

# **COYNE ENVIRONMENTAL**

**Queen Elizabeth School  
West Street  
Horncastle  
LN9 5DD**



## **ECOLOGICAL APPRAISAL**

**July 2023**

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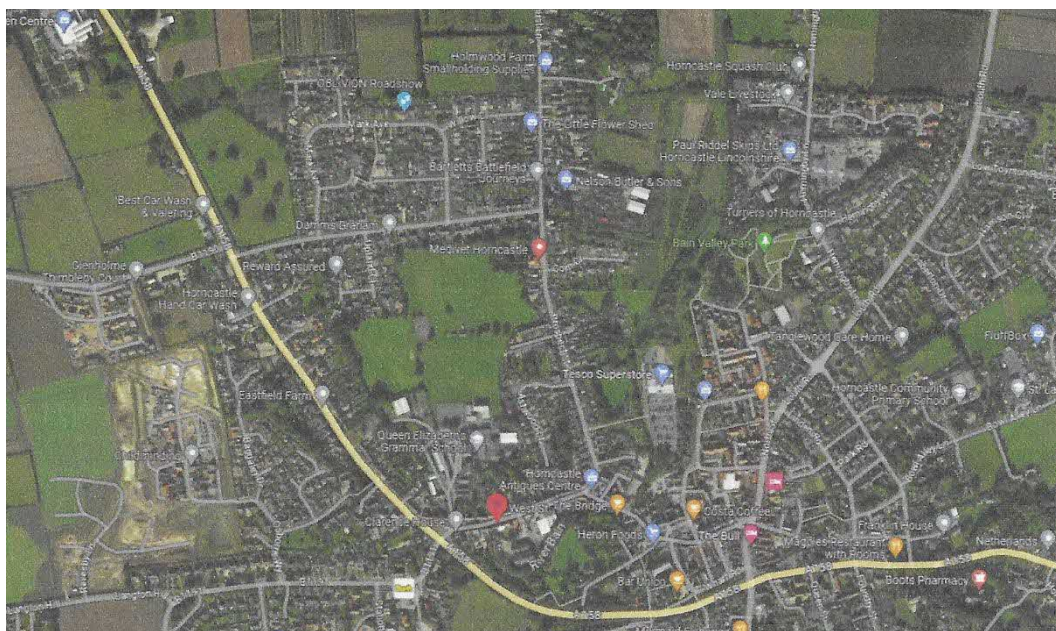
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## INTRODUCTION

Queen Elizabeth School, West Street, Horncastle, LN9 5DD has instructed Coyne Environmental with advice from Surfacing Standards Ltd. to carry out an Ecological Appraisal (EA) of the school site to establish the potential presence or absence of protected ecological features of significance. This is part of a proposal for the submission of a planning application to construct a new artificial turf pitch with flood lighting, on part of the school grounds.

It is proposed to undertake a Preliminary Ecological Appraisal (PEA) survey and report. This will also assist the local planning authority (LPA) on what environmental studies may be required when determining the application or which may be appropriately dealt with by a suitably worded condition.

From the survey and analysis of the site, it will be possible to review the proposals to ascertain what measures are needed to achieve a satisfactory result for the proposal. The PEA will enable East Lindsey District Council (ELDC) to consider the impact of the proposal on the environment. It can then discharge its legal obligations under the "Conservation of Habitats and Species Regulations (2018)" and any "Outline Mitigation and Compensation Strategy" if required.



I am a qualified Ecologist, Associate of the Institute of Ecology & Environmental Management with over 35 years' experience in the environmental field. This includes being a licence bat worker (Bat Licence 2015-15943-CLS-CLS). The PEA survey was carried out on the 27th July 2023. This was conducted in the day time, (18c) sunny conditions with light winds.

## PROPOSAL

The site is on the north side of the town, with its large sports fields forming a green lung to surrounding residential areas. There has been a school in Horncastle since 1327 and in 1571 Queen Elizabeth 1 gave it a Royal Charter. The school originally adjoined the river Bain but moved to the present site in

1908. It is a co-educational establishment which has recently gained Academy Status.

The new pitch is proposed for one of the open grass areas on the west side of the grounds. As the location of the pitch is near to adjacent housing it is proposed to create a acoustic bund on three sides of the area. This is currently mown sports turf with a number of ornamental trees around the edge of the proposed area. Along the boundary are clipped hedges, mainly hawthorn with residential gardens beyond. A disused commercial building, which is currently being demolished, is on the western boundary. This was granted planning permission for housing in 2016.

The recreation grounds currently have tarmac netball courts with adjacent changing rooms and various soccer pitches are marked on the ground, around these buildings. It is thus a sports facility with extensive grounds that would appear to be able to easily accommodate the proposal, without unduly affecting the ecology of the site.



The new flood lighting will be by a specialist lighting company who have designed similar installation and who will be submitting their own separate report. This will be designed to mitigate any unnecessary light spill and glare to adjacent areas and contain the light to the application site. Special attention will be taken to ensure the effect on wildlife, and bats in particular is minimal. Coyne Environmental will work with this specialist consultant to ensure that requirements for the sports pitch do not conflict with the safeguarding of the environment and overall biodiversity.

## **AREA DESIGNATION**

Management and protection of the biodiversity within the UK planning system is set out through European and UK legislation. The Wildlife and Countryside Act (1981) is the main protection for wildlife. There is also legislation for specific species, Protection of Badgers Act 1992, EU Habitats and Birds Directive and more general guidance, EU Biodiversity Strategy 2011-2020.

The Greater Lincolnshire Nature Partnership with the County Council, has developed a Biodiversity Action Plan (BAP) along with a Green Master Plan. These all are aimed at ensuring the environment of Lincolnshire and its wildlife is adequately protected. This study and report have also taken into account BS 42020 (2013) Biodiversity -Code of practice for planning and development.

The planning authority for the site is the East Lindsey District Council (ELDC) which has carried out a Green Infrastructure Audit. There has also been a Landscape Character Assessment (LCA) of the district and Horncastle comes within Area G3 as follows:

*“The area is underlain by Jurassic clay and overlain by marine and alluvial deposits on the bed of the Bain. There is a band of glacial till to the east, and glacial sands and gravels on either side of the river. This is a largely flat river terrace contained in part by the confluence of the Old River Bain and River Witham but with some gentle undulations. It is enclosed in many parts by woodland cover, hedgerows and mature ornamental tree avenues, as well as planting in and around the settlements.*

*The Old River Bain and the Horncastle Canal with its associated embankments meander through the area. The navigable River Witham is contained by large grassed and reinforced flood embankments and forms the south western boundary of the character area. Extraction of sand and gravel is the dominant activity around the River Bain and Horncastle Canal, where clusters of pits can be found. Some gravel pits are under excavation and others are water filled and have been restored for recreational and conservation purposes. There is a mix of medium to small scale arable and pastoral fields with hedgerows throughout which remain between settlements and other land uses. There is also a scattering of small holdings and pony paddocks”*

There are no National Nature Reserves (NNR), RAMS, SSSI sites, or local nature reserves (LNR) in the search area. This is not in a Conservation Area (CA) and there are no Tree Preservation Orders (TPO) on the trees being studied. This is thus a relatively small urban area within a county whose main employment is in agriculture, where large fields with few hedges or woodlands, is the norm.

## **CONDITION**

A full Phase 1 Habitat Survey was not deemed necessary as this is a site with few natural features. However, if the survey identifies any wildlife of significance, measures will be taken as set out in the JNCC guidance Handbook for Phase 1 Habitat Surveys (2010) and CIEEM Guidelines (2017). The application site is a historic secondary school within a large recreation area maintained to a high amenity standard with mainly ornamental planting.

There appear to be no remnants of original vegetation in the form of native hedges and mature hedgerow trees. The current boundary hedges are mainly hawthorn (*Crataegus monogyna*), maintained to keep them tidy, particularly along the back gardens of the residential areas. Most of the trees are ornamental maples (*Acer spp.*) with a group of Scots pine (*Pinus sylvestris*), in the NE corner. This is also the one area where the grass has been left and a few ephemeral weeds including Sheep's Sorrel (*Rumex acetosella*) and Chickweed (*Stellaria media*) are present.

On the western side of the grounds is a commercial building which is currently being demolished, with areas of building materials scattered across the grounds. This could be a potential area for wildlife and small mammals (voles, shrews) and reptiles (lizards, newts) to use as refugia and even hibernacula.

The boundary fence of open metal mesh, could also easily be used for wildlife to pass from one habitat to another.

The general grounds of the school are all amenity grass, mown to a standard sports turf and used as playing pitches and a setting for the school buildings. There appeared to be few areas of rough grass or left-over corners, so that there are virtually no opportunities for wildlife to take advantage of the grounds.



Bats, being European Protected Species (EPS) will probably inhabit the area but as none of the buildings will be affected by these proposals, the survey does not need to specifically inspect these. The boundary trees were also inspected for any suitable holes (woodpecker) or cracks in the bark, that bats could use for roosting, but no evidence was found (scratch marks, urine stains). However, the proposal does include the installation of flood lighting and bats may be disturbed at night.

The site is thus a typical urban landscape with few natural features and of minimal biodiversity value. Therefore, its wildlife value may not be of importance for species such as bats but which could use the site for foraging for food and commuting to adjacent habitats.

## **ECOLOGICAL ASSESSMENT**

Queen Elizabeth School is a typical educational establishment where the ecological value of the grounds and sports fields particularly, does not generally appear to have a high ecological value. The vegetation on site is mainly a limited number of mature non-native tree species, adjacent to the boundary hedge. On inspection no nests or nest building was found and the only birds that were noted, on site were a blackbird (*Turdus merula*) and a flock of pigeon (*Columba livia*). Using the British Trust for Ornithology (BTO) guidelines, the site has a low value for avifauna.

The site condition assessment has shown that the recreational grounds due to its use and management has only limited ecological value. Most of the area is close mown amenity turf maintained for sports activities. It is only at the edges, and the NE corner, in particular, that there is any ecology of value. Here a few native species occur (*Crepis capillaris*, *Carduus nutans*), none of great value for nectar seeking bees, butterflies and other invertebrates.

No evidence of rabbits, deer (droppings) was found on site or runs that red fox [REDACTED] may use. No excavations along the hedge lines of possible

██████████ or smaller holes that smaller species (voles) could inhabit, was found.

Wildlife could probably pass through the wire mesh of the site being demolished. However, the location for the proposed new pitch is near the centre of the grounds so that this should not disturb any animals using the site. Large open spaces are generally avoided as wildlife would not feel secure to venture in such territory.

There is no water near to the proposed site so the potential for protected Great Crested Newts (EPS) being in this location is unlikely. Using the Great Crested Newt (GCN) Suitability Index the site would score negative. The managed nature of the site also precluded reptiles such as grass snakes, slow worms and common lizards from using the playing fields for foraging /refugia (sheltering sites).

Extensive native flora is absent in this well-managed landscape and even the boundary hedge has little vegetation along the base. Thus, this urban habitat offers few opportunities for pioneer species to allow insects such as bees and butterflies to find food and shelter or refuges for small mammals (hedgehogs).

## **ANALYSIS**

From the above ecological evaluation, it can be seen that the proposed site has minimal ecological value. There is no area of importance for wildlife but the flood lighting could have an impact on sensitive species, in particular bats, as dusk is when they start to forage and this needs to be taken into account. However, the design of the lighting to contain the maximum reflection within the new pitch and the relatively small area that this facility occupies in relation to the larger size of the overall grounds, enables the bats to avoid this area. Bats can adapt to changes in light levels and will probably avoid this area when emerging to forage, if the floodlighting is in use at that time.

Birds also probably use the school grounds. The scheme does not directly affect the boundary trees but the construction of the proposed acoustic bund could affect the roots of these. An Arboricultural Impact Assessment (AIA) including a Root Protection Assessment (RPA) should therefore be undertaken, before any work is started on site. Any necessary fencing (Heras or similar) should be erected and maintained, in good order, until the works are complete. Work should be avoided, near the trees, in the breeding season (March-August), if the installation is proposed to take place over this period.

It has been established no wildfire are probably currently using the school grounds. Therefore, the proposal will have no effect on overall biodiversity. However as the work is close to the adjacent proposed housing site, wildlife may move between these areas towards other habitats. On the precautionary principle it is proposed that the following Precautionary Working Method Statement (PWMS) should be followed to ensure wildlife is not affected by the construction works.

## **PRELIMINARY WORKING METHOD STATEMENT**

The following works are recommended to be undertaken to ensure the existing ecology and possible wildlife of the site is managed to conserve as much as practical:

- 1 An AIA with root protection assessment (RPA) must have been undertaken and approved before any works take place.
- 2 During the clearance and construction, the trees should be protected in accordance with BS 5837(2012) Trees in Relation to Construction and the necessary protective fencing should only be removed upon completion
- 3 Trees and hedges may be used by birds as possible nesting sites. No work to the existing vegetation should be undertaken in the bird breeding season (Mar-Aug) and particularly important for House Sparrows (*Passer domesticus*) which are in steep decline (Red Listed).
- 4 If this is necessary to carry out urgent work, the vegetation should be inspected to see if nest sites are present and active. If this is the case the ecologist should be contacted for advice.
- 5 When carrying out clearance and removal of the materials from the site care should also be taken to ensure small mammals, like hedgehogs (*Erinaceus europaeus*) are not present in the materials, particularly the wood stacks. It is also important to ensure that if clearance does involve wood fires and that these are inspected to ensure animals like hedgehogs have not temporarily taken refuge here.
- 6 Although the likelihood of wildlife being present on this site is assumed to be negligible, as a precautionary measure, works to prepare the land should be timed to minimise the potential impact on possible wildlife.
- 7 Any necessary vegetation clearance should ideally be removed in winter (Dec-Feb) to initially within 20cm of ground level to ensure that any possible foraging / migrating between areas are not affected.
- 8 Ground level vegetation clearance can be undertaken during the spring/summer (mid Mar-mid Jun) when activity is more dispersed. This approach can be relaxed if no wildlife has been detected on site.
- 9 The majority of the area comprise grassland which will require some clearance for construction. Vegetation clearance and soil stripping works should progress in a systematic method working towards the site boundaries. This will encourage any potential reptiles / animals present to disperse to the surrounding gardens /green areas beyond the site
- 10 Soil stripping should ideally be undertaken during the active season, between March to October and in suitable weather conditions.
- 11 Given that wildlife is potentially likely to visit the site, simple precautions will be sufficient to ensure that they do not exploit more attractive or useful habitats created during the works by keeping the site tidy and storing materials off the ground. Any soils stacking should be smoothed to prevent potential cavities and covered in tarpaulin.
- 12 If in the unlikely event that animals are again found on site, they should be left to disperse of their own accord. Any that need assistance should be gently placed in a clean bucket and moved on to a safe location away from the development

## **BIODIVERSITY NET GAIN**

The Environment Act 2021 will have a mandatory require for Biodiversity Net Gain (BNG) on developments of a minimum of 10% from November 2023. Within this scheme it is recommended that the area between the boundary fence and the proposed bund could be planting to give both additional screening to adjacent residents (including the future housing site) as well as for wildlife enhancement and increased biodiversity.

It is recommended that a landscape scheme with wild flower seeding be considered as part of the reserved matters of the planning application. If there is an additional requirement for BNG the landscape scheme can form part of any mitigation or enhancement required to meet the statutory net gain.

## **CONCLUSION**

Queen Elizabeth School, West Street, Horncastle, LN9 5DD has instructed Coyne Environmental to carry out an Ecological Appraisal (EA) of the school site to establish the potential presence or absence of protected ecological features of significance. This is in preparation of a planning application. The site survey and subsequent desk top study of the surrounding areas indicates that the application site is not in an area of high risk for any specific species or sensitive habitats. The only area of concern is for bats and the design and location of the facility demonstrate that this should have minimal effect on this EPS species.

As the proposal includes an acoustic bund, a PWMS is proposed to ensure any wildlife present is not affected by the proposal. It is also recommended that when the application is lodged a landscape scheme of native wildflowers is considered. This would provide both amenity and wildlife benefit. There would also appear to be little probability of disturbing birds and no likelihood of encountering species like GCN, slow worms and other reptiles, as well as mammals.

Therefore, in my professional opinion I assess that the proposal for a new playing pitch with flood lighting will have minimal impact on the overall ecology of the area. I conclude that no further environmental studies are necessary to satisfy the requirement for ecological assessments and that the proposal can be submitted on this basis.

## **REFERENCES**

Lincolnshire BAP

East Lindsey Landscape Character Report

Bat Conservation Handbook

Bats and Artificial Lighting in the UK

BTO Guidelines



# Queen Elizabeth Grammar School

Creation of an AGP



**S&C SLATTER**  
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 TEL: 01703 533444  
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- Acoustic Wall Facing Area
  - Acoustic & Hard Standing Areas
  - 4.5m High Fence Line
  - 1.2m High Fence Line
- Notes:  
 Lines indicating to accommodate:  
 N1C: 11V 11.9.1525m (N/H)  
 N1C: 24V 23.625m (N/H)  
 N1C: 24V 23.625m (N/H)  
 N1C: 36V 37.525.320V (N/H)
- \*Standard sheet coordinates are to be accommodated by P1 control only



**S&C SLATTER**  
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ME  
 Queen Elizabeth Grammar School  
 Outline of a new  
 Consultation Plan  
 Date: 2014  
 No: 1501  
 Rev: 01