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Hagshaw LDES

Biodiversity Strategy

April 2025

A report by

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Report details

Site name:	Hagshaw LDES
Site address:	Land at the M74 Heat and Power Park (now known as Conexus West), west of Junction 11 of the M74, Coalburn, Lanark, ML11 0RL
Grid reference:	NS 828 326
Report date:	30th April 2025
Report author:	Colin Hicks BSc (Hons), MCIEEM
Report reference:	WOR-5247.1

Declaration of compliance

Code of Professional Conduct

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

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1. Introduction

1.1. Background

Western Ecology has been commissioned to complete a Biodiversity Strategy to align the proposed Hagshaw LDES development with Policy 3 of National Planning Framework 4 (NPF4).

Policy 3

a) Development proposals will contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats and building and strengthening nature networks and the connections between them. Proposals should also integrate nature-based solutions, where possible.

b) Development proposals for national or major development, or for development that requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention. This will include future management. To inform this, best practice assessment methods should be used. Proposals within these categories will demonstrate how they have met all of the following criteria:

i. the proposal is based on an understanding of the existing characteristics of the site and its local, regional and national ecological context prior to development, including the presence of any irreplaceable habitats;

ii. wherever feasible, nature-based solutions have been integrated and made best use of;

iii. an assessment of potential negative effects which should be fully mitigated in line with the mitigation hierarchy prior to identifying enhancements;

iv. significant biodiversity enhancements are provided, in addition to any proposed mitigation. This should include nature networks, linking to and strengthening habitat connectivity within and beyond the development, secured within a reasonable timescale and with reasonable certainty. Management arrangements for their long-term retention and monitoring should be included, wherever appropriate; and

v. local community benefits of the biodiversity and/or nature networks have been considered.

c) Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity, in accordance with national and local guidance. Measures should be proportionate to the nature and scale of development. Applications for individual householder development, or which fall within scope of (b) above, are excluded from this requirement.

d) Any potential adverse impacts, including cumulative impacts, of development proposals on biodiversity, nature networks and the natural environment will be minimised through careful planning and design. This will take into account the need to reverse biodiversity loss, safeguard the ecosystem services that the natural environment provides, and build resilience by enhancing nature networks and maximising the potential for restoration.

2. Methodology

A preliminary ecological appraisal and Ecological Impact Assessment have been completed for this site and are reported elsewhere.

A site visit was completed by Colin Hicks BSc (hons) MCIEEM on 21st February 2025 to inform this plan, and updated on 29th and 30th April 2025 by Yolanda Knight PhD, MRSB and Michael Sander, BSc (hons) to provide additional information on protected species that may not have been evident during the initial site visit.

2.1. Baseline habitats

Baseline habitat descriptions of vegetated habitats within the application boundary are provided within the EcIA and are summarised here for ease of reference:

Other lowland acid grassland (Area = 38.5ha)

Much of the assessment site comprises undulating grassland, wet in places, with areas of abundant soft rush *Juncus effusus* among grassland dominated by Wavy hairgrass *Avenella flexuosa*. Associated with these areas were locally abundant Yorkshire fog *Holcus lanatus*, marsh thistle *Cirsium palustre*, bristle bent *Agrostis curtisii*, common sorrel *Rumex acetosa*, creeping buttercup *Ranunculus repens*, heath wood-rush *Luzula multiflora* and creeping thistle *Cirsium arvense*.

Scattered, small willow *Salix* spp, alder *Alnus glutinosa* and birch *Betula* sp. were present within grassland along with scattered European gorse *Ulex europaeus*

(Small areas of lowland heath were present on dry stony ground characterised by ling *Calluna vulgaris,* bristle bent and immature gorse *Ulex europaeus.*

Areas of habitat indicative of Ground Water Dependent Terrestrial Ecosystems GWDTE) were present. However, these were fully assessed as part of a previous application at this site in "*M74 Heat and Power Park, National Vegetation Classification Survey and GWDTE Appraisal"* (see application ref: CL/17/0157) it was concluded:

> *"It is clear from the vegetation communities described for this study area and discussed in the various sections above that the habitats have been heavily influenced by anthropogenic interaction, from the former use as an opencast coal mine and current grazing livestock. Although some large relatively homogenous stands of vegetation occur across the study area most of the communities described above often form complex mosaics and transitional areas across the study area and are maintained by the current management regime. The survey results indicated the presence of potential GWDTE habitats, as summarised in Table 6-1 above. These habitats have been further assessed based on the underlying hydrogeology and historic land use, and, are not assessed as being truly groundwater dependent in this setting."*

The Site is dominated by this grassland.

The grassland is important at a Site level due to local land use types.

Other Lowland mixed deciduous woodland (Area = 0.68ha)

An area of open, immature scrubby woodland is present along a narrow, raised bank dominated by immature birch *Betula* sp, with occasional bramble, alder and willow. Ground flora was limited to grasses, including Yorkshire fog and cock's fog *Dactylis glomerata*, willowherb *Epilobium* sp. common nettle *Urica dioica* and bramble *Rubus fruticosus* agg.

This immature and scrubby habitat would qualify as a priority habitat.

The woodland is important at a Local level due to qualifying as a priority habitat.

Other standing water (Area = 0.46ha)

A pond is present in the west of the assessment site fringed by European gorse, willow and willowherb.

The pond is important at a Site level and would not qualify as a priority habitat.

Other rivers and streams (length = 1.8km)

Small watercourses in steep-sided channels drain the site with banks dominated by grasses and scattered scrub. A small area of bullrush *Typha latifolia* was present in the north of the assessment site.

The watercourses are important at a Site level and would not qualify as a priority habitat.

The remaining 6.9ha comprise developed land, bare ground and access roads within the assessment site.

2.2. Baseline species

Based on the site assessment, the following species are likely to be active here:

Species group	Assessment
Amphibians	Common amphibians, such as common toads and frogs, are likely to be present. However, there are no records for great crested newts within 32km. GCN eDNA and population studies were completed in 2015 and this included the pond within the Assessment Site (CL/15/0273). No GCN were recorded and they were scoped out in assessment in 2015 and 2017. Semi-natural habitats, such as grassland, scrub, and woodland, may provide some foraging, sheltering, and dispersing opportunities for common amphibian species.
Badgers	Occasional foraging evidence was recorded in April 2025 along with a pawprint, although habitats are suboptimal. Badger foraging activity was also recorded here during previous surveys, and it is likely that they are occasionally active here.
Bats: foraging	The habitats within the assessment would provide potential for foraging bats of open spaces, such as pipistrelle and noctule species, but lacks linear features suitable for less common species such as myotis. Bat activity surveys were completed in 2015 for the adjacent windfarm (CL/15/0273) and determined that bat activity index was low with common pipistrelle, soprano pipistrelle, brown long-eared, myotis and Nyctalus bats recorded.
Breeding birds	It is likely that common and widespread bird species nest in wooded habitats and tussocky grassland. Moorland breeding bird surveys completed as part of the adjacent wind farm in 2015 (CL/17/0477)

	identified two snipe, a curlew and a common sandpiper in the site; the latter was associated with the pond. Snipe and common sandpiper are Amber listed, and Curlew is Red listed.
Reptiles	It is possible that small numbers of common and widespread reptiles, such as slow worm, common lizard, grass snakes and adder, are present.
Otter	Although otter spraints was recorded in two locations along Poniel Water in 2016 during surveys for the M74 Heat and Power project, and a single otter spraint found along Poniel Water during the April 2025 survey, no evidence of otter was found within the redline boundary. The small watercourses within the proposed development site are unlikely to be an important foraging habitat for otter, although they could occasionally be active here, feeding on amphibians.

3. Mapping of development and associated habitats

Proposed habitats to be retained/created as part of the proposed development are shown within Landscape Proposals Plan: 1363/7 contained within Drawing Pack R001, and an interpretation of this plan is given in Map 2.

Vegetated habitats within the Assessment Site (Map 1 – Baseline habitats)

- Other lowland acid grassland = 38.5ha
- Other lowland mixed deciduous woodland = 0.68ha
- Other standing water = 0.46ha
- Other rivers and streams = 1.8km
- Currently developed land, bare ground and access roads = 6.9ha

Vegetated habitats retained within the Assessment Site (Map 2 – Proposed habitats)

- Other standing water = 0.46ha
- Other rivers and streams = 1.8km
- Currently developed land, bare ground and access roads = 6.9ha

Vegetated habitats enhanced within the Assessment Site (Map 2 – Proposed habitats)

- Other lowland acid grassland = 19.7ha

Vegetated habitats created within the Assessment Site (Map 2 – Proposed habitats)

- Other lowland mixed deciduous woodland = 3.35ha
- Attenuation pond = 0.37ha

4. Assessment of biodiversity changes

4.1. Baseline

Currently, the site comprises an area of unmanaged grassland and a small area of immature scrubby woodland, a small burn (Alder Burn) and an associated pond.

4.2. Proposed habitats

Proposed habitats to be retained/created as part of the proposed development are shown within Landscape Proposals Plan: 1363/7 contained within Drawing Pack R001, and an interpretation of this plan is given in Map 2.

Grassland

19.5ha of other lowland acid grassland will be retained around the LDES (Map 2). Birds will be able to forage for invertebrates on Site, particularly scrub nesting species. In addition, open areas will create good quality habitat for invertebrates (including bees and other pollinators), small mammals and plants, whilst semi-shaded areas will have value for soft bodied invertebrate species.

Scrub establishment and dominance by rank grasses should be avoided, and low-level, targeted grazing is recommended. This may be best achieved by native cattle breeds due to the dominance of coarser plants, such as rushes, in some areas.

This will open up the habitat and create a mosaic of good quality habitat for invertebrates (including bees and other pollinators), small mammals and plants.

Native trees and shrubs (woodland)

3.35ha of trees and shrubs will be planted around the LDES boundaries and will link into existing woodland to the west strengthening connectivity and allowing small animals to disperse around the site margins and into retained habitats of the site (Map 2).

As well as providing this linkage, these habitats will provide opportunities for invertebrates, small mammals and bird species, including nesting passerines, as they mature.

Attenuation pond

A 0.37ha water attenuation ponds will be created. These will not hold water at all times but can provide a damp habitat for marginal plants. Provided these do not affect the operation of the basin, the vegetated community should be allowed to develop naturally from any seed bank within the soil, or through windblown propagules.

In summary, the proposed development will:

- Retain biodiverse habitats where possible.
- Maintain ecological linkage for dispersal of plants and animals through the landscape along all boundaries and within the site.
- Enhance retained grassland within the site.
- Provide a significant area of additional tree plantings.
- Provide damp habitats associated with the attenuation pond.

This aligns the project with NPF4 as follows:

> *Development proposals will contribute to the enhancement of biodiversity, including where relevant, restoring degraded habitats and building and strengthening nature networks and the connections between them. Proposals should also integrate nature-based solutions, where possible.*
>
> *Development proposals for national or major development, or for development that requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention.*
>
> *Proposals for local development will include appropriate measures to conserve, restore and enhance biodiversity, in accordance with national and local guidance. Measures should be proportionate to the nature and scale of development.*
>
> *Any potential adverse impacts, including cumulative impacts, of development proposals on biodiversity, nature networks and the natural environment will be minimised through careful planning and design. This will take into account the need to reverse biodiversity loss, safeguard the ecosystem services that the natural environment provides, and build resilience by enhancing nature networks and maximising the potential for restoration.*

Should this project be permissioned, it is proposed that further details of the habitat creation, management and monitoring obligations summarised in this Report would be provided in a Biodiversity Monitoring & Management Plan to be secured by planning condition.

5. Monitoring

Monitoring is fundamental to the success of management and is required to assess biodiversity changes, identify potential issues, and provide remedial activities should targets be missed. It allows an informed assessment of any changes to be identified, when compared to baseline data and targets. This will enable the effectiveness of mitigation or compensation to be identified.

Every five years during operation, the management activities will need to be reviewed against the condition of the site, and a new five-year Management Plan produced.

Should the project be consented, it is proposed that further details of the habitat creation, management and monitoring obligations summarised in this Report would be provided in a Biodiversity Monitoring & Management Plan to be secured by planning condition. An adaptive management approach will be adopted whereby the results of monitoring feedback into the appropriate management of the Site.

An outline summary of proposed monitoring in years 1 to 5 is provided in Table 1.

Table 1. Proposed monitoring Y1-5.

Feature	**Initial monitoring**	**Subsequent monitoring**	**Comments**
Grassland in open areas - invertebrate and flora survey	Survey season immediately preceding commencement of development	Annually in year 2-5 following construction	After this initial period the need for monitoring will be assessed in consultation with LPA.
Grassland beneath platforms - invertebrate and flora survey	Survey season immediately preceding commencement of development	Annually in year 2-5 following construction	To provide an understanding of how species composition may change over time. After this initial period the need for monitoring will be assessed in consultation with LPA.
Native trees and shrubs	Survey season immediately preceding commencement of development	Annually in year 2-5 following construction	After this initial period the need for monitoring will be assessed in consultation with LPA.
Attenuation ponds	Survey season immediately preceding commencement of development	Annually in year 2-5 following construction	After this initial period the need for monitoring will be assessed in consultation with LPA.

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Legend

UKhabs habitats

- Lowland acid grassland
- Other lowland mixed deciduous woodland
- Developed land. sealed surface
- Artificial unvegetated unsealed surface
- Bare ground
- Pond
- Small watercourses

Protected species survey areas

- All species
- Red Sqirrel
- Badger
- Otter
- Pine marten

Protected species survey results

- Badger foraging scrape
- Bridge with negligible bat roost potential
- Badger footprint
- Otter spraint on rocks beside Poniel Water
- Squirrel drey

- Redline

0 100 200 m

N

Title: Map 1. Baseline habitats and protected species walkover survey 2025

Project: Hagshaw LDES

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Unit 2
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Legend

Created habitats

- Other woodland-broadleaved - 3.57ha
- Attenuation ponds

Retained Habitats

- Lowland acid grassland - 19.7ha enhanced
- Pond

- Redline

0 100 200 m

N

Title: Map 2. Proposed habitats

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