfavourable Declining	Recovering	25/03/2024		Unfavourable declining due to infrastructure, invasive species & 'other'. Assessed by NatureScot	

Notable events and assessment comment summary log

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Risk and Issues Log with Remedial Actions – Whiteness Head SSSI Vegetation management

Risk Identification Date	Risk	Trigger for Action	Preventative Action	Remedial Measure
July 2025	Vehicles not using correct track to access bothy	Vehicles observed accessing bothy inappropriately or recent vehicle tracks observed	Vehicle users should already be aware of correct access	Appropriate reporting process followed. Signage or marking of track if inappropriate access persists.

BIODIVERSITY ENHANCEMENT – WETLAND CREATION

Biodiversity Enhancement Summary	
Project Name	Extension wetland
Objectives	<ul style="list-style-type: none">• Create wetland area in 2ha of set aside land• Compensate for loss of wet heathland• Increase site biodiversity
Timescales	TBC
Habitat Retained, Created, or Enhanced	Retained: None Created: Wetland Enhanced: None
Species Affected	Positive: Wetland species including invertebrates Negative: Existing vegetation in the area
Constraints	<ul style="list-style-type: none">• Size and location of area• Water source
Review / Updated dates	DRAFT Updated 24/09/2025

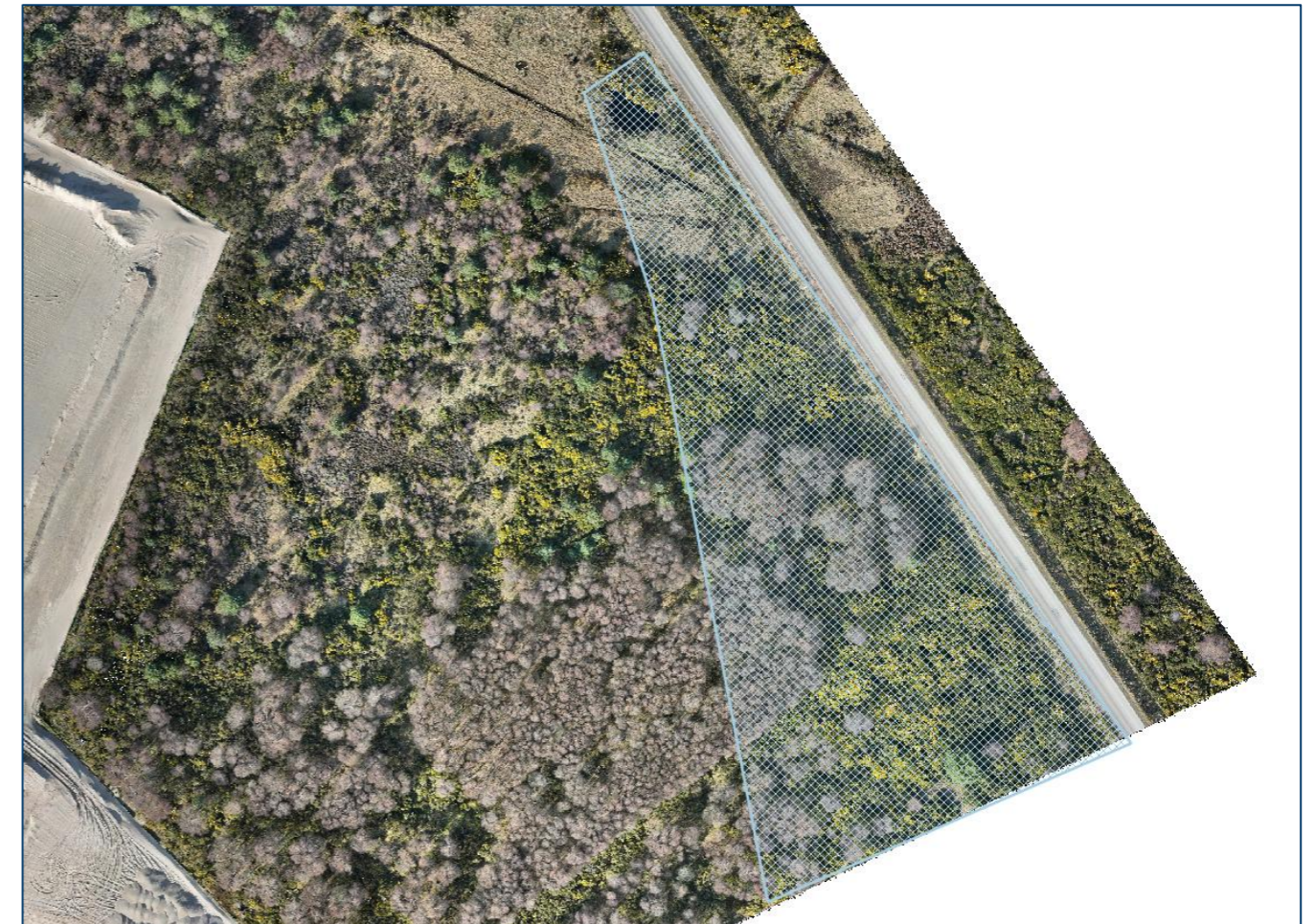


Location History and baseline summary

2025 NVC survey of this field indicates a mosaic of grassland, heath and scrub with some surface water dependant communities. Some of the vegetation and field drains suggest some historical grazing or agriculture.

Biodiversity Enhancement Actions

- A network of shallow and ephemeral ditches and pools connecting the water source to a main waterbody feature to benefit invertebrate and wetland vegetation
- Permanent waterbody creation, as large as possible within the constraints of the site, primarily to benefit invertebrates but may also benefit amphibians and birds.
- Transplant M6- M23b and M11c community from site development to wetland area if suitable conditions can be created.
- Retention of some birch and willow scrub and heathland areas within the 2ha area where it naturally exists and does not significantly impact of the open nature of the wetland.
- Suitable habitat established or heath retained in dry areas unsuitable for wetland vegetation
- Consideration to planting of suitable species to establish fringing vegetation around the waterbody and across wetland if required.
- Sluice system may be required to control water levels within the wetland and waterbody. Ongoing management to maintain the openness required to benefit invertebrates and prevent scrub invasion of the area.



Above: Aerial photo of wetland creation area

Below: Approximate location and size of wetland area

Baseline and Environmental Information – Wetland Creation

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional Information
Statutory / Non-statutory Designated Sites	Whiteness Head SSSI nearby site, but works are not anticipated to impact the designated site. Potential for transport of vegetation along existing drains	<input checked="" type="checkbox"/>	If planting is needed use native plants, with a low saltwater tolerance to reduce the risk of unsuitable vegetation establishing on the saltmarsh.
Protected and Notable Species	No protected or notable species recorded in location to date.	<input type="checkbox"/>	
Invasive Non-Native Species (INNS)	None noted on site	<input type="checkbox"/>	
Biological Records Plan - Sites and Species	N/A	<input type="checkbox"/>	
Baseline Habitats Survey	NVC and UKhab surveys conducted in 2024/2025 for EIA	<input checked="" type="checkbox"/>	May need use a suitable within the wetland area for transplanting or compensating for GWDTE identified during surveys
Public Access	No public access	<input type="checkbox"/>	
Climate	The impacts of climate change may alter the hydrology and species composition of the wetland over time.	<input type="checkbox"/>	
Geology and Topography	N/A	<input type="checkbox"/>	
Agricultural Land Status	N/A	<input type="checkbox"/>	
Soils and Substrates	Existing borehole data from this field.	<input type="checkbox"/>	Existing borehole data for the field will be consulted before final design of wetland.
Contaminated Land	No contaminated land is anticipated or has been found in boreholes to date.	<input type="checkbox"/>	
Hydrology and Drainage	Drainage design for the site development needs to be accommodated.	<input checked="" type="checkbox"/>	The wetland may need to utilise the surface water drainage from the site development as a freshwater input.
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	N/A	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	
Other – please specify	N/A	<input type="checkbox"/>	

Monitoring Program – Wetland Creation

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
Water Quality	Water quality monitoring, including pH, salinity, turbidity etc. Water chemistry analysis to monitor for pollutants	Salinity, pH and turbidity monitoring carried out monthly. Full water chemistry analysis once per year, additional surveys as needed or for reasonable cause.
Vegetation assemblage	UKhab and condition assessment.	Annually for first 3 years then as appropriate depending on habitat development with a minimum of 1 every 5 years.
Invertebrate assemblage	TBC Invertebrate surveys to cover dragonfly and aquatic invertebrates	Annually at an appropriate time of year.
Other associated species or habitats e.g. amphibians	Further surveys for other species to be decided based on development of the site	Ad hoc, as appropriate to wetland development

Habitat and Species Targets – Wetland Creation

Target Habitat or Species	Baseline Condition	Targeted Condition	Most recent Assessment date	Condition Assessment	Most recent Condition Assessment Comments and events	Previous 5 condition assessments
Establishment of GWDTE	None present	Present or successful translocation				
aquatic invertebrates	None present	TBC				
Water quality	N/A	Freshwater, free of pollutants.				

Notable events and assessment comment summary log

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Risk and Issues Log with Remedial Actions – Wetland Creation

Risk Identification Date	Risk	Trigger for Action	Preventative Action	Remedial Measure
September 2025	Upstream pollution event	Dieback of vegetation, change in water quality, water chemistry analysis	Good pollution controls present on site	Locate and take action at source. Restoration of wetland area.
September 2025	Translocation GWDTE fails	GWDTE in poor condition after 3 years of surveys	Select and prepare suitable area to most likely to result in successful translocation	Identify remedial actions required to improve condition of translocated GWDTE. If not possible establish similar GWDTE by appropriate planting.
September 2025	Unable to utilise drains, or drainage is not suitable for freshwater input	Identified during planning stage	N/A	Focus efforts on creating a permanent waterbody and seasonal ephemeral pools using groundwater.
September 2025	Establishment of invasive non-native species	INNS identified during surveys	N/A	Use mechanical or chemical treatment methods to remove INNS and monitor results.
September 2025	Scrub encroachment onto open wetland area	Significant number of scrub trees or gorse observed or change in UKhab surveys	N/A – this is a natural progression of the habitat	Remove scrub and ensure suitable ongoing management of wetland area.

BIODIVERSITY ENHANCEMENT – WOODLAND ENHANCEMENT

Biodiversity Enhancement Summary	
Project Name	Southern Boundary woodland
Objectives	<ul style="list-style-type: none">• Mitigate for removal of plantation area• Increase biodiversity in retained buffer
Timescales	Bullet point list of timescales for enhancement, monitoring requirements and reviews
Habitat Retained, Created, or Enhanced	Retained: woodland/plantation boundary Created: None Enhanced: woodland/plantation boundary
Species Affected	Positive: woodland species Negative: pinewood specialists
Constraints	<ul style="list-style-type: none">• Primary function is visual screening of development
Review / Updated dates	DRAFT updated 24/09/2025



Location History and baseline summary

A 20 meter visual screening buffer will be retained on the southern boundary of the plantation. The buffer primarily consists of commercial conifers with gorse scrub and heath in open areas and a small roadside pond.

Biodiversity Enhancement Actions

- Planting of native broadleaf species to initially create a shrub layer for screening purposes. This will likely include relative fast growing species e.g. Silver or Downy Birch (*Betula pendula* or *B. pubescen*) and Rowan (*Sorbus aucuparia*) as well as slower growing species e.g. Holly (*Ilex aquifolium* and Oak (*Quercus* sp.).
- Selective felling of some plantation trees may be required to increase light levels within buffer to allow planted broadleaves to develop and reach maturity and to encourage natural regeneration.
- Explore the potential of planting juniper and retaining dry heath within the buffer area
- Where appropriate plant, encourage or transplant suitable native herbaceous layer plants
- Explore opportunities for restoring or enlarging existing pond within the buffer area
- Standing deadwood creation by ringbarking selected trees for biodiversity benefits.
- Installation of artificial bird and bat boxes as appropriate or required
- As broadleaf planting develops and matures allow the plantation to move to a primarily broadleaf woodland, with retention of some mature pines to benefit specialist species.



Above: Aerial photo of part of the plantation boundary 2025

Below: approximate location of 20m woodland boundary enhancement area

Baseline and Environmental Information – Woodland Enhancement

Baseline and Environmental Information	Information Relevant to Enhancement	Constraint on design?	Additional information
Statutory / Non-statutory Designated Sites	No significant impacts are on Whiteness Head SSSI or Inner Moray Firth SPA are anticipated	<input type="checkbox"/>	
Protected and Notable Species	Red-listed and schedule 1 species are present in the plantation, opportunity to manage the retained buffer to benefit crested tit, crossbill and woodcock. Badger and Red Squirrel utilise the plantation.	<input checked="" type="checkbox"/>	Enhancements could include creating standing deadwood to benefit nesting Crested Tit, retention of some mature scots pine for Crossbills. Potential to install artificial structures for birds and mammals
Invasive Non-Native Species (INNS)	No INNS species have been identified in the plantation	<input type="checkbox"/>	
Biological Records Plan - Sites and Species	N/A	<input type="checkbox"/>	
Baseline Habitats Survey	UKHab and NVC carried out in the plantation 2024	<input type="checkbox"/>	
Public Access	No public access is anticipated	<input type="checkbox"/>	
Climate	Predicted climate change impacts may change species composition over time and increase stress on trees.	<input type="checkbox"/>	
Geology and Topography	N/A	<input type="checkbox"/>	
Agricultural Land Status	N/A	<input type="checkbox"/>	
Soils and Substrates	Existing borehole data from plantation	<input checked="" type="checkbox"/>	Existing borehole data will be consulted before finalising species for planting.
Contaminated Land	N/A	<input type="checkbox"/>	
Hydrology and Drainage	Existing roadside pond presents an opportunity for restoring or enlarging the feature.	<input type="checkbox"/>	
Flood Risk Zones	N/A	<input type="checkbox"/>	
Landscape Character and Designations	N/A	<input type="checkbox"/>	
Historic Land Use	Land used for commercial plantation	<input type="checkbox"/>	
Historic Environment and Earth Heritage	N/A	<input type="checkbox"/>	
Other – please specify	N/A	<input type="checkbox"/>	

Monitoring Program – Woodland Enhancement

Target Species or Habitat	Monitoring method	Monitoring Interval and Timing
Tree species composition and health	Appropriate walk through survey for tree health. UKHab and condition assessment	Tree health annually for 5 years, then as appropriate depending on habitat development. UKHab condition assessment once every 3 years after planting/translocation then as appropriate depending on habitat development but not less than 1 every 5 years.
Uptake of installed nesting and roosting boxes	Suitable survey carried out by appropriately qualified and licenced individual	Annually.

Habitat and Species Targets – Woodland Enhancement

Target Habitat or Species	Baseline Condition	Targeted Condition	Most recent Assessment date	Condition Assessment	Most recent Condition Assessment Comments and events	Previous 5 condition assessments
TBC						

Notable events and assessment comment summary log

Risk and Issues Log with Remedial Actions – Woodland Enhancement

Risk Identification Date	Risk	Trigger for Action	Preventative Action	Remedial Measure
September 2025	Planted trees and herbaceous plants fail to establish	Significant loss of planted trees or herbaceous plants within a 3 year period.	Ensure suitable species for soils and light conditions are selected	Establish cause of failure and remediate. Replant, where appropriate, with alternative species more likely to establish.
September 2025	Poor uptake of nest and roost boxes	Boxes are not being used after 3 years of installation	Ensure suitable boxes are selected and appropriately sited, taking into account different preferences between species.	Establish likely cause. Move boxes to alternative locations, consider removing and replacing nest boxes with alternative material and designs.

