WATER VOLE SURVEY REPORT
SANDTOFT INDUSTRIAL ESTATE, BELTON

NORTH LINCS PROPERTY LTD

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1 SUMMARY

This report has been produced for North Lincs Property Ltd to support the planning submission for an extension to the Sandtoft industrial Estate, Belton.

The report is an interim output provided to confirm initial findings with regard to water voles, and whether water voles have the potential to be negatively affected by the Development in the absence of mitigation.

Habitat assessments and surveys were completed for water vole, with evidence of water vole recorded along the eastern half of drain D2.

To reduce impacts to onsite ecological receptors and the likelihood of legal offences occurring, species-specific and general mitigation have been recommended.

2 INTRODUCTION

Surface Property Ltd (Surface) was commissioned by North Lincs Property Ltd (the Applicant) to undertake a water vole survey within the proposed development at Sandtoft Industrial Estate, Belton ('the Site'). The water vole survey focussed on drains D1, D2, D3, and D4, which were previously identified in earlier assessments[1]. All other drains previously identified are no longer extant, having dried up and undergone successional changes.

A description of the drains within the Site was made during the updated Extended Phase 1 Habitat Survey of 20th May 2021, with linked drains D1 and D2 identified as having habitats present with the potential to support water vole. This report should therefore be read in conjunction with the separate Ecological Impact Assessment (EcIA) report[2].

This report describes the methods and results of the survey and assesses the associated potential ecological impacts from the Developments. It also provides initial recommendations to avoid or reduce such impacts, as well as measures for ecological enhancements.

The report provides interim findings following the spring water vole survey completed on 20th May 2021, and provides an update to an earlier water vole survey completed on the Site in 2018[3], with the findings superseding the earlier report output.

2.1 The Development and Site Location

The Site lies to the east of the existing Sandtoft Industrial Estate (refer Figure 1 overleaf) and covers an area of approximately 23.9 hectares (ha). The Site is bordered by the River Torne to the east, the M180 to the north and agricultural land to the south. The Site is required to enable an expansion of existing users at the Sandtoft Industrial Estate.

The Development comprises the following;

- Pro Truck HGV and Plant Auctions - parking and storage of HGV's;
- North Lincs Property/Aggregates Ltd - expansion of existing builders' yard and bagged aggregates;
- GBA Transport Ltd – parking of HGV's;
- Ever Readymix Concrete Ltd – ready mix concrete facility; and
- 123 Car sales Ltd – parking area.

Figure 1 shows the locations of the Site (red line boundary) and drains D1, D2, D3 and D4 (Blue line) survey area.

[1] September 2017 *'Ecology and Protected Species Survey: Sandtoft Industrial Estate Extension to River Torne, Belton, North Lincolnshire'* Scarborough Nixon Associates Ltd

[2] June 2021 '*Ecological Impact Assessment: Land at Sandtoft Industrial Estate, Belton'.* Arcus Consultancy Services Ltd

[3] May 2018 'Further Protected Species Surveys: Land to the East of Sandtoft Industrial Estate, Belton, North Lincolnshire'. Scarborough Nixon Associates Ltd

Figure 1: Site location and survey area

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2.2 Water vole survey

The water vole survey was carried out within drain D1 and D2. Drain D2 extends east-west to bisect the northern quarter of the Site, and meets drain D1 along the north west boundary of the Site. The eastern end of the drain enters a *circa* 10 m below water level culvert, before it joins the River Torne. D3 and D4 were not considered to provide sufficiently suitable water vole habitat and therefore were not assessed further during the water vole surveys.

The habitats in the survey area comprise of trapezoidal drains, with a predominantly clear water column, with sparse aquatic plants present and occasional and lush emergent plants present to the edge of riparian habitats. The bank sides comprised of tall ruderal herbs and scrub species associated with freshwater habitats. The location of drains D1 and D2 and water vole survey results are shown in Figure 2, Appendix A.

2.3 Planning Policy and Legislation

Relevant legislation and policies are summarised in Appendix B.

3 METHODS

3.1 Water Vole

Water vole surveys were carried out on the 20th May 2021 by suitably experienced Ecologists. An assessment of habitat suitability was made of extant drains, D1, D2, D3 and D4 were undertaken, with the results used to inform the requirement for further surveys of drains D1 and D2 for evidence of water vole activity (as shown on Figure 2, Appendix A).

The weather conditions on the days of the visits were overcast with occasional light rain during the survey, but no heavy rain fall during the preceding days of the survey, therefore weather conditions were considered suitable.

The survey methodology for water vole was based on the industry-standard survey methodology for this species[4]. A water vole habitat suitability assessment was also undertaken and was based on a scoring system produced by Harris *et al*. (2009)[5]. Due to the large size of the Site and the presence of a network of drains present throughout, the scoring system has been modified slightly identifying water vole habitat suitability as 'low' (unsuitable), 'moderate' (sub-optimal) and 'high' (optimal).

The surveyors walked in pairs along the banks of all accessible watercourses considered suitable for water vole and initially conducted a metre-by-metre search (as far as possible accounting for dense scrub cover) of riparian and emergent vegetation for diagnostic water vole signs – such as latrines, faeces, sounds, feeding stations, feeding platforms, feeding excavations, burrows, runs and ball nests. As soon as a burrow was discovered, the surveyor switched to an intermittent search approach, searching a 2-3 m wide section approximately every 20 m to minimise disturbance of bankside habitats. Habitat quality was also assessed and noted during the survey.

3.1.1 Survey Limitations

Drain D1 and D2 contained steep and unstable banks, which meant being positioned further back from the drain and limiting visibility from the banksides; however, safe access into the drain was possible to enable the banksides to be surveyed from water level.

Dense vegetation also obstructed the surveyors view when looking for signs such as burrows, latrines and feeding remains and it is possible that evidence of water vole may have been under recorded during the surveys.

Although it was dry leading up to the survey, light rain was recorded during the survey. The extent and intermittent nature of the precipitation was unlikely to have led to water levels rises and extensive loss of water vole evidence during the survey; however, this may still have slightly reduced evidence of water vole presence.

4 Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds Fiona Matthews and Paul Chanin. The Mammal Society, London.
5 Harris, J., Markwell, H. and Raybould, B. (2009), A Method for Assessing Water Vole Habitat Suitability, In Practice, CIEEM

4 RESULTS

4.1 Water Vole

A modified version of the water vole habitat suitability scoring system created by Harris *et al*. (2009)[5] was used to give a general indication of the suitability of the habitat for water voles for each waterbody.

The results of the water vole survey are shown in Table 4.1, along with whether any rat or mink evidence was recorded during the visit. Table 4.1 also includes information on drains D3 and D4, which were scoped out of further water vole survey following the initial habitat assessment. Overall, the water vole habitat quality of drains D1 and D2 was recorded as 'moderate', whilst the west boundary drains D3 and D4 was recorded as 'low'. This suitability score was reflected by the evidence found.

Water vole surveys confirmed evidence of water voles using drain D2. During the surveys evidence of water vole included feeding remains at discrete locations in the eastern half of the drain. Despite being initially assessed as having habitat suitability, drain D1 did not contain water vole evidence, and at the time of the survey it was noted that the substrate was anoxic in places.

Due to the limitations detailed in Section 3.1.1, drain D2 was difficult to assess from the banksides, and although accessible at water level during the surveys, the dense bankside vegetation in places may have made it more difficult to identify some field signs, and these may have been missed.

Table 4.1 Water vole habitat assessment and survey results.

Transect ID	Transect length (m)	Evidence of water vole **	Evidence of rat	Evidence of mink or other predators	Water role habitat Suitability Score [low (unsuitable), moderate (sub optimal), high (optimal)]	Description of habitat
		May				
Drain D1	60	0	0	0	Moderate	Partly shaded along the western bank by a planted native species hedgerow, in-channel and bankside vegetation was partly shaded on the west bank. Riparian habitat to both banks was not dense, but provided some forage opportunities for water vole.
Drain D2	340	FR	0	0	Moderate	An open, mostly unshaded, and managed trapezoidal drain, with grass and tall ruderal habitat to the banksides, and occasional clumps of yellow flag iris, common reed and branched burweed present at the bank toe providing shelter and forage opportunities for water vole.
Drain D3	225	0	0	0	Low	Dense tree and hedgerow growth has shaded out the drain, leading to very few forage plant species being present, and therefore foraging opportunities to sustain water vole.
Drain D4	180	0	0	0	Low	Dense tree and hedgerow growth has shaded out the drain, leading to very few forage plant species being present, and therefore foraging opportunities to sustain water vole.

* Evidence of water vole: feeding remains (FR)

** 0 = no evidence

5 EVALUATION AND MITIGATION

The proposed developments have the potential to cause the following broad ecological impacts:

- Habitat loss/change during construction and operation;
- Direct harm to, or disturbance of, individuals of species during construction and operation; and
- Legal offences during construction.

The potential ecological effects of these impacts, and the associated mitigation to reduce these impacts, are discussed for each important ecological feature in turn.

5.1 Water Vole

The proposed Development includes the extension to the premises of companies identified in Section 2.1. Current access points and culverted sections will be used by these companies, such that there will not be a need to include additional crossing points along the boundary drain on the west of the Site (D4). Similarly, it is understood that an existing culverted crossing and access track in the north west corner of the Site will be utilised to access a section of the Site to the north of drain D1 and D2. The suitable water vole habitat within these drains will therefore be entirely retained, and furthermore, a landscape buffer maintained between the drains and the Development[6].

Whilst a further water vole survey is usually required over the summer months (July-September) to comply with water vole guidelines[7], no further survey beyond the one reported here will be required with the agreed avoidance approach above followed. However, should for whatever reason, a crossing be required across either drains D1 or D2, or works need to take place within the drains to widen the Site access, then a further summer water vole survey will be required to confirm continued absence of water vole burrows and inform the requirement for further mitigation and (if burrows are present) the requirement for a Natural England displacement or conservation licence.

During the construction phase, any cut vegetation and arisings must be raked off and removed from the works area. These arisings must not be deposited adjacent to or within drain D1, D2 or other drains onsite. Works within 9 m of any drains within the site will typically require a land drainage consent from Doncaster East Internal Drainage Board (IDB), and a buffer to this extent is included on the landscape and biodiversity mitigation plan[6].

Notwithstanding the above, the general aspects recorded within a precautionary water vole method statement accompanying the Landscape and Environmental Management Plan (LEMP) remain valid.

5.1.1 Pollution prevention

It is recommended that during the works, best working practices are in place to avoid damage to the banks of the watercourse during construction and to reduce the risk of a pollution incident occurring. These measures will need to be detailed within a Construction Environment Management Plan (CEMP). When working near water, industry best practice

[6] Arcus 2021 *'Landscape and Biodiversity Mitigation Plan'* (Drawing No.: 51064-DR-LAN-102)

[7] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. Eds Fiona Matthews and Paul Chanin. The Mammal Society, London.

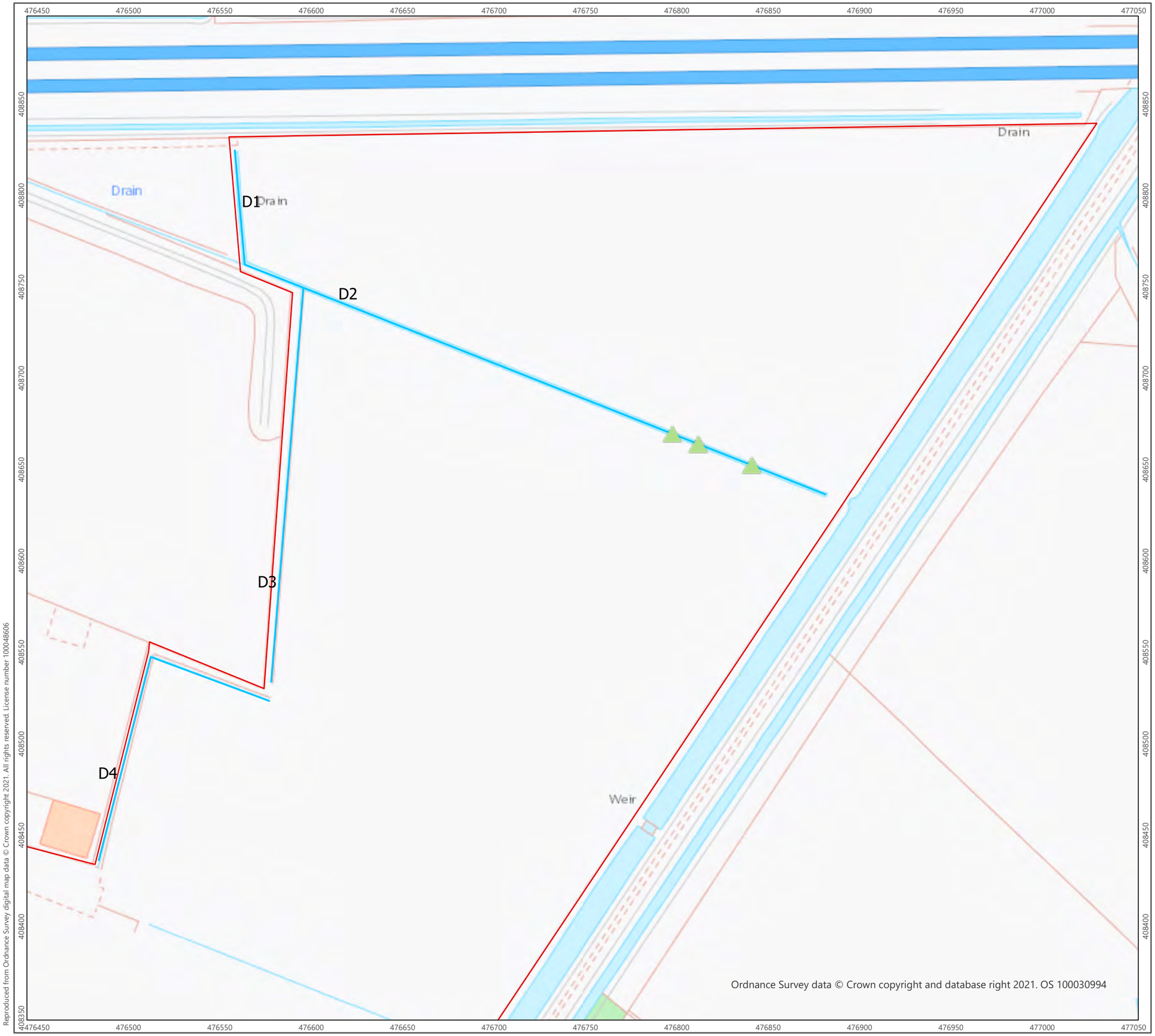
and guidance[8] on how to avoid and respond to a pollution incident is provided on the Government website[9]. In England (The Environment Agency) the guidance has been archived and is under review with no extant guidance in the public domain. Further applicable information is also provided by the Scottish Environment Protection Agency (SEPA), Natural Resources Wales (NRW), and the Northern Ireland Environment Agency (NIEA).

[8] NetRegs (2018) Guidance for Pollution Prevention Works and maintenance in or near water: GPP 5 Version 1.2 February 2018 Available: http://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf [Accessed November 2020]

[9] Gov.UK (2019) Pollution Prevention for businesses: Guidance. https://www.gov.uk/guidance/pollution-prevention-for-businesses [Accessed December 2020]

APPENDIX A – FIGURES

Figure 2: Drain Locations and Water Vole Survey Results



Surface

- Site Boundary
- Running water
- Water Vole Feeding Remains

1:2,000 Scale @ A3

0 25 50 m

N

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Checked By: DH	Date: 09/04/2020

Drain Locations and Water Vole Survey Results

Figure 2

Water Vole Survey Report
Sandtoft Industrial Estate, Belton

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APPENDIX B – PLANNING POLICY AND LEGISLATION

Wildlife and Countryside Act 1981

Water voles and reptiles are protected under the Wildlife and Countryside Act 1981[10] (as amended), making it illegal to intentionally or recklessly kill, injure or take, and intentionally or recklessly disturb whilst occupying a 'place used for shelter or protection'. The destruction of these places is also protected.

Habitat Regulations 2019 (as amended)

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[11] (the 'Habitat Regulations') are the principal means by which Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (the 'Habitats Directive') is transposed into law in England and Wales. The objective of the Habitats Directive is to protect biodiversity through the conservation of natural habitats and species of wild fauna and flora. The Directive lays down rules for the protection, management and exploitation of such habitats and species and makes it an offence to deliberately capture, kill or disturb wild animals protected under the Habitat Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

Natural Environment & Rural Communities (NERC) Act 2006

The NERC Act 2006[12]**Error! Bookmark not defined.** places a duty on local planning authorities to have due regard for biodiversity and nature conservation during the course of their operations, and thus ensures that biodiversity is a key consideration in the planning process.

Water voles are also listed as UK and London Species of Principle Importance under the NERC Act 2006[11] and local authorities and other public bodies have a legal duty to take their conservation into account. Because of this they are a material consideration in the planning process.

Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) was developed to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. The UK Post-2010 Biodiversity Framework' now (as of July 2012) succeeds the UKBAP, although the UKBAP priority species and habitats are retained through the NERC Act. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.

Wild Mammals (Protection) Act 1996

All wild mammals receive some protection under the Wild Mammals (Protection) Act 1996[13]. This Act includes offences of crushing and asphyxiation of any wild mammal with intent to inflict unnecessary suffering.

[10] Wildlife and Countryside Act 1981 (as amended). Available from https://www.legislation.gov.uk/ukpga/1981/69 [Accessed November 2020]
[11] Legislation.gov.uk *The Conservation of Habitats and Species and Planning (Amendment) (EU Exit) Regulations 2019* [online] Available at: http://www.legislation.gov.uk/ukdsi/2019/9780111176573 [Accessed September 2020]
[12] The Natural Environment and Rural Communities Act 2006
[13] Wild Mammal (Protection) Act 1996. Available from http://www.legislation.gov.uk/ukpga/1996/3/contents [Accessed November 2020]

APPENDIX C – PHOTOGRAPHS

	
Photograph 1: Drain D2 facing west	Photograph 2: Drain D2 over culvert facing west
	
Photograph 3: Drain D1 facing south towards drain D2.	Photograph 4: River Torne and culvert from drain D2.