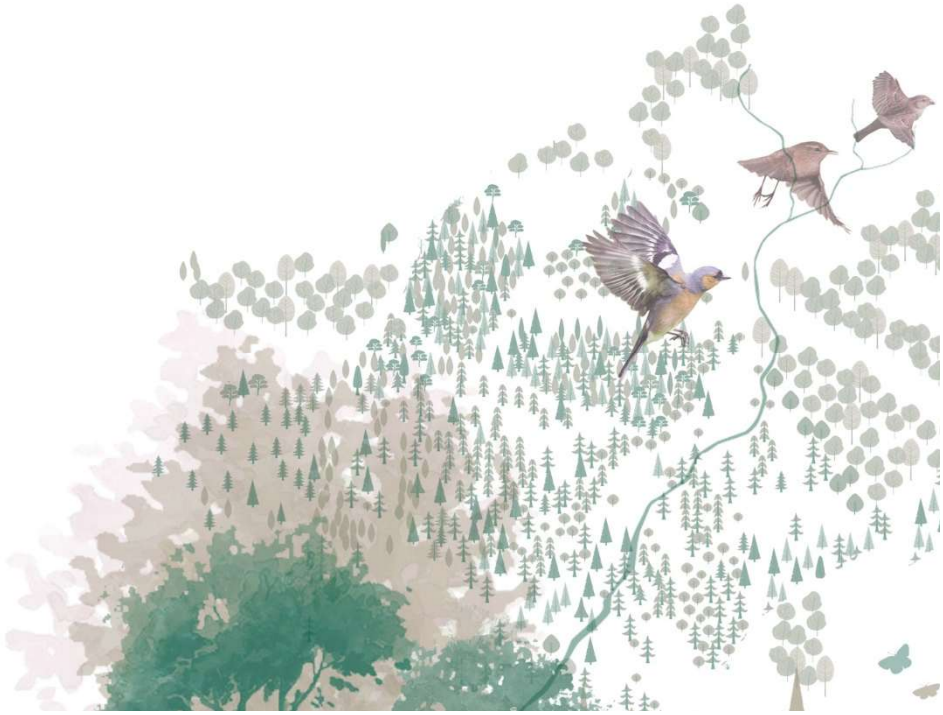


Hydro Aluminium Recycling Facility, Wrexham Industrial Estate, Wrexham

Construction Environmental Management Plan for Biodiversity

Prepared For: Pace Architecture Limited on behalf of Hydro Aluminium Deeside Ltd

Document Reference: 11549.005

February 2026

Version 1.0

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Document Title	Construction Environmental Management Plan (CEMP) for Biodiversity
Document Ref	11549.005
Version	1.0
Prepared For	Pace Architecture Limited on behalf Hydro Aluminium Deeside Limited

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Date	February 2026
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Amendment History					
Version	Date	Modified by	Check/ Approved by	Reason	Status
1.0	20/02/26	JK	LG/LG	Initial issue.	Issued.

Contents

1.0 Introduction 3
2.0 Ecological Protection Measures 7
3.0 Roles and Responsibilities..... 11

Tables

Table 1: Ecological Protection Measures Pre-Construction 7
Table 2: Ecological Protection Measures during the Construction Period 9

Appendix

Appendix A: List of Previous Technical Reports
Appendix B: CEMP Register for all Site Workers
Appendix C: Warning Signage Template

1.0 Introduction

1.1 This Construction Environmental Management Plan (CEMP) has been produced by The Environment Partnership (TEP) Limited on behalf of Pace Architecture Limited, acting for Hydro Aluminium Deeside Limited.

1.2 The site is located off Bridge Road within Wrexham Industrial Estate and comprises hardstanding, stepped earth bunds with modified grassland, plantation broadleaved woodland, small areas of scrub, and amenity grassland. Ancient semi-natural woodland lies immediately north of the site and is a Habitat of Principal Importance (HPI). A network of drainage ditches and four ponds (P1–P4) occur within 250 m of the site. These waterbodies and surrounding drains connect hydrologically to Redwither Brook and ultimately the River Dee SAC/SSSI, creating pathways for potential pollution and disturbance.

1.3 These features mean that construction activities have potential to affect sensitive receptors via:

- Disturbance;
- Sust and silt mobilisation;
- Polluted runoff;
- Lighting; and
- Removal of vegetation supporting protected species.

Ecological Summary and Key Constraints

1.4 The supporting PEA identifies the following ecological features relevant to this CEMP:

Habitats

1.5 Ancient semi-natural woodland (HPI) immediately adjacent to the northern boundary.

1.6 Plantation woodland and dense scrub within the site, providing ecological connectivity into the wider Wrexham woodland network.

1.7 Bare ground, ephemeral/perennial vegetation and bund edges that provide early-successional habitat suitable for invertebrates and reptiles.

1.8 A hydrological connection between on-site drainage and the River Dee SAC/SSSI via Redwither Brook.

Protected & Priority Fauna

1.9 Great crested newt (GCN):

- eDNA surveys were undertaken for ponds P1 and P2 only producing negative results. Results for ponds P3 and P4 are not available due to lack of access. A precautionary working method statement (PWMS) is therefore required for terrestrial habitat clearance.

1.10 Reptiles:

- Low–moderate suitability, particularly along bunds, bare ground and scrub margins.

1.11 Breeding birds:

- Nesting habitat present within scrub, hedgerow and woodland edges.

1.12 Bats:

- No roosting features identified within the site; woodland margins offer commuting and foraging habitat.

1.13 Badger:

- Suitable habitat present, though no signs were recorded. Species known to occur locally.

1.14 Otter:

- Recorded in the wider brook network; no evidence within the site itself.

1.15 Hedgehog:

- Suitable sheltering and foraging habitat within scrub, woodland and grassland.

1.16 Invertebrates:

- Dingy skipper and grizzled skipper recorded locally; early-successional habitat on bunds may support these species.

1.17 These constraints inform the species-specific PWMS and Biodiversity Protection Zones (BPZs) outlined in this document.

Roles, Responsibilities and Lines of Communication

1.18 To ensure effective ecological protection, the Client will appoint:

- Site Manager – responsible for day-to-day management of construction activities;

- Ecological Clerk of Works (ECoW) – responsible for ecological supervision, checks, advice and toolbox talks; and
- Environmental Champion - responsible for day-to-day onsite oversight of ecological and environmental compliance.

1.19 The CEMP sets out communication routes, reporting procedures for unexpected ecological finds, and escalation steps in cases of non-compliance. Toolbox talks will be delivered to all personnel prior to works commencing and repeated as necessary.

Scope of this CEMP

Biodiversity Protection Zones (BPZs)

1.20 Demarcation of ancient woodland, retained hedgerows, ponds, ditches and sensitive habitats, including:

- A woodland buffer to protect ancient semi-natural woodland (minimum buffer informed by best practice and project design);
- 6 m stand-off from top of bank of drainage ditches;
- BS5837:2012 Root Protection Areas for all retained trees;
- 4 m buffer to hedgerows; and
- Species-specific exclusion zones (e.g., appropriate buffers for active Schedule 1 bird nests).

Site pollution, dust and silt management

1.21 Including wheel wash facilities, damping down, silt fencing, fuel and chemical storage controls, and incident response procedures reflecting hydrological pathways to the River Dee SAC/SSSI.

Species-specific Precautionary Working Method Statements (PWMS)

1.22 Covering:

- Nesting birds;
- Bats (lighting controls);
- Amphibians (including GCN PWMS for terrestrial habitat clearance);
- Reptiles;
- Badger;
- Otter;

- Hedgehog; and
- Notable invertebrates including dingy and grizzled skipper.

General Wildlife Protection and Construction Practices

1.23 Including covering trenches overnight, provision of escape ramps, capping pipes, mammal-friendly site fencing, safe material storage, rodenticide restrictions, and retention of key habitat features wherever practicable.

Monitoring and Compliance

1.24 Quarterly ECoW audits, sign-off procedures for completed stages, and adaptive management where site conditions or ecological constraints change.

Status and Use of this Document

1.25 This CEMP is a live document. It will be updated:

- when design changes influence ecological risks;
- following new survey findings (e.g., if delays necessitate updated badger or otter checks); or
- if conditions on site require additional mitigation.

1.26 A copy of the current CEMP will be held in the site office at all times and provided to all personnel and subcontractors.

2.0 Ecological Protection Measures

Pre-Construction Measures

2.1 Table 1 gives the Ecological Protection Measures to be started prior to construction.

Table 1: Ecological Protection Measures Pre-Construction

Stage	Works	Methods	Timing	Person responsible	Person(s) required
1	Appointment of Ecological Advisors	The Client/Main Contractor will appoint a Project Ecologist and ECoW as required.	Prior to works	Client/Main Contractor	Client/Main Contractor
2	Ecological Toolbox Talk	ECoW delivers toolbox talks on protected species and PWMS. An Environmental Champion will be identified and agreed upon as part of this Toolbox Talk.	Prior to works	Project Ecologist/ECoW	All personnel
3	Habitat Protection	Install protective fencing for woodland and trees per BS5837:2012.	Prior to works	Main Contractor	Main Contractor with ECoW

Stage	Works	Methods	Timing	Person responsible	Person(s) required
4	Badger & Otter Pre-Commencement Check	Ecologist walkover of woodland/scrub to check for new signs; resurvey if >12 months old.	Prior to clearance	Project Ecologist	Project Ecologist/ECoW
5	Nesting Bird Check	If clearance Mar–Aug, ECoW nest check within 24h; exclusion if active nest.	Prior to veg clearance	Main Contractor	ECoW
6	Amphibian PWMS	Staged clearance and hand searches under PWMS due to suitable terrestrial habitat.	Prior to veg removal	Project Ecologist	ECoW/Contractor
7	Reptile PWMS	Pre-works reptile check; staged strimming under ECoW supervision.	Prior to veg removal	Project Ecologist	ECoW/Contractor
8	Hedgehog PWMS	Hand searches and staged clearance of scrub/woodland edge.	Prior to veg removal	Project Ecologist	ECoW
9	Invertebrate Measures	Sensitive clearance of early-successional habitat; supervised.	Prior to works	Project Ecologist	ECoW/Contractor
10	Pollution Prevention	Install silt fencing, spill kits, bunded storage, wheel wash.	Prior to construction	Main Contractor	Main Contractor/ECoW

Stage	Works	Methods	Timing	Person responsible	Person(s) required
11	Demarcation of Working Areas	Fence work zones and storage to protect retained habitats.	Prior to construction	Main Contractor	Contractor

Construction Phase

2.2 Table 2 gives details of the Ecological Protection Measures to be applied during the construction period.

Table 2: Ecological Protection Measures during the Construction Period

Works	Methods	Timing & Frequency	Person Responsible	Personnel Required
Pollution Prevention	Implement CEMP pollution controls: silt fencing, spill kits, bunded storage, wheel wash; prevent runoff to Redwither Brook and River Dee SAC; minimise dust with damping; follow RAMS.	Throughout construction	Main Contractor	All site staff; Environmental Champion
Covering Open Excavations	Cover trenches nightly or provide escape ramps at <45°; daily checks by Environmental Champion.	Daily during construction	Main Contractor	Project Ecologist/ECoW
Storage of Materials	Store materials away from retained habitats; secure chemicals per COSHH; keep materials off ground where possible.	Throughout construction	Main Contractor	Main Contractor

Works	Methods	Timing & Frequency	Person Responsible	Personnel Required
Vegetation Management	Keep vegetation short (<150mm) to deter wildlife refuge; supervised strimming where required.	Throughout construction	Main Contractor	Project Ecologist/ECoW
Lighting Controls (Bats)	Avoid unnecessary lighting; use warm/neutral spectrum; minimise spill with cowls/louvres; use motion sensors.	As required during works	Main Contractor	Main Contractor
Badger Site Inspections	Quarterly walkovers by Environmental Champion; report any signs to Project Ecologist immediately.	Quarterly	Environmental Champion	Project Ecologist/ECoW
General Wildlife Protection	All staff to remain vigilant; any wildlife encountered to be reported immediately to Project Ecologist.	Throughout construction	All site staff	All site staff

3.0 Roles and Responsibilities

Environmental Champion

3.1 An Environmental Champion will be appointed by the Main Contractor prior to the commencement of works. The Environmental Champion will act as the primary point of contact on site for all ecological and environmental matters and will work closely with the Project Ecologist and ECoW. Their role is to ensure that the requirements of this CEMP are implemented effectively throughout the construction period.

3.2 The Environmental Champion will:

- Maintain an active daily presence on site and provide oversight of activities with potential ecological or environmental risk;
- Ensure all personnel and subcontractors are aware of ecological constraints, protected species considerations, and relevant method statements;
- Communicate regularly with the Project Ecologist/ECoW to ensure appropriate supervision and advice is available when required;
- Ensure protection measures, buffers, and exclusion zones are respected and maintained;
- Monitor compliance, maintain an ecological section within the site log, and report any non-compliance or unexpected ecological issues immediately;
- Support the implementation of pollution prevention measures and rapid response to any incidents; and
- Coordinate toolbox talks and ensures new personnel receive appropriate ecological briefing.

3.3 The Environmental Champion is essential for ensuring that ecological risks are managed proactively on site and that the works remain compliant with all legislation, planning conditions, and the commitments of this CEMP.

Project Ecologist and ECoW

3.4 The Client will appoint an appropriately qualified Project Ecologist (CIEEM member) prior to the commencement of works. The Project Ecologist will provide professional ecological guidance throughout the project and will appoint an ECoW where on site ecological supervision is required.

3.5 The Project Ecologist and ECoW will:

- provide ecological advice to the Site Manager, Environmental Champion and contractors throughout the works;
- deliver toolbox talks to ensure all site personnel understand ecological sensitivities, protected species considerations, and the relevant Precautionary Working Method Statements (PWMS);
- undertake ecological checks, pre commencement surveys and watching briefs as needed in response to site activity;
- supervise key stages of vegetation clearance, excavation, lighting installation and any works with potential to affect protected or priority species;
- ensure all works proceed in accordance with current wildlife legislation, planning conditions and this CEMP;
- report any ecological non compliance immediately to the Site Manager and advise on corrective actions;
- issue stop works instructions if there is a risk of committing an offence under wildlife legislation or damaging a sensitive ecological receptor;
- maintain ecological supervision records and provide summaries to the Environmental Champion for inclusion in the site log.

3.6 The Project Ecologist and ECoW play a critical role in ensuring that construction activities proceed legally, safely, and with full regard for ecological protection requirements.

Arboriculturist

3.7 An Arboriculturist will be appointed to support the protection and management of trees and woodland features within and adjacent to the site. Their role is necessary because the development lies immediately next to ancient semi-natural woodland, a Habitat of Principal Importance, and includes plantation broadleaved woodland and retained trees that require protection in accordance with BS5837:2012. The PEA recommends the implementation of Root Protection Zones and careful avoidance of impacts on woodland areas where feasible.

3.8 The Arboriculturist will:

- Provide technical advice on the protection of retained trees, hedgerows and woodland, ensuring compliance with BS5837:2012 Trees in Relation to Design, Demolition and Construction.
- Define and verify Root Protection Areas (RPAs) and confirm the location and installation of tree protection fencing prior to site works.

- Advise on construction activities within or near RPAs, including groundworks, storage, machinery movement, or changes to levels, ensuring retained trees and woodland are not adversely affected.
- Respond to any tree safety issues that arise during construction, providing recommendations for safe and legally compliant management actions.
- Liaise with the Project Ecologist and Environmental Champion to ensure that tree protection measures align with ecological requirements and do not compromise sensitive habitats such as the adjacent ancient woodland.
- Provide input on the design and implementation of woodland buffers, where feasible, and ensure that retained trees and woodland are safeguarded from accidental damage, runoff, pollution or encroachment.
- Ensure any tree works (e.g., removal of failed trees, crown lifting, pruning) are undertaken safely, legally and in a manner that avoids impacts to protected species, coordinating with the ECoW where necessary.

3.9 The Arboriculturist plays an essential role in preventing damage to high-value woodland and tree features on or adjacent to the site and ensuring the development remains compliant with planning requirements, ecological commitments and statutory protections.

Toolbox Talks

3.10 As part of the site induction, information relating to the ecology of the site will be provided by the Environmental Champion so that all site workers are aware of the ecological receptors on site.

3.11 Task-specific toolbox talks will be provided to contractors by the ECoW if required when on site. Toolbox talks will explain the potential presence of protected species on site, implications regarding these species, required working methods and locations of any exclusion zones. Protection zones for retained trees and hedgerows will also be addressed.

General Ecological Protection Measures

3.12 These general measures apply across all construction activities at the Site. They are designed to prevent ecological harm to retained habitats, including adjacent Ancient Semi-Natural Woodland, plantation woodland, dense scrub, ephemeral/perennial vegetation, and to protect notable fauna such as amphibians, reptiles, bats, nesting birds, hedgehog, polecat, and dingy and grizzled skipper butterflies. Measures also address the site's hydrological connection to the River Dee SAC/SSSI.

Pollution Prevention & Hydrological Safeguards

3.13 Because the site drains into a brook that flows to Redwither Brook → Clywedog → River Dee SAC/SSSI, pollution controls must be implemented:

- No contaminated runoff to leave the site. Install silt fencing, straw bales, geotextile barriers or similar around exposed soils and bunds.
- Wheel wash and damping down must be used to prevent dust and sediment mobilisation, especially near bare ground/ephemeral habitats.
- Spill kits must be kept at all refuelling and chemical storage locations; all staff must know the emergency response protocol.
- All chemicals, fuels, oils must be kept in bunded, locked containers, on an impermeable surface >10 m from drains and watercourses.
- Air pollution from plant must be minimised by ensuring engines are switched off when idle.
- Concrete washout areas must be fully contained and placed away from drainage pathways.

Protection of Woodland, Trees & Sensitive Habitats

3.14 The PEA identifies adjacent Ancient Semi-Natural Woodland (HPI) to the north and plantation woodland within the site:

- No encroachment into the ancient woodland boundary or plantation woodland.
- Install protective fencing (e.g., Heras or BS5837-compliant tree protection) prior to works.
- Maintain a buffer zone between construction areas and the ancient woodland / watercourse; no storage, lighting, refuelling, or excavation within this zone.
- Prevent dust deposition on woodland edges through damping down during dry periods.
- Keep materials off the ground on pallets and away from hedgerows, woodland edges, ponds and drainage channels.

Lighting Controls

3.15 The PEA notes potential impacts on bats and other nocturnal species:

- Avoid night-time working wherever possible.
- No lighting directed towards woodland edges, scrub, hedgerows or ponds.
- Use warm spectrum (<2700K), downward-directed, low-spill luminaires.
- Motion-sensor security lighting must have short timers (≈1 min).

- Lighting used during construction (if unavoidable) must be localised, task-specific, and switched off immediately when not required.

Excavations, Structures & Hazard Prevention for Wildlife

3.16 To protect amphibians, reptiles, hedgehog, small mammals:

- All trenches and pits must be covered overnight, or provided with an escape ramp not exceeding 45°.
- Pipes must be stored capped or vertically to prevent entrapment.
- Any temporary fencing must be wildlife-permeable, except where exclusion fencing is purposely required under PWMS.
- Daily checks for trapped wildlife must be undertaken by the Environmental Champion or trained site personnel.

Vegetation Management & Habitat Safeguarding

3.17 The PEA confirms suitability of habitats for reptiles, amphibians, hedgehog, polecat, nesting birds and invertebrates (especially dingy/grizzled skipper):

- Vegetation must be kept short (<150 mm) following initial clearance to prevent recolonisation by wildlife.
- Where tall ruderal vegetation is cleared November–April, cut initially to 300 mm to protect hibernating hedgehog, under Ecologist supervision.
- No vegetation clearance during bird nesting season (March–August) unless an Ecologist confirms absence of active nests within 24 hours of works.
- All habitat clearance (scrub, earth banks, ephemeral/perennial vegetation) must follow the Precautionary Working Method Statement (PWMS) for amphibians, reptiles, hedgehog and polecat.
- Retain small areas of bare ground and early-successional habitat where consistent with design, to conserve habitat suitability for Section 7 butterflies.

Waste, Materials & Site Housekeeping

3.18 All rubbish must be contained to prevent windblown escape into woodland or drainage features.

3.19 Cement bags, plastics and packaging must be stored in covered skips.

3.20 No mixing of chemicals, fuels or concrete near habitat buffers or drainage lines.

3.21 Limit the risk of rodenticide impacts on polecat by avoiding rodenticide use whenever possible, and employing non-chemical pest control first.

General Wildlife Awareness

3.22 Toolbox talks must highlight the presence of GCN-suitable ponds (P1–P3), ancient woodland, and species recorded or likely in the area (badger, otter, bats, amphibians, reptiles, hedgehog, dingy/grizzled skipper).

3.23 Any wildlife encountered must be reported to the Project Ecologist immediately.

3.24 Stop-work procedures must be followed if protected species are found during construction.

Working Hours

3.25 No works one hour before dusk or one hour after dawn, unless unavoidable and approved by the Ecologist, with additional lighting controls.

Additional Habitat Safeguards

3.26 Retain existing plantation woodland and manage to enhance structural diversity.

3.27 Protect the balancing pond (P1) and any seepage/ditch features from disturbance, pollution and shading.

3.28 Any required buffer for ancient woodland must be respected throughout construction.

Invasive Non-Native Species (INNS) Awareness & Protection Measures

3.29 As part of the Preliminary Ecological Appraisal (PEA), a Phase 1 Habitat Survey was undertaken in April 2023 (TEP ref: 9871.002) which identified no Schedule 9 INNS within the Site. Desktop study records returned for the PEA, identified the presence of the several INNS within 2km of the Site, including Canadian waterweed, Himalayan balsam, Japanese knotweed, montbretia and water fern.

3.30 An updated INNS survey was undertaken on 28th January 2026 by Connor Tucker QCIEEM, FISC Level 3, a competent and appropriately trained individual. The weather was sunny with temperatures reaching a maximum of 7°C, accompanied by a mild breeze.

3.31 No Schedule 9 INNS were recorded within the Site during the survey. However, dog rose (Rosa canina) and Franchet's cotoneaster (Cotoneaster franchetii) were present. Neither species are listed on Schedule 9 of the WCA and therefore they are not classed as INNS.

3.32 The below measures should be adopted during all construction works:

- All site operatives receive a toolbox talk on INNS awareness and biosecurity protocols.
- Site inductions include a briefing on the importance of preventing the introduction and spread of INNS.
- Movement of vehicles, machinery, and personnel across the site should be kept to a minimum and restricted to designated access routes.
- All vehicles, machinery, and tools are visually inspected and cleaned of soil and plant debris before entering and leaving the site.
- Materials such as soil, aggregates, and plant stock are sourced from verified suppliers and stored in clean, designated areas.
- Stockpiles are kept away from watercourses, boundaries, and ecologically sensitive areas.
- Regular site inspections should be carried out by UK Engineering during the construction works to check for signs of INNS.

3.33 If INNS are identified during construction the following measures should be adopted:

- Any suspected INNS sightings should be reported immediately to the Site Manager;
- If INNS are identified, an exclusion zone will be established around the infestation and clearly marked with signage and physical barriers (see warning signage in Appendix C);
- Access to the exclusion zone will be restricted to essential personnel only;
- All personnel and equipment entering the exclusion zone must clean footwear and tools before exiting;
- Vehicles operating within the exclusion zone will be cleaned (visually free of soil and debris) before leaving; and
- Contaminated soil and plant material are handled in accordance with regulatory guidance and disposed of via licensed waste carriers.

Appendix A: List of Previous Technical Reports

Document Title	Report Reference	Version
PEA	9871.002	1.0

Appendix B: CEMP Register for all Site Workers

Date	Task	Personnel Signature

Appendix C: Warning Signage Template



Restricted Access

The soil in this area contains [name of INNS], which is invasive and is being treated. Do not enter unless authorised. Do not remove soil from this area without authorisation.

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