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STRATA STERLING BARNSLEY WEST LTD

BARNSLEY WEST

OTTER AND WATER VOLE SURVEY

OCTOBER 2023

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OCTOBER 2023

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Appendix 1 – Legislation and Policy

DRAWINGS	TITLE	SCALE
LD10361/020	Waterbody Location Plan	1:7500@A3

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 Wardell Armstrong LLP (WA) was commissioned by Strata Sterling Barnsley west Ltd to undertake an otter *Lutra lutra* and water vole *Arvicola amphibius* surveys of a proposed mixed use development scheme on land to the west of Barnsley, South Yorkshire (Ordnance Survey central grid reference SE 31631 07175.

1.1.2 The aim of the otter and water vole surveys was to i) determine the likely presence/absence of otter and water vole along the watercourses on or adjacent to site, ii) determine the likely impacts of the proposed development, iii) assess whether further surveys are required, iv) determine the levels of activity and distribution, v) to inform whether a European Protected Species Licence for otter or a site specific licence for water vole is required and inform appropriate mitigation measures.

1.2 Background

1.2.1 This report accompanies a Preliminary Ecological Appraisal update (PEA) (Wardell Armstrong 2022), (White young Green (WYG), 2021) and (AECOM, 2017) which identified the presence of a several drains/watercourses. The PEA reports identified a likely absence from site. For completeness a survey of all water courses has been undertaken to confirm and validate previous assessments.

1.2.2 The updated proposed development comprises a mixed-use development to provide up to 1,560 new homes and up to 43 hectares of employment land for Use Class E/B2/B8. In addition, the proposals will provide:

- Part of the Link Road between M1, Junction 37 and the A635, Barugh Green Road (The section from Higham Lane to Barugh Green Road)
- A new primary school
- Small local shops and community facilities
- Strategic areas of greenspace and wildlife corridors

1.3 Site Context

1.3.1 The area of detailed ecological study (Site) comprises all habitats within the application site boundary. Habitats on Site are dominated by arable farmland and improved /modified grassland. The wider landscape immediately beyond the Site boundary is predominantly residential housing and commercial /industrial units. Further beyond is mixed arable and pastoral farmland.

2 METHODOLOGY

2.1 Desk Study

2.1.1 The desk study was informed by review of existing available information provided by Barnsley Biological Records Centre (data requests operated by Sheffield BRC) (BBRC) and from available internet-based resources for a 2km search radius and from the Sites central grid reference. Information was sought for all protected species within the last 10 years.

2.1.2 The ecological desk study was carried out by an Associate member of CIEEM, who has completed numerous ecological desk studies within the last four years.

2.2 Otter Survey

2.2.1 The otter survey broadly followed the standard guidance outlined in Monitoring the Otter, Conserving Natura 2000 Rivers, Monitoring Series No. 10 (Chanin, 2003). The ditches and streams were searched for signs including sightings, couches, holts, spraints, slides, feeding areas and remains, footprints and mammal paths. See Drawing LD10361/020 for waterbody locations.

2.3 Water Vole Survey

Habitat Assessment

2.3.1 A habitat assessment was undertaken of the ditch habitat to be affected by proposed works. The habitat assessment methodology is based on (Dean 2021)[1] Assessing the value of water vole habitat. This is summarised in Table 1 below:

Table 1: Assessing the Value of Water Vole Habitat

Habitat Category	Bank profile	Bank substrate	Variation in Water Level	Herbaceous Vegetation	Water
Optimal (all criteria needs to be met)	Steep approaching 1:1 on one side of watercourse. Steep or shallow banks on static waterbodies, or fen type habitats, where water levels do not fluctuate significantly.	Earth or Peat	No noticeable variation during the summer months, banks are not overtopped recently	Continuous swathe of tall luxurious vegetation, providing 90-100% cover on all banks. (tall tussocky grassland) and marginal in-channel/ vegetation is present (emergent species).	Permanent

[1] Dean, M. 2021. Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Surveys.

Table 1: Assessing the Value of Water Vole Habitat					
Habitat Category	**Bank profile**	**Bank substrate**	**Variation in Water Level**	**Herbaceous Vegetation**	**Water**
Good (all criteria needs to be met)	Steep approaching 1:1 on one side of watercourse. Steep or shallow banks on static waterbodies, or fen type habitats, where water levels do not fluctuate significantly.	Earth or peaty banks, or stony reinforced banks with gaps allowing access behind.	No noticeable variation during the summer months, banks are not overtopped recently.	Continuous swathe of bankside or in-channel vegetation (emergent) vegetation providing at least 60% ground cover. Maybe dominated by grasses and weeds rather than luxurious riparian vegetation. The vegetation should be tall except in urban or sub-urban areas where shorter bankside vegetation may also qualify.	Permanent water or routinely wet for 2-3 months during the summer and where other good habitat is present in immediately adjacent areas with permanent water.
Suitable but Poor	Any habitat that falls short of the criteria as 'good' but does not meet the criteria for negligible value' could reasonably be considered as 'Suitable but Poor'.				
Negligible	Shallow profile on both banks.	Rocky or gravel, unsuitable for burrowing.	Considerable variation is water level – the bank toe can by more than 1m horizontally over the breeding season.	No or limited bankside or marginal vegetation, (due to shading or other permanent factors – note that management can change and is often a temporary factor).	n/a
	Vertical bank face with no burrowing opportunities behind it.	Reinforced banks with no gaps.	n/a		n/a

2.3.2 The watercourse was walked for the entire length where it is present through the site. Notes were taken of the bank type and vegetation.

2.3.3 Assessing habitat value for water vole can be subjective. Therefore, an element of 'professional judgement' is required, where use of knowledge and experience is used to make an informed decision that is justified with evidence.

Field survey

2.3.4 Surveys to identify presence/infer absence were undertaken on 15th May 2023 in accordance with standard best practice guidance as set out in the Water Vole Mitigation Handbook (Dean et al, 2016). This consisted of identifying the extent and

distribution of water vole activity through searches of bankside habitat from the channel (where accessible) for field signs indicating recent activity, e.g. feeding stations, latrines, droppings, recent burrowing activity and footprints. The location of evidence was recorded (if located) to enable further analysis through population estimation.

2.3.5 Latrines are indicators of terrestrial behaviour, which in turn generally correlates with breeding activity. It is therefore considered that watercourses/bodies which display latrines, burrows and feeding signs form breeding sites for water voles.

2.3.6 Where evidence of water vole is recorded the number of latrines along the water course would be used to obtain an estimate of population size.

3 RESULTS

3.1 Desk Study

3.1.1 One record of European Otter was identified by the desk study from 2019 at Silkstone Beck some 2.45 km away from the site boundary to the west, beyond the M1 Motorway. No records of water vole were provided.

3.2 Otter

3.2.1 No evidence of otter was recorded during the survey. There were a number of prominent features along the channels particularly D2 and D3 which would typically be used as a spraint site. However, no evidence was recorded. Similarly, no evidence was recorded of mink *Neovison vison*.

3.2.2 The ditch habitats were considered to be of negligible suitability for otter as they were primarily dry, somewhat isolated from larger water bodies and located beneath mature hedgerows. The stream habitats could potentially be utilised by commuting otter, but the lack of evidence along the water course infers absence.

3.3 Water vole

Habitat Assessment

3.3.1 A summary of the watercourses present on site is given in Table 2 below:

Watercourse ID Number	Description	Photo	Suitability
D1	Field boundary ditch with mature hedge above. Ditch is partially dry becoming wet with shallow water 0.02m max depth. Channel is approximately 1m wide with and predominantly bare earth due to heavy shading from hedge above. No emergent or aquatic vegetation is present. Banks are 0.5m high with limited sparse vegetation comprising ivy Hedra helix and common nettle.		Negligible

Watercourse ID Number	Description	Photo	Suitability
D2	Stream (western leg). Banks are shallow almost flat in places and support woodland flora and ruderal species to include common nettle, creeping buttercup *Ranunculus repens, cleavers Galium aparine*, broadleaved dock *Rumex obtusifolius,* Ramsons *Allium ursinum* and lesser celandine *Ranunculus ficaria*. To the south the banks become steep greater than 45° and undercut in places. The channel is various widths ranging from 0.5m-1m wide with a slow flow. No aquatic or emergent vegetation is present in this area. The water flows south to north		Poor but Suitable
D3	Stream through Craven wood (Eastern leg). Here the banks are steep sided and vertical and in places undercut. Banks extended to approximately 3m high in places. Channel sides are bare due to heavy shading from Craven wood. The channel is 1m-1,5m wide with slow to moderate flow. No aquatic vegetation or emergent vegetation was present in this section of the stream. The stream continues beyond Hermit Lane to the South along the edge of Craven Wood. Banks are steep and variable in height steep and greater than 45° or vertical and undercut. Banks are also variable in height.		Poor but Suitable

Watercourse ID Number	Description	Photo	Suitability
	Water flows in a south to north direction and merges with the Stream listed as D2.		
D4	Partially culverted drain. Break in pipe exposes water run-off which seeps into field and meets a natural spring in the centre of the field. Here some aquatic vegetation is present such as floating sweet-grass *Glyceria fluitans and brooklime Veronica beccabunga.* The water collects in a half culvert along the base of a hedgerow and scrub. Here the flow is of moderate speed. No aquatic/emergent are present in this area. The water flows from the culvert into the natural watercourse along the base of the hedge. The channel here is very narrow only 0.2m wide but the water varies in depth between 0.02-0.1m. Banks along the natural section of the water course are also variable in gradient, being almost flat and poached to the west as its unfenced to the field. The east side supports a mature but managed hedge and a steeper bank. The ditch terminates at the field gate to the north, at this point the ditch is culverted beneath Hermit Lane and adjoins Craven Wood Stream (D2)	 	Negligible

Watercourse ID Number	Description	Photo	Suitability
D5	A small section of ditch along an internal hedge that is no longer present. No evidence to suggest the area become wet or holds water during periods of high rain fall.		Negligible
D6	Field drain is no longer present. No depressions or waterlogging within areas mapped.		Negligible
D7	Dry internal field drain. Depression present along the base of hedge but no evidence of it ever supporting water. Dry ditch is narrow and meandering in nature. The ditch is predominantly bare dry earth and heavily horse poached as it is currently unfenced from the field.		Negligible

Watercourse ID Number	Description	Photo	Suitability
D8	Wet/Damp man-made drain through field. Drain is approximately 1m wide and supports damp ground and shallow water max depth 0.04m, and supports annual meadow grass *Poa annua*, creeping bent *Agrostis stolonifera* and where the drain is wetter floating sweet-grass. The banks are approximately 45° and covered in short grazed grassland which extends from adjacent field. Drain is unfenced and sheep grazed.		Negligible
D9	Dry ditch, no visible signs the ditch has been wet over recent years.		Negligible
D10	Dry ditch present along internal field boundary hedge. Dry channel is approximately 0.5m wide with shallow banks <0.5m high. Banks support common nettle, creeping thistle and cleavers.		Negligible

Watercourse ID Number	Description	Photo	Suitability
D11	Dry ditch, 0.5m wide with steep banks supporting tall ruderals and scrub including common nettle and bramble *Rubus fruticosus*. Fly tipped rubbish is present within the channel.	No photo	Negligible

Field Survey

3.3.2 No water vole field signs to include burrows, latrines, droppings, feeding stations or pathways were recorded during the survey of watercourses on site.

3.3.3 Several rat burrows were recorded along D3. Burrows were larger in diameter, and some had a fan of spoil outside the entrance.

4 CONCLUSIONS

4.1.1 Otters are very mobile species and can cover large territories extending approximately 40km. Given that otters were recorded by the desk study within 2km of the site boundary it is recommended that as a precaution a 10m buffer from the larger streams namely D2 and D3 is retained to provide a sheltered undisturbed corridor for commuting. This buffer should be fenced to ensure breaches by construction vehicles during the construction period is avoided.

4.1.2 As no evidence of otter or water vole was recorded from Site they are considered likely to be absent as resident species.

5 REFERENCES

Botanical Society of the British Isles. (2013). Online atlas of the British and Irish Flora http://www.brc.ac.uk/plantatlas/index.php?q=title_page

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

Dean. M. (2021). Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Surveys. Conservation Handbooks.

Stace. C. A. (2010). 'New Flora of the British Isles'. Cambridge University Press.

APPENDICES

Appendix 1 – Legislation and Policy Summary

Legislation for Species

Species	Legal Status
European Legislation	
Otter	These animals and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 (and as amended), which makes it illegal to: • Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; • Deliberately disturb[1] such an animal; and • Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely: • The development is for reasons of overriding public interest; • There is no satisfactory alternative; and • The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a duty to 'have regard to the requirements of the EC Habitats Directive' i.e. LPA's must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.

[1] Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

Species	Legal Status
Domestic (UK) Legislations	
Otter, Water Vole	These animals receive full protection under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to certain exceptions) to: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Wild Mammals	The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals (as defined by the act) against the following actions: mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Policy Summary

Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to 'have regard' to the conservation of biodiversity when considering planning applications.

Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF).

The NPPF underpins the Government's planning policies for England and how these are to be applied. The central theme of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF states:

> *When determining planning applications, local planning authorities should apply the following principles:*
>
> - *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
> - *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where*

the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons[63] and a suitable compensation strategy exists; and;*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*
- *The following should be given the same protection as habitats sites:*

  a) potential Special Protection Areas and possible Special Areas of Conservation;

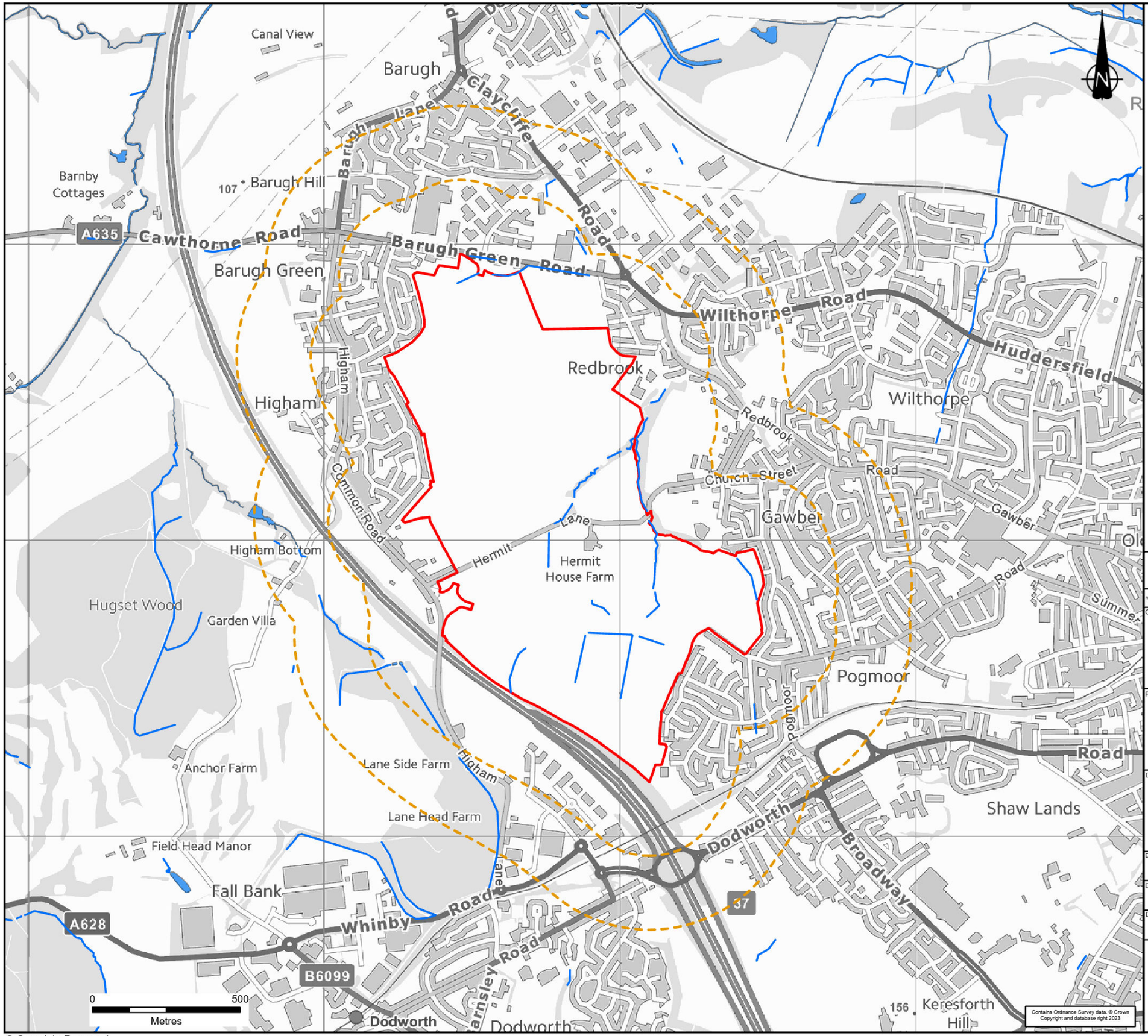
  b) listed or proposed Ramsar sites; and

  c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

The NPPF requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

DRAWINGS



KEY

- Site Boundary
- 250 m and 500 m Buffer
- Watercourses
- Waterbodies

Notes:

Boundaries are indicative.

REVISION	DETAILS	DATE	DRAWN	CHK'D	APP'D

CLIENT

STRATA STERLING BARNSLEY WEST LTD

PROJECT

BARNSLEY WEST

DRAWING TITLE

WATERBODY LOCATION PLAN

DRG No.		REV
LD10361/005		A
DRG SIZE	SCALE	DATE
A3	1:12,500	11/10/2023
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