OTTER AND WATER VOLE SURVEY & REPORT

at

Land at Grange Moor
off Barnsley Road
Wakefield
West Yorkshire
WF4 4DR

Client:
Acumen Designers & Architects

Client Address:
Old Leeds Road
Huddersfield
HD1 1SG

Client Contact:
01484 546000 (Tel)

JCA Ref:
19649f/JF

Date of Report:
27/09/2023

JCA Limited
Arboricultural & Ecological Consultants

Quality Assurance

JCA ref.	Version	Desktop Survey Completed:		Site Surveyed:		Report Completed:		Reviewed:	
		Date	Name	Date	Name	Date	Name	Date	Name
19649f/JF	Planning	21/11/22	Amy Donaldson	09/05/23 25/09/23	James Foster	27/09/23	James Foster	28/09/23	Alex Donovan
								02/10/23	Adam West

All ecologists employed by JCA are members of, or are under application for, membership of the Institute of Ecology and Environmental Management (IEEM) and follow the Institute's code of professional conduct when undertaking ecological work.

Risk Assessment Completed	
Bio-security Procedure Completed	
Lone Worker Procedure Completed	

Summary

JCA Limited has been commissioned by **Acumen Designers & Architects** to undertake an Otter and Water Vole survey of a site located at **Land at Grange Moor, off Barnsley Road, Wakefield, West Yorkshire**. The site is located at Ordnance Survey (OS) National Grid Reference **SE 22216 15226**, with a nearby postcode of **WF4 4DR**.

Surveys were carried out on 09/05/23 & 27/09/23 in which the the ditch on site and its banks were searched for field signs of otter and water vole for 100m up and downstream of the site.

No evidence for the presence of either species was found during the course of the surveys.

Contents

1. Introduction and Terms of Reference

1.1 Background

1.1.1 In **April 2023**, JCA Ltd was commissioned by **Acumen Designers & Architects** to undertake otter and water vole surveys of a site located at **Land at Grange Moor, off Barnsley Road, Wakefield, West Yorkshire, WF4 4DR**, hereafter referred to as 'the site'. The purpose of the survey is to investigate the potential impact that the proposed development may have on local and national otter and water vole populations.

1.2 Scheme Description and Location

1.1.1 **Land at Grange Moor, off Barnsley Road** is situated approximately 9km southwest of Wakefield, at grid reference: **SE 22216 15226**.

1.1.2 The site is bordered to the northeast by industrial buildings and is surrounded predominantly by arable farmland to the north, south and east with small pockets of woodland.

1.1.3 The scheme is the development of an industrial unit with associated access, parking and soft landscaping.

1.1.4 I am instructed by Acumen Designers & Architects to visit the site and prepare my findings in a report. For this purpose, I have been supplied with a site map (drawing: 2753_SK01Indicative Site Layout).

1.3 Previous Studies

1.3.1 In November 2022, JCA Limited was instructed by **PCS Property Solutions Ltd** to undertake an Ecological Impact Assessment (EcIA) scoping of the site (JCA Ref: 19649a/AD). During the EcIA field survey, the ditch and pond on site was determined to be suitable to support otters and water voles, which are likely to be disturbed by the proposed development, therefore further surveys were recommended.

1.4 Scope of the Report

1.4.1 This report is compiled in accordance with the Joint Nature Conservation Committee's (JNCC) '*Common Standards Monitoring Guidance for Mammals*', Natural England's *'IN112 Monitoring the Otter'* and the People's Trust For Endangered Species (PTES) '*National Water Vole Monitoring Programme Survey Guidelines 2015*'.

1.5 Aims and Objectives

1.5.1 The aim of the survey is to assess the sites potential for supporting otter and water vole, in the form of nesting sites and foraging habitat. The following tasks have been undertaken:

- Desktop study – a review of historical records of otters and water voles in the surrounding area, including the results of previous ecological surveys in the area.
- Field surveys – Two otter and water vole transect surveys, involving a walked route of the entirety of the watercourse that is to be impacted by the proposed development, where accessible.
- Ecological report – an assessment of the survey results, implications for the proposed development and recommendations for avoidance, mitigation, and enhancement where appropriate. This report and the maps are supported by photographs (**Appendix 2**).

1.6 Legislative Context

Habitats Directive

1.6.1 The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

1.6.2 In England, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The Regulations make it an offence to deliberately capture, kill, disturb, damage or destroy a breeding/resting place of or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5.

Otters

1.6.3 Otters are given special protection within England by their inclusion on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

As a result, it is an offence to:

- Deliberately capture, injure, or kill an otter.

- Possess or advertise, sell or exchange an otter (dead or alive) or any part of an otter.
- Deliberately disturb an otter in such a way as to be likely significant to affect:
- The ability of any significant group of otters to survive, breed or nurture their young,
- The local distribution or abundance of otters,
- Damage or destroy a breeding site or resting place of any otter (this does not necessarily need to be intentional or deliberate),
- Intentionally damage, destroy or obstruct access to any place that an otter uses for shelter or protection,
- Intentionally or recklessly disturb an otter while it is occupying a structure or place that it uses for shelter or protection.

1.6.4 With specific reference to the offence of disturbance, Regulation 43(1) of the Conservation of Habitats and Species Regulations 2017 states that a person commits an offence if the disturbance of animals includes, in particular, any disturbance which is likely to impair their ability:

- To survive, to breed or reproduce, or to rear or nurture their young.
- In the case of animals of a hibernating or migratory species, to hibernate or migrate.
- To affect significantly the local distribution or abundance of the species to which they belong.

1.6.5 Otters are also afforded more general protection within the Natural Environment and Rural Communities Act (NERC) 2006. This imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, “to have due regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity” [Section 41]. It notes that “conserving biodiversity includes restoring or enhancing a population or habitat” [Section 41]. Consequently, attention should be given to dealing with the modification or development of an area if aspects of it are deemed important to otters.

1.6.6 Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 habitats of principal importance and 1,150 species of principal importance. Otters are listed under Section 41 of the NERC Act 2006.

Water Voles

1.6.7 Water voles are protected under schedule 5 of the Wildlife and Countryside Act 1981 (as amended). While previously only their burrows were protected from disturbance or damage, since 6th April 2008 they have been given further protection which makes it illegal to:

- Intentionally or recklessly kill, injure or take water voles,
- Possess or control live or dead water voles or derivatives thereof,
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection,
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

1.6.8 Water voles are also listed as a species of Principal Importance in England under schedule 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

1.6.9 Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level) and are usually drawn up by a consortium of local Government organisations and conservation charities. Water vole are a priority species on the UK Biodiversity Action Plan (UKBAP) and the Kirklees Biodiversity Action Plan (LBAP).

National Planning Policy Framework (NPPF)

1.6.10 The NPPF outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed instead of using land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments using the principles of the mitigation hierarchy. Paragraphs 170, 174 and 175 of the NPPF give policy support to the provision of measurable net gains in biodiversity. Paragraph 174 specifies that plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including locally designated sites; and promote the conservation, restoration and enhancement of priority habitats and ecological networks and the protection and recovery of priority species.

National Policy Statement for National Networks (2014)

1.6.11 The National Policy Statement for National Networks (2014) states "development should avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives. The applicant may also wish to make use of biodiversity offsetting in devising compensation proposals to counteract any impacts on biodiversity which cannot be avoided or mitigated. Where significant harm cannot be avoided or mitigated, as a last resort, appropriate compensation measures should be sought".

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2. Methodology

2.1 Desktop Survey Methodology

2.1.1 JCA Ltd undertook a full desktop study as part of the Ecological impact assessment (EcIA) for the site, with data of any records of otters, water vole and designated sites within a 2km radius of the site collected on behalf of JCA Ltd from West Yorkshire Ecology Service (WYES) (see References: JCA 19649a, 2023). This report will be used to inform the findings of otter and water vole at the site.

2.1.2 The Multi-Agency Geographic Information for the Countryside (MAGIC) website was used to locate any designated sites, such as; Local Nature Reserves (LNR), Special Areas of Conservation (SAC) or Sites of Special Scientific Interest (SSSI) that may be present within 2km of the survey site.

2.2 Field Survey

2.2.1 Otter and water vole surveys can be undertaken simultaneously, the surveys were undertaken on 09/05/23 and 25/09/23. All field surveys referred to methodologies outlined in Chanin (2003) and Strachan *et al*. (2011)

2.2.2 The watercourse and both sides of the bank were surveyed. Evidence of otters, water voles and other riparian mammal activity, such as invasive American mink *Neovison vison*, was investigated as part of the surveys. Other information is also collected, including the nature of the habitat, condition of watercourse banks, quality of surrounding terrestrial habitat, bank shape and the watercourse current.

2.2.3 The site was surveyed on the 09/05/23 and 25/09/23 by James Foster *BSc (Hons)* (Assistant Ecologist JCA Ltd.). Survey conditions are summarised in Table 1.

Table 1: Survey times and weather conditions.

Survey date	Lead surveyor	Temp Start/Finish °C		Humidity %	Wind speed/Direction mph		Cloud Cover %	Precipitation mm
09/05/2023	James Foster	17	18	58	14 W	14 W	55	0
25/09/2023	James Foster	19	19	60	15 SW	15 SW	25	0

Otters

2.2.4 Otter field signs surveyed for included spraints, tracks, feeding remains, otter slides, holts (underground dens and breeding sites) and couches (above

ground sites where otters rest during the day).

Water Voles

2.2.5 Water vole evidence searched for during the surveys included latrines, feeding evidence, feeding stations, burrows, grazed lawns, footprints and runways through vegetation.

Water vole numbers for each area were calculated based on the equation by Morris *et al*. (1998) as: y = 1.48 + 0.683x (where y = water vole numbers and x = number of latrines).

2.3 Survey Constraints

2.3.1 Otter surveys are not restricted to specific months or seasons; Water vole surveys must be undertaken between March and October, with optimal surveys being conducted between April and September. It is recommended that both otter and water voles surveys are not undertaken during periods when there is or after heavy rain as field signs will be washed away or obscured by higher water levels.

2.3.2 The watercourse and both sides of the bank were surveyed. Evidence of otters, water voles and other riparian mammal activity, such as invasive American mink *Neovison vison*, was investigated as part of the surveys. Other information is also collected, including the nature of the habitat, condition of watercourse banks, quality of surrounding terrestrial habitat, bank shape and the watercourse current.

2.3.3 The weather during the surveys and in the days prior had been dry, calm and clear, having little effect on field signs that could be present.

2.3.4 There were access limitations, some sections of the ditch were heavily vegetated, However, this is not considered to present a significant constraint on the findings of the report as these heavily vegetated sections were mostly dry and the rest of the ditch and the pond was surveyed in its entirety.

2.3.5 The details of this report will remain valid for a period of 18 months. If works have not commenced within this period or land use on site changes, it is recommended that a new review is undertaken.

3. Results

3.1 Desktop Survey Results

3.1.1 Statutory Designated sites

The MAGIC website revealed no internationally designated sites within 2km of the site.

The MAGIC website revealed no nationally designated sites within 2km of the site.

3.1.2 Non-statutory Designated sites

Records received from WYES revealed no non-statutory designated sites within 2km of the site.

3.1.3 Otters

No records of otters were returned from WYES.

3.1.4 Water Vole

No records of water voles were returned from WYES.

3.2 Field Survey Results

3.2.1 Habitats and features present.

Watercourse

A ditch borders the sites eastern and southern boundary almost in its entirety (**see Appendix 1 & 3**) the ditch is approximately 50cm wide and a 1m deep. The ditch is fairly shallow and contained a small amount of stagnant water (under 10cm deep) on the eastern section during the first visit and was completely dry during the second visit. There was overgrown vegetation obscuring the ditch almost in its entirety on both visits. The bank is short, steep and made of natural substrate. There was a wider area in the ditch on the south eastern corner but was however dry on both visits. The ditch is bordered by arable fields on both sides, with woodlands in the further vicinity providing potential feeding habitat for water voles. There is also a small pond on the southeastern corner of the site, it was choked with terrestrial vegetation but did contain some small sections of stagnant water, with emergent vegetation.

3.2.2 Otter

No signs or evidence of otter presence/ activity was identified on site.

3.2.3 Water Vole

No signs or evidence of water vole presence/ activity was identified on site.

4 Assessment and Recommendations

4.1 Habitats

4.1.1 Watercourse

The proposed development may impact the water course should further pollution enter the ditch and prevention measures are not in place. Damage to the watercourse bank may occur as a result of the proposed development.

4.2 Otter and Water Vole

4.2.1 As no evidence of otter or water vole presence was found, we recommend that the proposed development at **Land off Grange Moor, off Barnsley Road, Wakefield** should go ahead, and that no European Protected Species Mitigation Licence is required. However, the work should be carried out with care and vigilance.

4.2.2 Should any otters or water voles be seen during any stage of the development, all work must stop immediately, and Natural England must be contacted. Natural England will provide advice on the best course of action. It must be stated that this is a legal requirement and only an approved licenced ecologist can handle otters and water voles.

4.2.3 Although no evidence of otters and water voles were found, JCA recommends that habitat around the development is improved to benefit otters and water voles. JCA can provide this in the form of an Otter and Water Vole Enhancement Plan.

5 References

Ecological impact assessment (EcIA) JCA Ref: 19649a/AD, 2023

Otter:

Chanin P (2003a) Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series No. 10. English Nature, Peterborough.

Chanin P (2003b) Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough.

Chanin P (2005) Otter surveillance in SACs: testing the protocol. English Nature Research Report No 664. English Nature, Peterborough.

CCW (2009) Otters. A Guide for Developers. CCW Species Series. CCW. www.ccw.gov.uk

Highways Agency (2001) Design Manual for Roads and Bridges; Volume 10 Section 4 Part 2

Macdonald DW, Mace G and Rushton S (1998) Proposals for future monitoring of British mammals. DETR, London.

National Parks and Wildlife Service (2009) The Otter in Ireland. National Parks and Wildlife Service, Dublin.
Natural England. Otter surveys - When do I need a licence?
www.naturalengland.org.uk/Images/wmlg02_tcm6-3750.pdf

Ward D, Holmes N and José P (1994) The New Rivers and Wildlife Handbook. RSPB, Bedfordshire.

Water Vole:

Natural England (2008) Water voles – the law in practice: Guidance for planners and developers. Natural England, Peterborough.

Natural England (2010) Water voles and development: licensing policy. Technical Information Note TIN042. Natural England, Peterborough.

Strachan R and Moorhouse T (2006) Water vole conservation handbook 2nd Edition. Wildlife Conservation Research Unit, Oxford.

Websites:

Google Maps. **<**http://maps.google.co.uk/**>**

Multiple-Agency Geographic Information for the Countryside (MAGIC). <http://www.magic.gov.uk/>

Natural England. < http://www.naturalengland.org.uk/>

Nature on the Map. Natural England. <www.natureonthemap.org.uk>

Relevant Legislation:

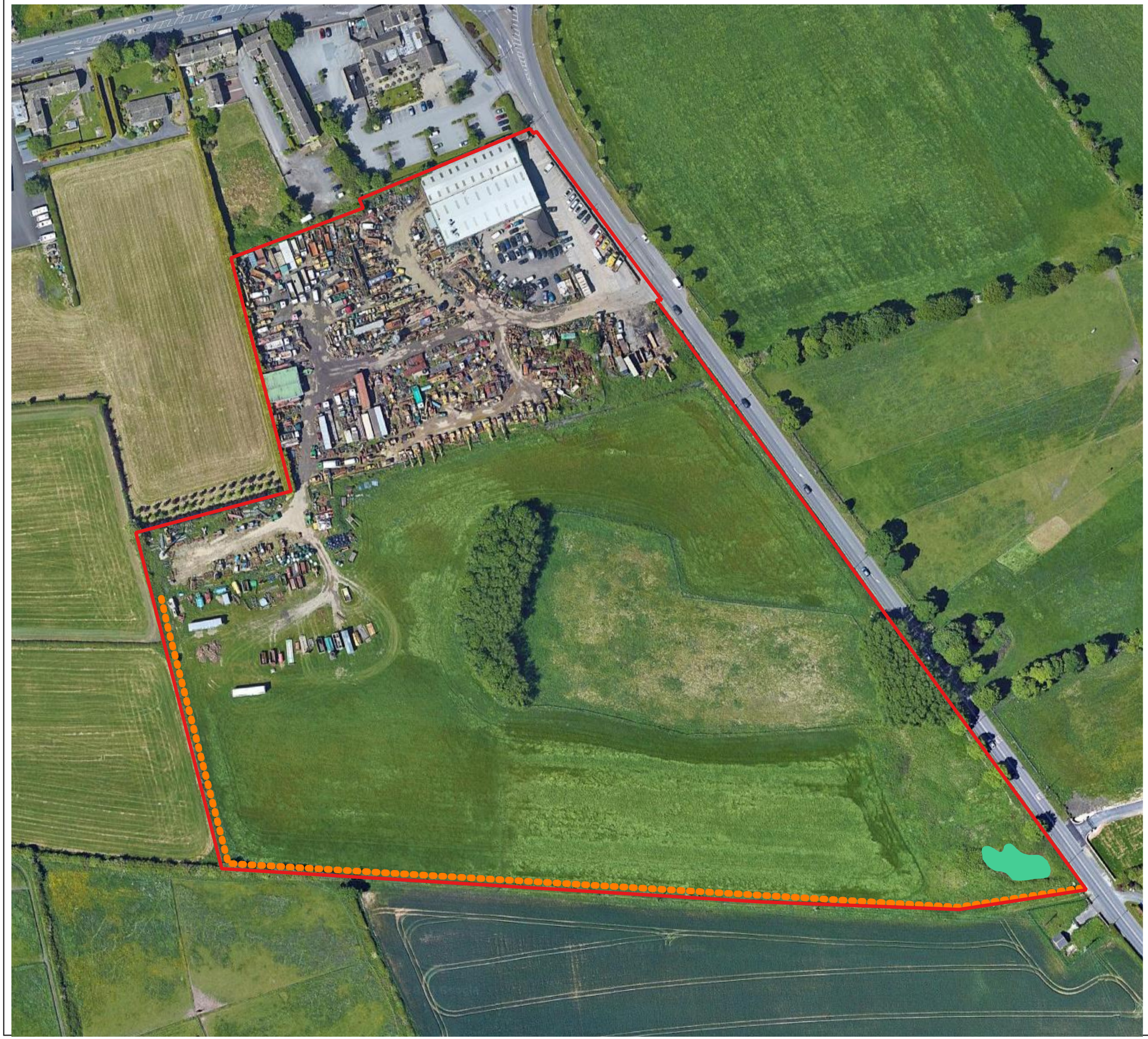
Wildlife and Countryside Act 1981 <http://jncc.defra.gov.uk/page-3614>

The Conservation of Habitats and Species Regulations 2017
<https://www.legislation.gov.uk/uksi/2017/1012/contents/made>

Countryside and Rights of Way Act 2000
<http://www.legislation.gov.uk/ukpga/2000/37/pdfs/ukpga_20000037_en.pdf?view=interweave>

Appendices

Appendix 1: Site Plan and Water Vole/Otter Transect Route



Site name & address

Land at Grange Moor, off Barnsley Road, Flockton, Wakefield, WF4 4DR.

Key

- Red Line Boundary
- Water Vole/Otter transect route
- r1a - Pond

Scale 0 25 50 m

Site	Client
Land at Grange Moor	Acumen Designers & Architects
Project	**Author**
Water Vole Survey Report	JF
Plan ref	**Revision**
19649f/JF	0

Appendix 2: Proposed Development Plan

Only figured dimensions should be used.

Scaled dimensions should be checked with the Architect.

DO NOT SCALE OFF THIS DRAWING

rev	description	drwn	auth	date

ACUMEN
DESIGNERS & ARCHITECTS
acumenarchitects.co.uk 01484 546 000
Headrow House, Old Leeds Road, Huddersfield, HD1 1SG

Client
ACUMEN

Project
NEW PROPOSED UNIT

Project No	Drawing No	Rev
2753	SK01	/

Description
INDICATIVE SITE LAYOUT

Scale	Date Drawn	Drawn By	Authorised By
1:1250@ A3	MAY'22	JC	JC

File loc: C:\Users\Sam\Desktop\Grange Moor Printed By: James

Purpose of Issue
Planning○ Building Regs○ Tender○ Construction○ Comment● Info○

Appendix 3: Photographic Evidence

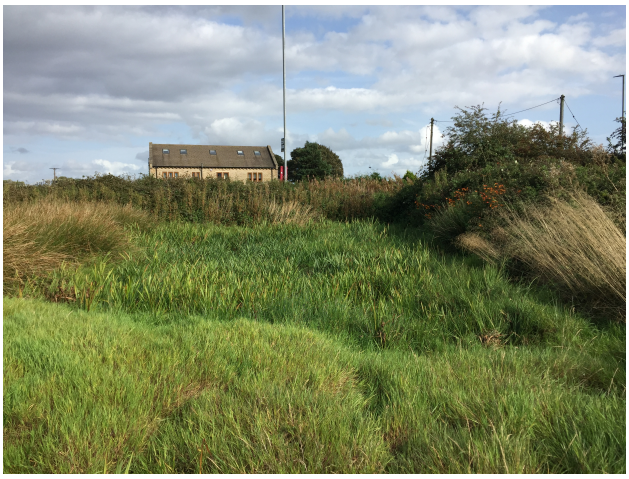


Photo 1: The pond on the southwest of site, viewed from the east.

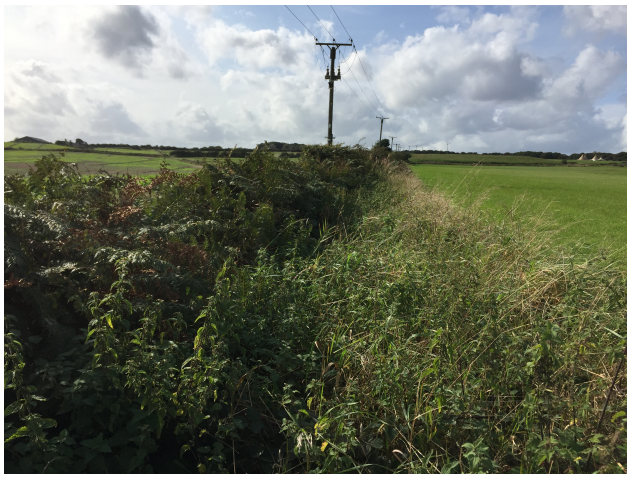


Photo 2: The southern section of ditch viewed from the west.

Photo 3: A view of the dry bottom in the southern section of ditch.

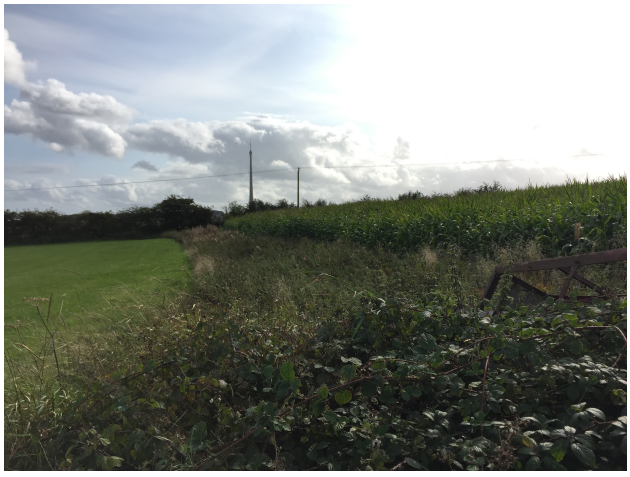


Photo 4: A view of the eastern section of ditch, viewed from the north.

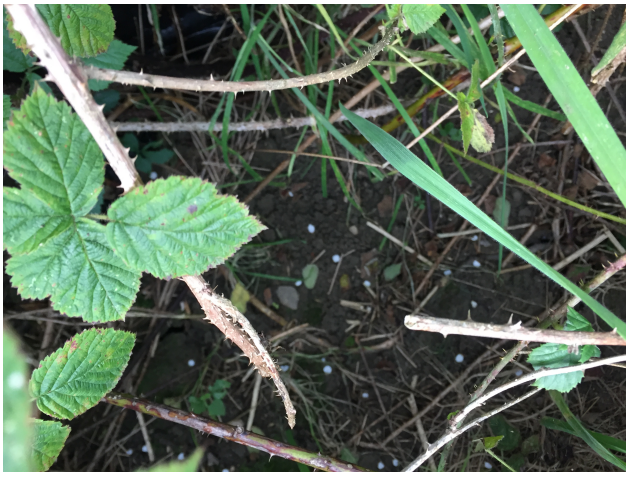


Photo 5: A view of the dry bottom of the ditch in the eastern section of ditch.

Photo 6: A view of the wider more open section of ditch on the southwestern corner.

Appendix 4: Glossary

Otters

Holts: These are structures used as permanent shelter by otters. Holts are usually a hole or burrow along the river bank amongst riparian vegetation. Holts can also be found in the root system of riverbank trees or behind large boulders set into the bank. Lying-up areas are associated with other otter field signs. They can also be connected to lying-up areas and have may more than one entrance.

Lying-up areas/couches: Also known as couches, these are locations along a watercourse used occasionally by otters for grooming, resting and feeding. Many lying-up areas can be located throughout an otter's territory and are typically found hidden in bankside riparian vegetation or as 'nest-like' structures amongst reeds and grasses. Lying-up areas usually have other field signs such as footprints, feeding remains and spraints (otter droppings).

Natal Dens: Natal dens are holts which are used by otters to give birth and rear their young. Natal dens are usually a lot more inconspicuous than other otter holts and lack evidence of otter activity around the entrance. Natal dens are also different to other holts as they can be found some distance from the watercourse, sometimes set back in woodland amongst tree roots, rubble, log piles or even amongst reed beds.

Slides: These are worn patches along the waters edge where otters patrol.

Spraints: A spraint is the dung of the otter. Spraints are typically identified by smell and are known for their distinct aromas, the smell of which has been described as ranging from freshly mown hay to putrefied fish.

Water Vole

Feeding stations: Favoured feeding location used by water voles. These are usually neat piles of chewed lengths of vegetation, with sections measuring 8cm with 45 degree cuts.

Latrines: Piles of droppings left by water voles. Droppings are cylindrical and range from green through to dark purple/black. Latrines are used to mark out territories between February to November. Trampled latrines are a good indication that breeding is taking place.

Nests: Water voles can make woven nests the size of footballs. However, they commonly form burrows in watercourse banks which are typically wider than they are high with a 4-8cm diameter.

Runways: Water voles create runways or tunnels through vegetation, used to commute to foraging sites and as escape routes from predators.

Appendix 5: Author Qualifications

Adam West, Principal Ecologist
BSc (Hons) Animal and Wildlife Management.
Adam joined JCA to lead the expanding ecology department. Having returned to education as a mature student, Adam studied Countryside Management for two years before undertaking a Batchelor's degree in Animal and Wildlife Management, for which he was awarded First Class Honours. Adam has many years' experience in ecological consultancy, working on projects ranging from individual planning applications to national infrastructure projects. Adam holds a Natural England Level 1 great crested newt survey class licence and a Natural England Level 2 bat survey class licence.

James Foster, Assistant Ecologist
BSc (Hons) Biology.
James gained his undergraduate degree in biology in 2012 from University of Leeds. James has plenty of experience in ecology, having worked countless projects of different scales all over the north and midlands. James has 9 years of experience surveying anything from reptiles to hedgerows and holds a Great crested newt licence level 1 and is working towards his bat licence and barn owl licence.

Alex Donovan, Graduate Ecologist
MBIOL, BSc Biology (Industrial).
Alex joined JCA in 2023 after graduating from the University of Leeds with a First Class Honours Integrated Master's degree in Biology. As part of his degree programme, Alex spent an industrial placement year working in the Uplands Research Department of the Game and Wildlife Conservation Trust, assisting on various ecological surveys and projects. Alex is a registered Trainee Bird Ringer, licensed through the BTO, and has previously conducted seasonal bat emergence and transect surveys.

I hope that this report provides all the necessary information, but should any further advice be needed please do not hesitate to contact the author.

Signed

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James Foster *BSc (Hons)*

27/09/2023

Reviewed by

.....

Alex Donovan *MBIOL BSc (Hons)*

28/09/2023

Approved by

.....

Adam West *ACIEEM*
02/10/2023

For and on behalf of ***JCA Ltd***

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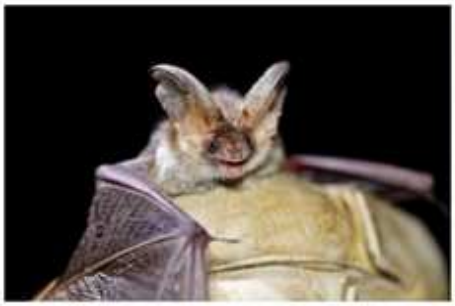

ECOLOGICAL SERVICES

Ecological Pre-Planning Services

- Phase 1 Habitat Surveys
- Great Crested Newt eDNA Sampling
- Protected species: Bat, Wintering and Nesting Bird, Badger, Amphibian, Otter, Water Vole, White-Clawed Crayfish, Dormice and Reptile Surveys.
- Preparation for Environmental Impact Assessment (EIA)
- Invasive Species Surveys
- Code for Sustainable Homes
- Butterfly & Insect Surveys

Ecological Post-Planning Services

- Biodiversity Enhancement Plans
- Protected Species Mitigation
- Ecological Management (Bat and Bird box installation and inspection)
- Planting Schemes
- Monitoring of bird or bat boxes.

ARBORICULTURAL SERVICES

Guidance for Architects & Developers

- British Standard 5837 Surveys
- Arboricultural Implications Assessments (AIA)
- Arboricultural Method Statements (AMS)

Advice for Engineers, Loss Adjusters and Insurers

- Tree Surveys for Subsidence
- Heave Assessment
- Tree Root Identification

Advice for Local Authorities and Social Housing

- Tree Safety Surveys
- Specialist Decay Detection
- Landscape and Orchard Design

Tree Advice for the Legal Profession

- Subsidence Litigation
- Personal Injury and Accident Investigation
- Expert Witness, Planning Inquiries and Appeals

Veteran Tree Management

- Ancient Woodland Management
- Veteran Tree Management

Tree Health and Pest and Disease Management

- Pest and Disease Surveys
- Tree Health Checks
- Disease Mitigation and Control

JCA Limited

Arboricultural & Ecological Consultants

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