



ELM Associates

Ecological Survey

R & EM Watson

New House Farm

Eglwys Cross, Whitchurch, Shropshire

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Environmental Land Management Associates Ltd

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Summary

- A site visit and assessment for protected species was carried out on 23rd March 2021.
- There were no limitations to the survey and the surrounding area was assessed for impact on Great Crested Newts, Water Vole, Otter, Badgers, Reptiles and Protected plants
- The area surrounding the existing lagoon, where the extension is proposed is an agriculturally improved grass field, managed by cutting and grazing and is of little ecological value.
- The proposed extension to the lagoon will enable better nutrient management by increased slurry storage thus spreading at the correct time of year.

Methodology

Species to be considered are Great Crested Newt, Water vole, Otter, Reptiles, Badgers and Plants in line with Wrexham County Borough Development Guidance and the request for an ecology report.

A desktop survey was undertaken to assess the habitat using google earth and historic records. The proposed area is on the edge of the farmyard and adjacent to the existing slurry store and dirty water lagoon. Llyn Bedydd SSSI lies 995m south of the site and a watercourse (a tributary of Emral Brook) is located 170m west of the site. There are no records of water vole, otter, reptiles or notable plants at the site and no sightings by the farmer. Badgers have been seen on the farm and are known to be present in the wider area. Great Crested Newts are assumed present in the wider area and there is one pond within 500m of the site. This is located across the road 170m east and has no direct habitat links to the site.

Site Description

The farm is within a rural area and the landscape is dominated by dairy farming with predominantly improved grass leys with arable fields of maize. The proposed location for the lagoon extension is at the edge of a grass field managed for grazing and silage. Adjacent to the existing slurry store, dirty water lagoon and track the area is a mix of compacted soil and a modified grass sward. There is a small amount of rougher grassland on the sides of the existing slurry lagoon.

Results

Grass Sward

The site has a modified sward of perennial rye grass and white clover. There is no other plant diversity, other than cleavers and nettles in the area adjacent to the dirty water lagoon. It is not a good terrestrial habitat for Great Crested Newts or reptiles with little structure or rough grass areas in which to hibernate or find refuge.

Grassland Species Present:

Perennial Rye Grass: *Lolium perenne*

White Clover: *trifolium repens*

Evidence of Site Use by Protected Species

The diversity of plant species both in the grassland and on the existing lagoon sides is poor with no notable plants present.

There is no evidence of badger activity within 30m of the site, no badger runs or latrines through the hedgerow or across the field. There are no badger sets within the field.

No Great Crested Newts were noted during the survey and the site is not adjacent to a pond or on a likely route between ponds or habitat. It is not considered a suitable refuge area.

The watercourse is located 170m from the site and will not be impacted during the lagoon construction. No construction works will be within 100m of the watercourse.

Benefits

The building of additional slurry storage is considered beneficial to the wider environment, as it enables improved management of slurry and manures through better timing of applications, thus getting more benefit from their phosphate and nitrate value. This is also in accordance with new proposed all Wales nitrate vulnerable zone legislation.

Ammonia Mitigation and Biodiversity Improvements

There is an opportunity for tree planting around the existing lagoon on the bank sides which will help with ammonia capture. Trees have been shown to reduce emissions from slurry lagoons by reducing the wind speed over its surface and can also recapture ammonia by the trees themselves through increased turbulence and deposition velocities. They can also increase the dispersion above the canopy through increased mixing thereby reducing deposition to nearby sensitive habitats.

It is proposed to plant 80 trees around the existing slurry lagoon and dirty water store which will be planted in a double staggered row 2m apart. Species mix will be: 30% silver birch, 20% scots pine, 20% goat willow, 20% wild cherry and 10% hazel.

Conclusions

The proposed development is not likely to impact on protected species. The loss of the approximately 1,500m² of modified agricultural grassland is not significant.

The location of the site in relation to the one pond within 500m and the improved grassland habitat between the site and pond means it is unlikely any Great Crested Newts using the pond will be impacted by the development. There are no corridors suitable for Great Crested newts to use to navigate towards the site. Fencing the site to exclude Great Crested Newts is not considered necessary. The following Reasonable Avoidance Measures are considered sufficient:

Reasonable Avoidance Measures:

- To discourage Great Crested Newts and other reptiles from using the site before the development the grass should be kept short by mowing or grazing. If fenced off, before the works it should not be allowed to develop into tussocky grassland which could be an attractive foraging habitat for Great Crested Newts and reptiles.
- Keep duration of groundworks as short as possible.
- Backfill trenches and other excavations before nightfall, or leave a ramp to allow newts and reptiles to easily exit.
- Raise stored materials (that might act as temporary resting places) off the ground, e.g. on pallets.

Site Plan



Photographs

Photo 1

Existing slurry store, the new store will adjoin here



Photo 2

Proposed site looking west from existing store.



Photo 3

The adjacent field consists of an improved agricultural rye grass sward.



Photo 4

Area on which the new lagoon will be constructed.

