

Preliminary Ecological Assessment

Coxhoe waste tip leachate treatment plant

**Gary Shears
Ecology Section
Durham County Council
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Address: **Coxhoe waste tip site, Coxhoe, Durham.**

Surveyor: Gary Shears

Date: May 2022

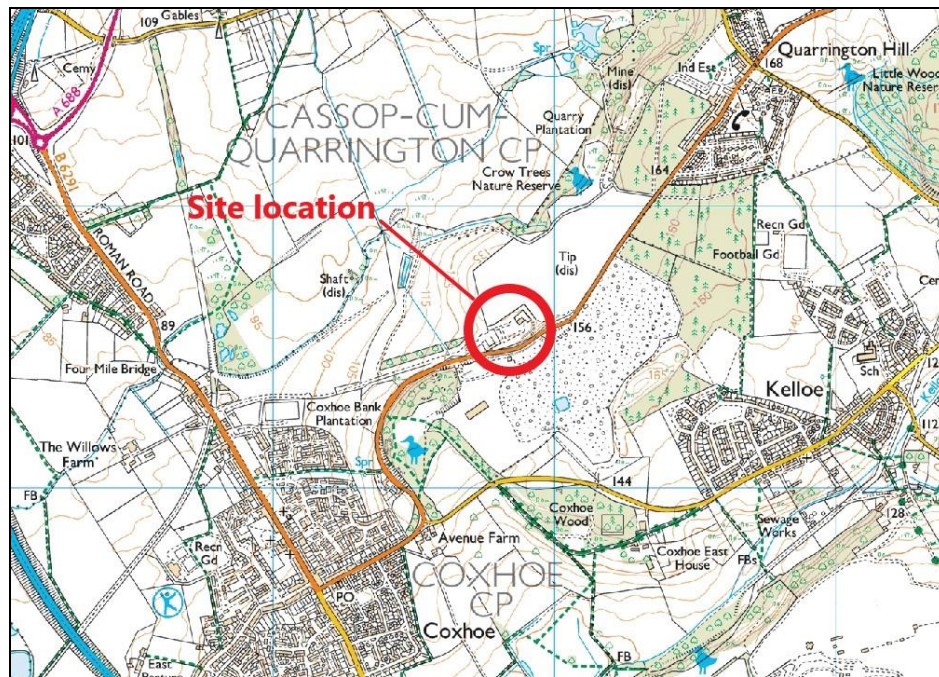


Figure 1: Location of study area

Executive summary

Durham County Council Ecology section was commissioned to undertake an ecological assessment at land at Coxhoe waste tip (figure 1 above). The assessment is required to inform the construction of a new leachate treatment unit.

The site was surveyed in May 2022 to identify priority species and habitats and determine the requirement for further survey. A data search with the Environmental Records Information Centre has been undertaken to further inform the survey.

The survey area is a broadleaved plantation, presumably planted when the former tip was landscaped after it ceased operation and comprised almost entirely of mature Hawthorn scrub with little understorey. The verges at the edge of the parcel were slightly more herb-rich with some species associated with woodland and ruderal habitats. Occasional broadleaved trees were present however they were spindly with a restricted growth habit due to the light competition.

All habitats in the surveyed site are to be removed to facilitate the development however the habitats present are very common in the locality and the removal is unlikely to have a major negative impact on species found in the area.

The proposal

It is intended to construct a waste leachate treatment plant to treat contaminated groundwater that is leaching out of the former Coxhoe East Quarry Landfill Site into watercourses and also to treat leachate collected from Joint Stocks landfill site, including the green waste composting operations.

All existing vegetation from the development site is to be removed in the winter of 2022/23 with development commencing summer 2023.

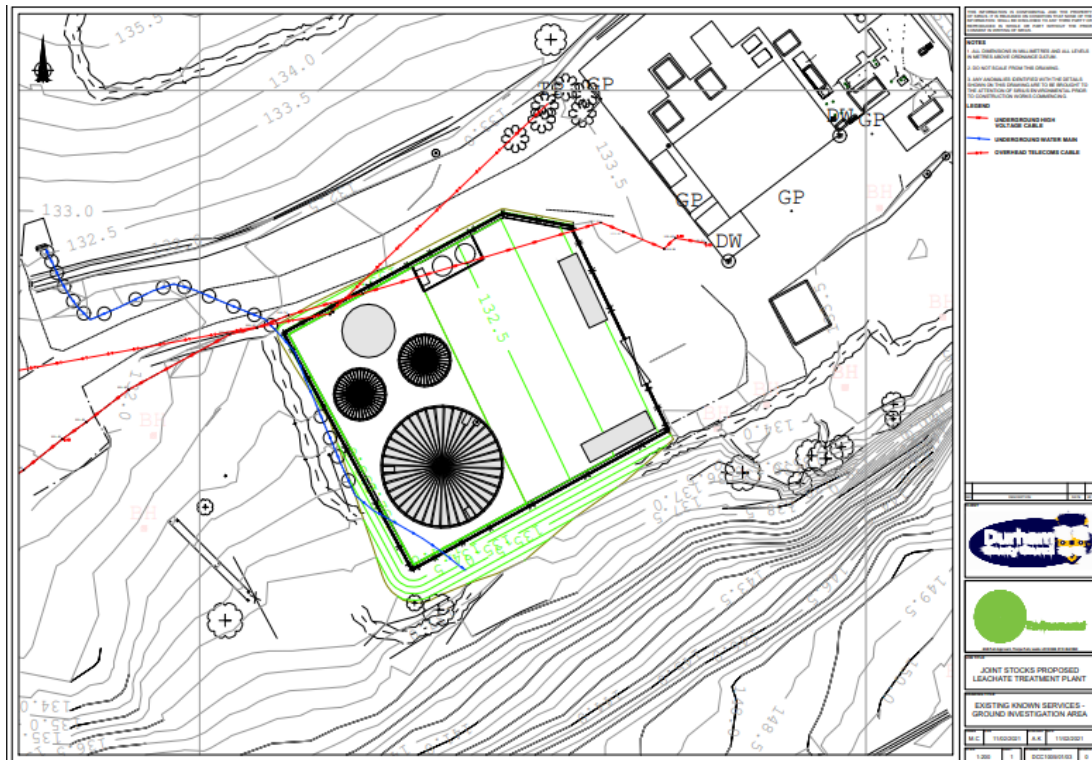


Figure 2: Draft layout plan supplied by DCC waste management

Survey area description

The survey area comprises

- dense scrub with occasional broadleaved trees
- small areas of neutral grassland with ruderals and woodland edge species.



Plate 1: The survey area

Survey methodology

Desk top survey

The Environmental Records Information Centre (North East) database and the DCC GIS was checked for bat species records in the vicinity.

Site based survey

Survey was undertaken in May 2022 and the area was checked for the potential for both protected and priority species and habitats to be on site or in the vicinity.

Habitats

The survey included all land on the site of the proposed new building and the woodland adjacent. All habitats were recorded, and a general description and condition were noted.

Access was available to all areas for the survey.

Bats

Mature trees were inspected externally for bat field signs and features bats could use. Binoculars were used to assist the survey.

Weather conditions were favourable for the survey.

Breeding birds

The potential for breeding birds to use the site was noted.

Badger

The site was surveyed for signs of badger setts and foraging.

Amphibians

The potential for amphibians to use the site was recorded. The ponds on the adjacent Crowtrees LNR site are known to contain GCN (surveys 2018).

Reptiles

The potential for reptiles to use the site was recorded.

Legislation and Species Information

Planning Policy

The government National Planning Policy Framework (NPPF) states the following:

- Plan policies and planning decisions should be based upon up-to-date information about the natural environment (Paragraph 158 and 165).
- Plan policies should promote the preservation, restoration and recreation of priority habitats, ecological networks and the recovery of priority species (Paragraph 117).
- Local planning authorities should set out a strategic approach in their Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure. (Paragraph 114).
- When determining planning applications in accordance with the Local Plan and the presumption in favour of sustainable development local planning authorities should aim to conserve and enhance biodiversity by applying a number of principles, including if significant harm resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. (Paragraph 118).
- Certain species have been identified as requiring conservation action as species of principal importance for the conservation of biodiversity in England. Local authorities should take measures to protect the habitats of these species from further decline through policies in local development documents. Planning authorities should ensure that these species are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations. Planning authorities should refuse permission where harm to the species or their habitats would result unless the need for, and benefits of, the development clearly outweigh that harm (Paragraph 14).

Bats

All British bat species are protected under the Wildlife and Countryside Act 1981 (as amended) and also The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The Act and Regulations makes it an offence to:

- Intentionally kill, injure, take (handle) or capture a bat
- Intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (this is taken to mean all bat roosts whether bats are present or not) - under the Habitats Regulations it is an offence to damage or destroy a breeding site or resting place of any bat
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection - under the Habitats Regulations it is an offence to deliberately disturb a bat (this applies anywhere, not just at its roost) in such a way as to be likely to affect its ability to survive, breed, reproduce, rear or nurture their young or hibernate.

Great Crested Newt

Great crested newts are protected under the Wildlife and Countryside Act 1981 (as amended) and also The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

Under the legislation it is an offence to:

- Intentionally or recklessly kill, injure, or capture a great crested newt
- Possess or control any live or dead specimen or anything derived from a great crested newt
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and
 - Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
- Damage or destroy a breeding site or resting place
- Sell, barter, exchange or transport or offer for sale great crested newts or parts of them

Breeding birds

All wild bird species, their eggs and nests are protected by law.

- intentionally kill, injure, or take wild birds
- intentionally take, damage, or destroy a wild bird's nest while it's being used or built
- intentionally take or destroy a wild bird's egg
- possess, control or transport live or dead wild birds, or parts of them, or their eggs
- sell wild birds or put them on display for sale
- use prohibited methods to kill or take wild birds

Survey results

Existing data

Protected and priority species records within 1km of site

Great Crested Newt	306m from site
Dingy Skipper	Several within 1km of site
Hedgehog	Several within 1km of site

Designated sites within 1km of the site

Quarrington Hill & Coxhoe bank Plantation Local Wildlife Site	adjacent site
Coxhoe Ponds Local Wildlife Site	400m from site
Quarrington Hill Grasslands Site of Special Scientific Interest	770m from site
Crowtrees Local Nature Reserve	50m from site
Coxhoe Quarry wood Local Nature Reserve	200m from site

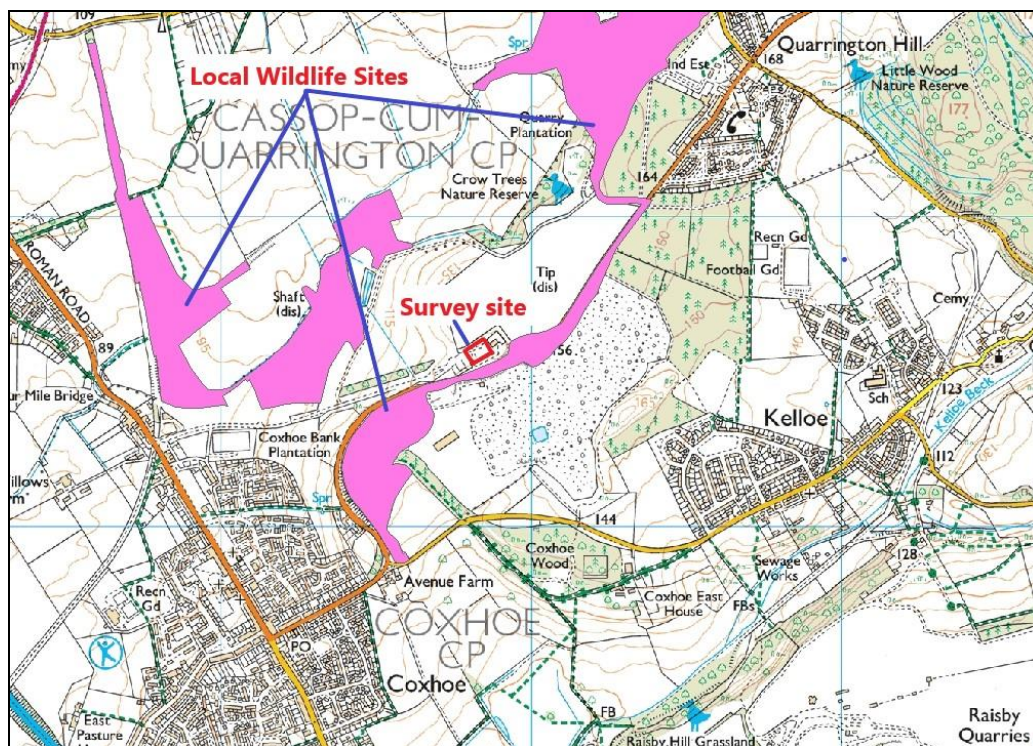


Figure 3: Local Wildlife Sites near the study site

Existing data for great crested newt

A series of small ponds are present approximately 290m from the application site within the Crowtrees LNR

Surveys were undertaken by DCC Ecologists in April, May, and June 2018. Survey methods included torch surveying and bottle trapping where appropriate.



Plate 2: great crested newt ponds near the application site

The total number of individuals for each species recorded per pond is detailed in the table below. The results confirm that a small population of great crested newts are present and using the ponds for breeding. Habitat surrounding the ponds comprises of grazed species rich pasture with woodland and other ponds a short distance away.

Species totals per pond	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6
Great crested newt	2M/2F	2 M	1M/2F	0	1F	0
Smooth newt	30M, 21F	20M, 10F	3M/4F	2M/4F	1F	4M/3F
Palmate newt	0	0	0	0	3M	0
Common frog	0	0	0	0	0	0
Common toad	0 Spawn noted	0	0	0	0	0

The image below shows the GCN ponds and the surrounding habitat and the distance from the application site.



Plate 3: GCN ponds and adjacent habitat

It is considered that the great crested newt population present in these ponds is likely to use the surrounding woodland and scrub areas for hibernation and that the risk of newts using the application site for hibernation is low. The lack of suitable amphibian hibernation opportunity in the application site further supports this conclusion.

Site survey results

Habitats

Mature scrub

Most of the survey site comprises of mature Hawthorn *Crataegus monogyna* scrub with very little understorey. Parts near the edges had been recently cut to ground level to facilitate ground investigation works and the increased light level has allowed some ruderal vegetation to grow. All of the scrub in the study area is to be lost to facilitate the development.

A very small area of neutral grassland is present on the southern edge of the survey compartment. This is likely to be lost to facilitate the development.



Plate 4 northern edge of the compartment and density of the scrub



Plate 5: dense scrub and ruderal vegetation growing in response to clearance work



Plate 6: recently cleared area for ground investigation works

Protected Species

Bats

No bat roosts or signs of bat use were found during the site survey as the mature hawthorn scrub does not contain any features that bats could use for roosting.

Bats are likely to use the edges of the scrub area for foraging however the loss of the scrub parcel is likely to be insignificant with little impact on the foraging availability in the area.

Breeding birds

The potential for breeding birds in the mature scrub areas is high therefore any clearance should be undertaken outside the main bird breeding season (late February to August).

Badger

The site does not contain any badger setts therefore the risk of negative impacts on this species as a result of the development is low.

Reptiles

The habitat within the survey site is unsuitable for reptiles therefore the risk of negative impacts on this species as a result of the development is low.

Water Vole and Otter

There are no watercourses or other waterbodies within the survey site therefore the risk of negative impacts on this species as a result of the development is low.

GCN

The survey area does not contain any habitats suitable for great crested newt breeding and the nearest ponds are around 300metres away.

The scrub present on site is mature with a closed canopy therefore there is little field or ground layer vegetation present. The ground beneath the scrub canopy is level with very little vegetative litter/detritus and opportunities for GCN hibernation are limited. It is considered that the scrub can be removed under a precautionary working methods statement during the winter months.

The construction of the waste leachate treatment plant may provide more of a risk of harming GCN through construction activities and material storage therefore a Mitigation Licence is required from Natural England.

It is considered that the project falls within the scope of the Natural England District Level Licencing Scheme for great crested newts.

District Level Licencing (DLL) is an alternative approach to licencing where a more strategic mitigation licence is granted for certain local authority or regional areas. In the north east DLL covers Northumberland, Durham, Tyne and Wear and Tees Valley. With DLL developers join the DLL scheme and pay for new habitat to be created with the sum based on the predicted impacts of their particular development.

This route to licencing offers a faster and simpler system for developers and is likely to be applicable to this proposal.

The applicant should register with Natural England and apply to join the DLL scheme. Once planning permission has been granted the application for DLL can proceed and if successful, approval to start work is given.

The link below provides information on joining the DLL scheme:

<https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes/developers-how-to-join-the-district-level-licensing-scheme-for-gcns>

Impact assessment

Designated sites within 1km of site

Quarrington Hill & Coxhoe bank Plantation Local Wildlife Site

The proposed new building is approximately 15 metres from the Quarrington Hill & Coxhoe Bank Plantation Local Wildlife Site. The development site is contained within an existing track therefore excavations for the building are unlikely to have a significant impact on the roost systems of the woodland.

If lighting is proposed on the southern edge of the building it will be low level and directed towards the building to reduce light spill into the woodland edge.

Coxhoe Ponds Local Wildlife Site

The existing waste tip sites drain towards this LWS, and the water is contaminated with leachate. The proposed scheme is expected to be of considerable benefit to the LWS as the leachate treatment plant will remove/treat these contaminants and ensure a much higher water quality input in to the wetlands.

Quarrington Hill Grasslands Site of Special Scientific Interest

No impacts are expected on this SSSI as it is x m from the development site as a result of this proposal.

Crowtrees Local Nature Reserve

This LNR contains ponds that receive water from the historic waste tip sites therefore the proposal to clean water inputs will have a significant beneficial effect on the water quality in the ponds. No impacts are expected on the grasslands within the LNR.

Coxhoe Quarry Wood Local Nature Reserve

No impacts are expected on this LNR as a result of this development.

Development in the absence of mitigation

- Negative impacts on bat foraging if lighting is installed and directed toward the woodland edge.
- Negative impacts on bat roosts in the woodland if lighting is installed and directed towards the woodland.
- Disturbance to breeding birds in the woodland adjacent the development site during the construction phase.
- The construction of the waste leachate treatment plant may provide a risk of harming GCN through construction activities and material storage.

Recommendations

- The application site should be cleared of all vegetation over the winter of 2022/23, in advance of the bird breeding season, therefore impacts on breeding birds are avoided. If clearance is delayed for any reason the scrub must be hand checked by an experienced ecologist for any active bird nests before any clearance commences.
- The mature woodland adjacent the site already suffers with noise disturbance from operations connected with the existing gas turbine plant and the publicly accessible waste recycling site. The operation of the leachate treatment plant is unlikely to have a significant disturbance effect over existing levels. It is however considered that disturbance during the construction phase is likely to be high and mitigation is proposed in the form of a sensitive lighting scheme and daytime working only to reduce noise disturbance.
- The applicant should register with Natural England and apply to join the DLL scheme and obtain the necessary licensing for this scheme.

Biodiversity Net Gain

The Biodiversity Metric 3.0 Calculation Tool is used to calculate the existing biodiversity units in the development site and assigns a score determined by each type of habitat present and its condition and 'distinctiveness' in the local area. The areas of habitat that are to be retained, created, enhanced, or lost to the development are then assessed and a score provided accordingly.

Once the baseline and post-development calculations are known the calculation tool provides a figure that determines whether biodiversity loss or gain has been achieved.

The proposed development will remove 0.22ha of mature hawthorn scrub and no habitats are to be retained or enhanced on the development site therefore, without compensation, the development would result in a loss of 2.2 biodiversity units and conflict with the National Planning Policy Framework.

It is proposed to enhance an area of land within the applicants' ownership by creating 0.4ha of native scrub planted at a wide spacing and manage it within an existing

conservation grazing management framework for the site. If this is undertaken the development will provide 0.48 habitat units and 21.72% biodiversity net gain.



Plate 7: area for biodiversity net gain habitat enhancement

It is expected that the delivery of the biodiversity net gain habitat enhancement will be secured via planning condition.

On-site baseline habitat units 0.22ha Mature hawthorn scrub:	2.2 units
On site habitats retained post development:	0
Off site baseline habitat units 0.4ha other neutral grassland:	1.6 units
Off site post intervention scrub planting and grass enhancement	4.28 units
Biodiversity net gain (+21.72%)	0.48 units

Conclusion

The proposed waste leachate treatment plant will result in the loss of 0.22ha of mature hawthorn scrub and compensatory planting is proposed in the conservation grazing area, adjacent the development, and managed by the applicant. The proposed habitat enhancement will provide 21% biodiversity net gain.

Impacts on protected and priority species are expected to be negligible providing the necessary recommendations are undertaken, and no impacts are anticipated on any statutory designated sites nearby. Impacts from lighting at the proposed waste treatment plant on the adjacent non-statutory designated site Coxhoe Bank Plantation are to be minimised through a sensitive lighting scheme.