

# Auckley Ecology & Biodiversity

New Development & Planning Permission

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## Introduction

The ecology and biodiversity in Auckley are predominantly settled and have been undisturbed for decades or longer; evolution of ecosystems has followed, and continues to follow, natural paths and adaptation to changing environments and climate change. Areas which have previously served as industrial and commercial grounds are reclaimed by nature and have established carbon stores, food webs and biodiversity [NB historical aerial photography is available to purchase, new aerial photography should be considered]. Legislative changes in agriculture has seen an increase in raptors in the area over the last 30 years and the presence of apex predators including raptors, snakes and badgers demonstrates a settled and complex food web and ecosystem with good vegetative and invertebrate biodiversity [NB DMBC Biological data search suggested]. The ecology and biodiversity in Auckley centre around the River Torne and other historic water bodies as a water source, and as water levels rise (Figure 1) as a result of climate change and an increase in hard-standing development, fallow land has begun to re-establish seasonal and permanent standing water bodies which not only provide diverse habitats but also form part of the natural flood defence and are a valuable carbon store. This evolution is a partial reversion to original topography, the area being reclaimed wetlands drained by Vermuyden technology in the early 17<sup>th</sup> Century (The Editors of Encyclopaedia Britannica, 2020). These drainage ditches and dikes are of historical import and serve to manage water levels and the local ecology has evolved to be suited to this environment for around 400 years. Auckley has areas of established historical hedgerow environments as well as historic ditches & dikes, grassland, shrubland and woodland of varying degrees of management which support indigenous avian, mammalian and reptilian species themselves dependent on a biodiversity of vegetation and invertebrate life.

## Current Practice

Recent planning applications have been based in whole, or in part, on desk studies with regards to ecology and geology and have utilised Google Earth (or similar) dated aerial images to demark potential ecology and habitat. These are not an appropriate means to assess the current status of habitat or land. Geological changes have been historically key in the area with quarrying of sand and gravel having been prevalent; only site exploration and soil core sampling can identify the geological (and contamination) status of a site. A planning application indicating gravel and sand is still present on a site quarried years ago has not considered the geology of the area sufficiently and therefore any flood risk assessment is void and planned construction practices may be inappropriate. Publicly available aerial photography, such as Google Maps, are out-dated. For example, the Whitmoore Drive estate is still shown as arable agricultural land, New College a sports field for Hayfield School and The Yorkshire Wildlife Park footprint is much smaller than current reality (

Figure 2). Furthermore, the use of read-across to historical organism and land surveys provides inaccurate information and care should be taken to scrutinise restrictions to recent surveys (such as a lack of water-side survey for water voles). Current analytical techniques to identify land contamination should be utilised; the sensitivity of analytical techniques has improved exponentially over the last 30 years (advent of inductively coupled plasma, mass spectrometry and gel permeation chromatography, for example). A Weight-of-Evidence approach (based on historic data) is therefore not appropriate for ecological and biodiversity impact assessment as the level of protection is unproven and more often than not a cautionary approach is not taken. Land contamination should be adequately addressed for each site given the historic use of organophosphates, PBT's, hydrocarbons and quarry-associated chemical processes. Many village sites are suitable habitat for protected species and each site should be surveyed seasonally, thoroughly (without restriction or constraint) and in a timely manner prior to planning permission application; the presence of protected species and habitats should be a driving consideration in development, not an after-thought.

## Relevant Data

### Doncaster Council Biological Data Search

Doncaster Council have a biological reporting system where reports of species are logged. Although a service which incurs a charge, data can be requested (e.g. Full species search in 2 km buffer, £208.33). Data is provided from a variety of sources including members of the public, natural history groups, recording societies and ecological consultancies. In addition to this, Doncaster Council undertakes a rolling survey and assessment of Local Wildlife Sites to ensure that the information held for these wildlife hotspots is current, comprehensive and accurate. Since 2008 over 50% of Local Sites have been surveyed by suitably qualified surveyors.

Records can be submitted by members of the public and are welcomed and encouraged by Helen Markham, Doncaster Council Ecologist. Residents of Auckley should be encouraged to submit recordings of species to ensure that an accurate record of biodiversity in the village is held:

<https://www.doncaster.gov.uk/services/planning/submitting-biological-records>

### The Environment Agency

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### Other Records

Records of relevance may also be acquired from;

- South Yorkshire Badger Group
- South Yorkshire Bat Group
- Doncaster Naturalists' Society
- Yorkshire Naturalists' Union
- Biological Records Centre (BRC)
- National Biodiversity Network (NBN)
- British Trust of Ornithology (BTO)
- Royal Society for the Protection of Birds (RSPB)
- Natural England
- Yorkshire Wildlife Trust (YWT)

## Aerial photography

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## Habitats & Environment

### Hedgerows

Whether hedgerows are protected or not (The Hedgerows Regulations, 1997), they provide habitat for many species. There are many provisions for the protection of hedgerows which should be fully investigated prior to planning permission being granted where a hedgerow exists.

Pertaining to ecology and biodiversity specifically, hedgerows are protected if;

- contains protected species (The Wildlife and Countryside Act, 1981)
- contains species that are endangered, vulnerable and rare and identified in the British Red Data books
- includes woody species and associated features as specified in Schedule 1, Part II Criteria, paragraph 7(1) of the Hedgerow Regulations - the number of woody species needed to meet the criteria is one less in northern counties

As the presence of badgers (protected), hedgehogs (endangered) and grass snakes (protected) in Auckley is known, a thorough biological survey (including vegetation and invertebrates) should be undertaken by suitably qualified independent experts and cover all relevant seasons; the assessment of the outcome of which should be a condition of planning application approval (considering the requirement for 10% net gain of biodiversity stated in the NPPF (Ministry of Housing Communities & Local Government, 2019).

### Woodland & Shrubland

The geology of the area, particularly previously quarried ground, often results in stunted growth of mature trees owing to lower nutrient value in the topsoil. Since tree protection, and woodland / shrubland protection can be applied at least in part by age, the size of the tree cannot be taken as an indication of age in this locality. Thus, alternative techniques must be utilised when assessing any tree, woodland or shrubland. Surveys which make conclusions on tree age based on height / size alone are not appropriate for this locality. Owing to poor nutrient and seasonal changes in the water table, trees in the locality have the potential to have far-reaching roots. This should be particularly considered where a tree, shrubland or woodland have been considered to be protected either in any case or as part of a specific planning permission since direct impact should be assessed for:

- damaging or destroying all or part of them (including their soils, ground flora or fungi)
- damaging roots and understorey (all the vegetation under the taller trees)
- damaging or compacting soil around the tree roots
- polluting the ground around them
- changing the water table or drainage of woodland or individual trees

Where a buffer zone is proposed in mitigation, guidance is that the buffer zone around tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. Thought should be given to the age of the tree and likely root system footprint and consideration to extending the recommended buffer zone scope since the visible tree may be smaller than its root system in this locality.

## Water

River

Xxx

Standing water & wetlands

Xxx

Ditches and Dikes

Xxx

## Grassland

Xxx

## Greenbelt

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## Mosaic habitat

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## Protected Species

### Wildlife and Countryside Act 1981

Section 9(1) of the Act (The Wildlife and Countryside Act, 1981) prohibits the killing, injuring or taking by any method of those wild mammals listed on Schedule 5 of the Act. Section 9(4)(a) prohibits the damage, destruction, or obstruction of access to any structure or place which any wild mammal listed on Schedule 5 uses for shelter or protection, and Section 9(4)(b) prohibits the disturbance of any such mammal while it is occupying a structure or place which it uses for that purpose.

As no recent and truly independent and thorough studies or surveys have been undertaken, it is entirely appropriate to survey each proposed site (and surrounding area) for the presence of protected species. The following protected species are known, or suspected to inhabit the locality or adjacent lands:

<i>Arvicola terrestris</i>	Water vole
<i>Lutra lutra</i>	Otter
<i>Vespertilionidae &amp; Rhinolophidae</i>	All bats
<i>Anguis fragilis</i>	Slow worm
<i>Natrix natrix</i>	Grass snake
<i>Vipera berus</i>	Adder
<i>Triturus cristatus</i>	Greater crested newt

Further protected species which may be present (not limited to):

<i>Graphoderus zonatus</i>	Water beetle
<i>Paracymus aeneus</i>	Water beetle

Various *lepidoptera* and other invertebrates.

Avoidance of development in the habitat of these protected species should be the first requirement. Mitigation should be thorough and complete and impose zero impact on the protected species.

### [Natural Environment and Rural Communities Act 2006](#)

Whilst hedgehogs are not protected under Schedule 5 of the Act (The Wildlife and Countryside Act, 1981), they are listed on schedule 6 of the which makes it illegal to kill or capture wild hedgehogs. They are also listed under the Wild Mammals Protection Act (Wild Mammals (Protection) Act, 1996), which prohibits cruel treatment of hedgehogs and are a species of 'principal importance' under NERC (Natural Environment and Rural Communities Act, 2006) , which is meant to confer a 'duty of responsibility' to public bodies. With the hedgehog population in steep decline and public opinion moving toward their inclusion in Schedule 5 of the Wildlife and Countryside Act, it would be prudent to consider the hedgehog as if it were protected as such, in order for the public body (DMBC, Auckley Parish Council) to uphold their duty of care under the NERC Act.

### [Protection of Badgers Act 1992](#)

Since badger setts are known to exist in the locality, including on land with current pending permission sought for development, it is appropriate to consider the Act (Protection of Badgers Act, 1992).

it is an offence to:

- Wilfully kill, injure or take a badger (or attempt to do so).
- Cruelly ill-treat a badger.
- Dig for a badger.
- Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it.
- Cause a dog to enter a badger sett.
- Disturb a badger when it is occupying a sett.

Whilst licences to undertake some actions can be issued if it is justified, for example where a badger sett is found on a proposed site for a road, it is imperative that Natural England (licence granter in England) be consulted and a full risk assessment be undertaken. The preference would be to leave the land undeveloped since Badgers are protected.

### [Doncaster Local Plan 2015 – 2035 \(Publication version June 2019\)](#)

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### [National Planning Policy Framework \(February 2019\)](#)

The National Planning Policy Framework (NPPF) protects the seasonal and permanent standing water bodies and historical drains and ditches in that they provide flood mitigation, improve biodiversity and minimise greenhouse gas emissions through their role as carbon stores (para 148, 149). Furthermore, core strategy 15 serves to preserve and enhance areas of diverse ecology and requires robust ecological and land contamination surveys (remediation at cost to the developer). Paragraph 170 stipulates that net gain for biodiversity should be achieved.

### [Environment Bill \(pending\)](#)

The Environment Bill (as current), Schedule 15 introduces the requirement for a biodiversity net gain to be a general condition of planning permission approval. Thus, the pre-development biodiversity value of the site should be considered against the proposed post-development biodiversity value of the site. Off-site biodiversity gain can be used to offset net-loss of a development, so vigilance is

required to ensure off-site development to improve net gain are fulfilled accordingly, where relevant. Net-gain for biodiversity may also be purchased so a stipulation that biodiversity net gain should be within the Parish boundaries and agreed with the Parish Council is suggested, whether the off-set net gain is off-site or purchased.

The net gain percentage requirement is 10% though this is a minimum and thought should be given to the possibility of increasing this on a Parish level, if possible. The protection that the Bill affords in that pre-development biodiversity levels are legally set to October 2019 (unless agreed otherwise by the planning department and developers) may be of detriment to Auckley’s biodiversity in that many proposed development sites are privately owned, have restricted public access and the quality of existing survey data is unknown. Thus, if possible, a locally driven stipulation should be considered following acquisition of data from DMBC (Biological data search) and perhaps a new local baseline survey.

*“Some experts had worried that some landowners could be tempted to reduce the biodiversity value of their land prior to the implementation of the net gain policy, making it easier to achieve a 10% target, but the new bill has effectively ruled that out by setting a date of 15 October 2019 as the baseline from which the value of biodiversity will be applied, unless otherwise agreed between the developer and local planning authority.” (Agyepong-Parsons, 2019)*

## Biodiversity Metric 2.0

The Biodiversity Metric 2.0 (The Biodiversity Metric 2.0, 2019) provides a way of measuring and accounting for biodiversity losses and gains resulting from development or land management change. Biodiversity Metric 2.0 updates and replaces the original Defra biodiversity metric. Biodiversity Metric 2.0 has been developed with input from a wide range of environmental NGOs, developers, land managers, Government agencies and other interested parties.

The full report for each planning application, showing current status (including data entry) and the proposed enhancement should be made available for scrutiny and it will be vital to establish that recently acquired, accurate and objective data has been used for the calculation tool (constraints owing to the Environmental Bill are relevant here).

## Recent Cases

Recent developments have impacted negatively on the ecology and biodiversity of the village of Auckley. Developments have started prior to planning permission approval, habitats have been destroyed in contravention to CEMP’s and planning applications continue to be submitted with incomplete or inadequate ecological assessments. Planning approvals should be granted only where robust ecological impact assessments have been made and evaluated, planning applications should only be considered where a robust ecological report has been submitted and detrimental impact to ecology at the hands of developers should incur consequences, particularly in contravention to the law, to deter future detriment to the environment.

## Contravention to Wildlife and Countryside Act 1981

Developer / Applicant	Yorkshire Wildlife Park
Activity	Destruction of reptile / wet grassland habitat in a restricted season prior to planning application approval being sought and prior to release by a qualified ecologist
Date	July 2019

Reference	19/00486/FUL
Mitigation	Under the consideration of DMBC

### Incomplete Ecology Survey

Developer / Applicant	HTC Wolffkran Ltd
Activity	Submission of inadequate ecology report
Date	Application received 26 November 2019
Reference	19/02884/FULM
Mitigation	Ongoing application. DMBC Ecologist objects on these grounds and cites the following species to be of significance: Bats Reptiles Mature trees (avian roosting) Greater crested newts

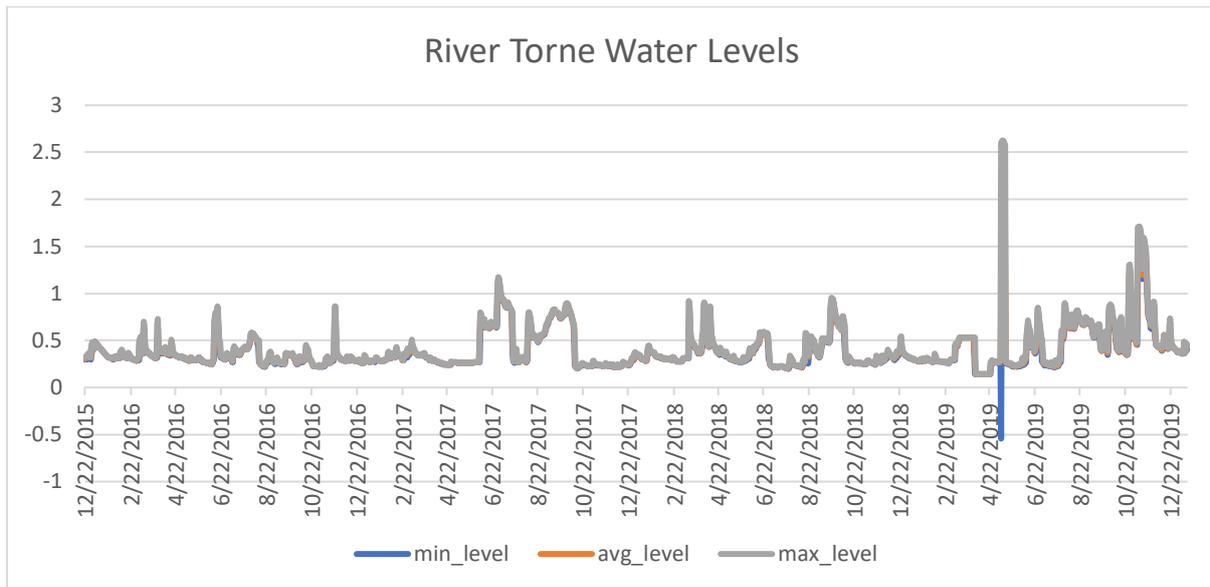
### Environmental Pollution

Developer / Applicant	Yorkshire Wildlife Park
Activity	Run-off of exposed topsoil into historic and biodiverse ditches and over road surface due to changed topography and failure to protect topsoil against advice of engineers
Reference	October 2019
Mitigation	19/00486/FUL
	Under the consideration of DMBC

## References

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Figure 1: River Torne Water Levels 2015- 2020

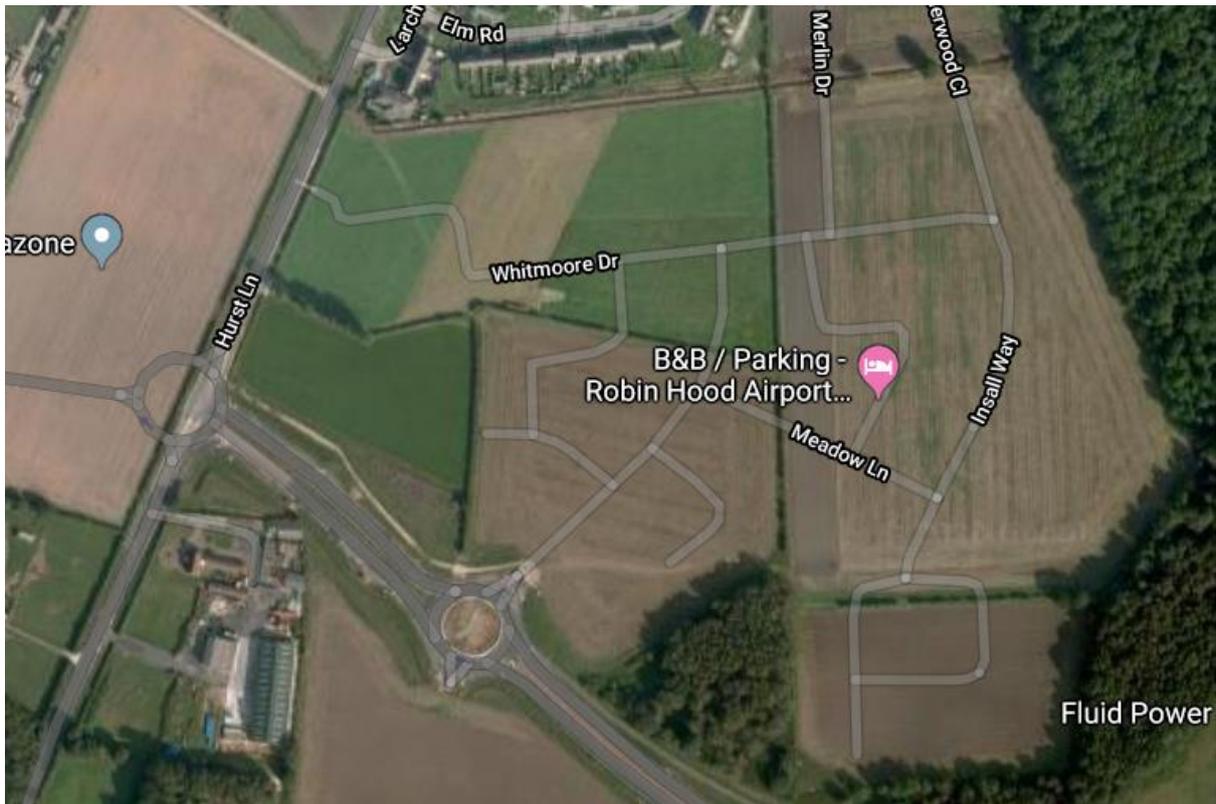


River Levels UK (<https://riverlevels.uk/south-yorkshire-auckley-auckley-lvl#.XjKv8G52s6Y>)

Data source: The Environment Agency

Figure 2: Google maps

Whitmoore Drive



New College



# Yorkshire Wildlife Park



Data Source: Google maps