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Watercourse Survey

Roman Bank

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Sea Island Developments Ltd.



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Summary

OS Ecology Ltd were commissioned by Sea Island Developments Ltd. to undertake a watercourse survey of the River Welland, adjacent to the Roman Bank development site. The works which have potential to impact on the watercourse comprise the development of the site for care accommodation with associated landscaping which includes drainage of surface water into the River Welland.

Summary Table	
Habitat Assessment	The watercourse is a relatively wide (~8m) slow flowing river with steep sided vegetated banks. The depth is estimated to be around 1.5m with little variation noticed in the water depth during the survey visits. Common reed (*Phragmites australis*) and reed mace (*Typha* sp.) are abundant along the banks along with bramble (*Rubus sp.*) scrub which is very dense in places. The banks on both sides of the river adjacent to the site comprise grassland which is considered to undergo limited management comprising infrequent mowing.
Otter	Otter are known to use the watercourse at least intermittently based on the spraints recorded on the River Welland during each survey. However, no evidence of resting or breeding sites were recorded during the survey. The banks of the watercourse are considered to be sub-optimal for resting and breeding due to the lack of dense cover and frequent disturbance due to the urban setting of the watercourse. It is considered the species uses the stretch of the River Welland under survey for commuting and is more likely to rest and breed in less disturbed habitats with denser cover.
Water Vole	No confirmed evidence of water vole was recorded on site or within the survey area. However, based on the records of the species in the area, the suitable habitat and the potential for the concealment of field signs there remains a low residual risk the species may still be present within the habitats adjacent to the development. There also remains a low risk the species may move into the habitats adjacent to the site, due to their transient nature.
Impact Assessment	The following impacts are predicted on the watercourse as a result of the development: • A low residual risk of impacts on water vole should the species be present within the watercourse or utilising the banks adjacent to the site during the site clearance or construction phase. • A low residual risk of impacts on otter should the species be using the dense scrub on site or the adjacent banks of the watercourse during the construction phase. • Impacts to water quality through the discharge of surface water and in the absence of a filtration system. • Impacts to water quality within the watercourse during the construction phase.

	• Degradation of adjacent habitats through light spill and in particular light spill onto the River Welland LWS.
Mitigation and Compensation Scheme	The following mitigation and compensation measures are recommended: • External lighting that may affect the value of the adjacent watercourse to wildlife will be avoided, with a detailed lighting scheme and landscaped buffer incorporated into the development to avoid light spill onto this feature. • Any excavations left open overnight will have a means of escape for mammals that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°. • If site clearance has not commenced by November 2023, a pre-commencement check should be undertaken for otter and water vole within 90 days of site clearance. • Should the pre-commencement check record water vole or otter within the watercourse adjacent to the site, the design of the site will establish an appropriate buffer to burrows and/or resting places to avoid disturbance and works will not be undertaken until a mitigation licence has been obtained from Natural England. • Should the site clearance works record water vole or otter within the watercourse works will stop and advice sought from the project ecologist. • The discharge of surface water from the development into the River Welland will follow current best practice and standards. • Landscape planting shall include berry and fruit bearing species to provide increased foraging opportunities in the local area for wildlife, including otter and water vole.

1. Introduction

Site Location

1.1 The site is located to the north east of Spalding town, Lincolnshire at an approximate central grid reference of TF 257 238. The site location is illustrated within figure 1 in the appendices.

Site Description

1.2 The site is small, approximately 0.42ha in size and comprises bramble scrub. From a review of historic aerial imagery, the site previously contained hardstanding and industrial buildings with the buildings demolished and the site abandoned sometime between 2010 and 2016.

1.3 The watercourse under survey comprises the River Welland which incorporates the River Welland LWS which lies approximately 5m west of the site.

Objectives of the Study

1.4 The objectives of this report are:

- To identify and describe any potential ecological receptors associated with the watercourse adjacent to the site.
- To identify and assess whether proposals may impact on the identified receptors.
- To identify potential mitigation, compensation or enhancement measures if required.
- To identify and detail further surveys if required.

Development Proposals

1.5 Proposals include the development of the site including care accommodation and with associated landscaping.

2. Methodology

Scope of Study

2.1 The surveys were undertaken following the guidance provided in the Water vole Conservation Handbook[1] and The Water Vole Mitigation Handbook[2]., however due to the low risk of otter using the site, details on otter field signs were also recorded to inform the impact assessment.

2.2 For the purposes of this report, the survey area comprises an area up to 500m downstream of the proposed works and up to 250m upstream. The survey area was based on site conditions and adjusted accordingly where permission to access land was not available or where health and safety restricted safe access.

2.3 Due to the presence of Spalding Lock approximately 200m north of the development, the upstream habitats were surveyed up to this feature.

2.4 The watercourse was surveyed to identify whether the following were present for legislative and planning purposes:

- Habitats of conservation value
- Priority Habitats
- Protected and Priority Species

2.5 The ecological characteristics of the site were reviewed to identify the scope of the assessment, with the zone of influence determined through professional judgement.

2.6 The survey area is illustrated within the appendices.

Desk Study

2.7 Desk study was undertaken to assess the nature of the surrounding habitats and included:

- Assessment of aerial imagery and Ordnance Survey mapping.
- A search of the MAGIC website[3] for designated sites and European protected species mitigation licences within 2km of the survey area.
- A data search request submitted to the Local Record Centre.

[1] Strachan R, Moorhouse T, Gelling M. 2011. Water Vole Conservation Handbook. Third Edition.
[2] Dean M, Strachan R, Gow D, Andrews R. 2016. The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). The Mammal Society, London.
[3] Multi Agency Geographic Information for the Countryside (www.magic.gov.uk)

Field Survey

Otter

2.8 Survey work was completed by two surveyors, working within the watercourse where possible. Due to the nature of the watercourse the banks were surveyed using watercraft in the first instance and then subsequently the banks were walked where it was safe to do so to check for field signs of otter.

2.9 The banks and any features within or adjacent to the watercourse were checked for the presence of field signs indicating otter activity and for individuals. Field signs looked for include spraint, footprints, feeding remains, otter slides, holts (underground resting sites) and couches (above ground resting sites).

2.10 Where potential holt sites were recorded, detailed inspection was undertaken of the surrounding area for field signs that confirm use.

2.11 Survey work was not completed following a period of prolonged rainfall, which would potentially result in increased water levels within the watercourse and field signs being washed away.

2.12 Where field signs of otter and other notable species were recorded, these were mapped.

2.13 The following survey equipment was utilised:

- GPS.
- Digital camera
- Binoculars

Water Vole

2.14 Survey work was undertaken following the guidance provided in the Water vole Conservation Handbook[4] and The Water Vole Mitigation Handbook[5].

2.15 The Water Vole Mitigation Handbook states that the optimal survey period for water vole survey is between mid-April and September. However, surveys should not be undertaken following periods of high-water levels as this could result in field signs having been washed away.

2.16 The guidance recommends that two surveys are undertaken during the survey period to account for seasonal changes in water vole use of a watercourse. One survey should be completed in the first half of the survey period and one in the latter half. Instances where a second survey may not be required include when the habitat is considered unsuitable

[4] Strachan R, Moorhouse T, Gelling M. 2011. Water Vole Conservation Handbook. Third Edition.
[5] Dean M, Strachan R, Gow D, Andrews R. 2016. The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). The Mammal Society, London.

for the species or where presence has been recorded on the first survey and it is considered that impacts can be assessed, and mitigation designed based on this.

2.17 Survey work was completed by two surveyors, working within the watercourse where possible. Due to the nature of the watercourse the banks were surveyed using watercraft in the first instance and then subsequently the banks were walked where it was safe to do so to check for field signs of water vole.

2.18 A detailed search of the banks, taking care to look underneath vegetation, was completed to check for field signs indicating water vole activity including droppings, latrines, burrows, footprints, feeding remains and for water vole themselves.

2.19 Where field signs of water vole and other notable species were recorded, these were mapped.

2.20 The following survey equipment was utilised:

- GPS.
- Digital camera
- Binoculars

Survey Conditions

2.21 The surveys were undertaken on the 9th November 2022, 13th June 2023 and 16th august 2023 under the following weather conditions:

Table 1: Watercourse Survey Conditions

Date	Temperature	Cloud Cover	Precipitation	Wind Conditions
9th November 2023	13°C	30%	Dry	F2
13th June 2023	25°C	20%	Dry	F2
16th August 2023	21°C	30%	Dry	F1

2.22 An initial watercourse assessment was undertaken on the 9th November 2022, outside of the recommend period for water vole survey due to the timing of commission. Subsequently, an additional two water vole surveys were undertaken in 2023 following guidance[2] and spaced two months apart to account for potential seasonal variables.

Limitations to Survey

2.23 The banks were dense with vegetation at the time of the surveys and as such it is possible field signs may have been concealed. However, the watercourse was surveyed both from watercraft within the watercourse and from the banks, where it was safe to do so, which is considered to have minimised this limitation.

Assessment Methodology

2.24 Guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) is utilised to provide habitat valuations.

2.25 The level of value of specific ecological receptors is assigned using a geographic frame of reference. For, example international value being most important (SACs, SPAs and pSPAs), then national (SSSIs), regional, county (LWS), district (LNR), local and lastly, within the immediate zone of influence of the site only (low).

2.26 In terms of species, should the population within the site constitute greater than 1% of the geographic population, it would be considered significant at that level. In addition, presence of designated sites, scarce species and or quality[6]/diversity of habitats are used to guide that valuation

[6] Quality can be subjective and vary in different geographic areas. Reasoned professional judgement is therefore used to inform the assessment.

3. Results

Desk Study

European Protected Species Licensing

3.1 The MAGIC website did not identify any granted Natural England European Protected Species licences for water vole or otter within 2km of the site[7].

General Land Use

3.2 A review of aerial imagery and Ordnance Survey mapping highlighted that the general land use in the surrounding area is dominated by residential housing to the east and industrial units to the west.

Data Search

Local Records Centre

3.3 The following table summarises the data search results from Lincolnshire Environmental Records Centre. Records were provided for all protected and notable species within 2km of the site, of which only riparian species are listed. The full data search can be provided on request, and more detail is provided with the Ecological Appraisal.

Table 2: Records from LRC Data Search

Taxon	Species	No. of Records within Search Area	Records of Particular Note
Mammals (excluding bats)	Eurasian Otter	21	Most recently recorded in 2019 with a record from 2017 on the River Welland.
	European Water Vole	148	Most recently recorded in 2020 approximately 1.7km south on the River Welland. The majority of records are associated with the Coronation Channel which diverts flow from the River Welland.

[7] The dataset is noted as having been last updated in January 2022.

Field Survey

Habitats

Table 3: Watercourse Description

The watercourse is a relatively wide (~8m) slow flowing river with steep sided soft vegetated banks. The flow depth is estimated to be around 1.5m with little variation noticed in the water depth during the survey visits. Common reed (*Phragmites australis*) and reed mace (*Typha* sp.) are abundant along the banks along with bramble (*Rubus sp.*) scrub which is scattered in places. The banks on both sides comprise grassland which is considered to undergo limited management comprising infrequent mowing. On the majority of survey visits the grassland had a sward height of approximately 40cm and included species such as cockfoot grass (*Dactylis glomerata*), Yorkshire fog (*Holcus lannatus*), creeping thistle (*Cirsium arvense*), common nettle (*Urtica diocia*), false oat grass (*Arrhenatherum elatius*), common ragwort (*Jacobaea vulgaris*), rosebay willowherb (*Chamaenerion angustifolium*) and hedge bindweed (*Calystegia sepium*).



Photo 1: The watercourse banks adjacent to the site (June).



Photo 2: The section of the River Welland adjacent to the site, with the site pictured on the right.

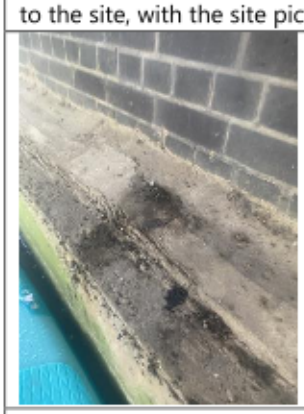


Photo 3: Otter spraint recorded underneath A151 bridge on concrete ledge.



Photo 4: The watercourse banks adjacent to the site (August).

Otter

3.4 A map of the field survey results is provided in the appendices.

3.5 On all three survey visits fresh otter spraint was recorded under the A151 bridge (see photo 3 above). These spraints were considered to be recent on each occasion and as such it is considered the species is present within the watercourse at least intermittently. The spraints were located 240m downstream of the site.

3.6 No field signs of otter were recorded associated with the site or elsewhere along the stretch of watercourse surveyed.

Water Vole

3.7 No field signs of water vole were recorded during the surveys and as such survey focused on the suitability of the habitats present.

3.8 The majority of the river comprises soft steep-sided vegetated banks which provide suitable habitat for the species (photo 1,3 and 4), limited by the urban setting of the site and potential disturbance. The channel is approximately 8m wide and 1.5m deep mostly with no precipitable flow and occasionally with rippled flow.

3.9 The habitats immediately adjacent to the site comprise tussocky banked grassland with bramble scrub in places. At the waters edge the submergent vegetation comprised a narrow belt of reeds which would provide suitable habitat for water vole, should they be present.

4. Site Assessment

Assessment of Survey Findings

4.1 The habitats on site, comprising of a block of dense scrub, are considered to be of local ecological value due to the absence of this habitat in the immediate area and the proximity of the site to the River Welland LWS. It is considered that the scrub may offer some functional habitat to this local wildlife site.

4.2 The River Welland LWS is considered to be of at least local value, and when considered in the context of the wider landscape and as a functional habitat it is likely to be of higher ecological value.

Water Vole

4.3 No confirmed evidence of water vole was recorded on site,

4.4 However, based on the records of the species in the area, the suitable habitat and the potential for the concealment of field signs there remains a low residual risk the species may still be present within the habitats adjacent to the development. There also remains a low risk the species may move into the site, due to their transient nature.

Otter

4.5 Otter are known to use the watercourse at least intermittently based on the spraints recorded on the River Welland during each survey. However, no evidence of resting or breeding sites were recorded during the survey.

4.6 The banks of the watercourse are considered to be sub-optimal for resting and breeding due to the lack of dense cover and frequent disturbance due to the urban setting of the watercourse. It is considered the species uses the stretch of the River Welland under survey for commuting and is more likely to rest and breed in less disturbed habitats with denser cover.

5. Impacts

5.1 The following impacts are based on the survey work to date and the understanding that the Client wishes to undertake the following:

- Develop the site for care accommodation and with associated landscaping.

5.2 As a result of the assessment completed and the nature of the proposed works, the likely impacts specifically to riparian species, without appropriate avoidance measures, mitigation and/or compensation scheme, are:

- A low residual risk of impacts on water vole should the species be present within the watercourse or utilising the banks adjacent to the site during the site clearance or construction phase.
- A low residual risk of impacts on otter should the species be using the dense scrub on site or the adjacent banks of the watercourse during the construction phase.
- Impacts to water quality through the discharge of surface water in the absence of a filtration system.
- Impacts to water quality within the watercourse during the construction phase.
- Degradation of adjacent habitats through light spill and in particular light spill onto the River Welland LWS.

6. Mitigation and Compensation Scheme

Avoidance Measures

6.1 The following measures should be incorporated into the design of the scheme to avoid impacts on riparian species specifically:

- External lighting that may affect the value of the adjacent watercourse to wildlife, will be avoided with a detailed lighting scheme and landscaped buffer incorporated into the development to avoid light spill onto this feature.
- Any excavations left open overnight will have a means of escape for mammals that may become trapped in the form of a ramp at least 300mm in width and angled no greater than 45°.

Mitigation Strategy

6.2 The following mitigation strategy should be adhered to:

- If site clearance has not commenced by November 2023, a pre-commencement check should be undertaken for otter and water vole within 90 days prior to site clearance.
- Should the pre-commencement check record water vole or otter within the watercourse adjacent to the site, the design of the site will establish an appropriate buffer to burrows and/or resting places to avoid disturbance and works will not be undertaken until a mitigation licence has been obtained from Natural England.
- Should the site clearance work record water vole or otter, or their field signs, within the watercourse works will stop and advice sought from the project ecologist.
- The discharge of surface water from the development into the River Welland will follow current best practice and standards.

Compensation Scheme

6.3 The following compensation scheme should be adhered to:

- Landscape planting shall include berry and fruit bearing species to provide increased foraging opportunities in the local area for wildlife, including otter and water vole.

Appendix 1 – Policy and Legislation

Planning Policy

National Planning Policy Framework (NPPF)[8]

The revised National Planning Policy Framework sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. Planning law requires that applications for planning permission be determined in accordance with the development plan. The key paragraphs from the relating to the natural environment are detailed below:

Table 4: Ecologically Relevant Paragraphs of the NPPF

Paragraph	Statement
170	Planning policies and decisions should contribute to and enhance the natural and local environment by: a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
171	Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework[9]; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
172	Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads[10]. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major

[8] NPPF February 2019 (https://www.gov.uk/government/publications/national-planning-policy-framework--2)
[9] Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.
[10] English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters.

Table 4: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	**Statement**
	development[11] other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of: a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy; b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
173	Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.
174	To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity[12]; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation[13]; and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
175	When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), b) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; c) 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; d) 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[14] and a suitable compensation strategy exists; and development whose primary objective is to conserve or enhance biodiversity should be

[11] For the purposes of paragraphs 172 and 173, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

[12] Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

[13] Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

[14] For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

Table 4: Ecologically Relevant Paragraphs of the NPPF	
Paragraph	**Statement**
	supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.
176	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[15]; and 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.
177	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.

Government Circular ODPM 06/2005 Biodiversity and Geological Conservation[16] (England only)

This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

Part IV - Conservation of Species protected by Law details that the presence of a protected species is a material consideration when considering a development proposal that may result in harm to the species or its habitat and that planning authorities must have regard to species protected under the Habitat Regulations.

It goes on to say that: *it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted.*

Natural Environment and Rural Communities (NERC) Act 2006[17] [18]

Section 40 – To conserve biodiversity

Section 40 puts a duty on public authorities to conserve biodiversity when undertaking its duties and functions,

[15] Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.
[16]ODPM Circular 06/2005 Office of the Deputy Prime Minister Eland House, Bressenden Place, London SWIE 5DU Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System
[17] https://www.legislation.gov.uk/ukpga/2006/16/section/40
[18] https://www.legislation.gov.uk/ukpga/2006/16/section/41

Section 41 – Biodiversity list and Action

Section 41 – Requires the Secretary of State *to publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity*. They must also *take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section or promote the taking by others of such steps*.

The 2007 lists were superseded by the UK Post-2010 Biodiversity Framework.

Table 5: UK Priority Habitats (excl. marine habitats)[19]

UK BAP broad habitat	UK BAP priority habitat
Rivers and Streams	Rivers
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes
	Ponds
	Mesotrophic Lakes
	Eutrophic Standing Waters
	Aquifer Fed Naturally Fluctuating Water Bodies
Arable and Horticultural	Arable Field Margins
Boundary and Linear Features	Hedgerows
Broadleaved, Mixed and Yew Woodland	Traditional Orchards
	Wood-Pasture and Parkland
	Upland Oakwood
	Lowland Beech and Yew Woodland
	Upland Mixed Ashwoods
	Wet Woodland
	Lowland Mixed Deciduous Woodland
	Upland Birchwoods
Coniferous Woodland	Native Pine Woodlands
Acid Grassland	Lowland Dry Acid Grassland
Calcareous Grassland	Lowland Calcareous Grassland
	Upland Calcareous Grassland
Neutral Grassland	Lowland Meadows
	Upland Hay Meadows
Improved Grassland	Coastal and Floodplain Grazing Marsh
Dwarf Shrub Heath	Lowland Heathland
	Upland Heathland
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps
	Purple Moor Grass and Rush Pastures
	Lowland Fens

[19] http://jncc.defra.gov.uk/page-5706

	Reedbeds
Bogs	Lowland Raised Bog
	Blanket Bog
Montane Habitats	Mountain Heaths and Willow Scrub
Inland Rock	Inland Rock Outcrop and Scree Habitats
	Calaminarian Grasslands
	Open Mosaic Habitats on Previously Developed Land
	Limestone Pavements
Supralittoral Rock	Maritime Cliff and Slopes
Supralittoral Sediment	Coastal Vegetated Shingle
	Machair
	Coastal Sand Dunes

Protected Species Legislation

European Protected Species

European Protected Species (EPS) are species of plants and animals (other than birds) protected by law throughout the European Union. They are listed in Annexes II and IV of the European Habitats Directive and receive full protection under The Conservation of Species and Habitats Regulations 2017 (as amended). This make it an offence to:

- deliberately capture, injure or kill any European Protected Species (EPS)
- deliberately disturb any European Protected Species (EPS);
- damage or destroy a breeding site or place of rest or shelter used by any European Protected Species (EPS).

The Wildlife and Countryside Act 1981 (as amended) adds further protection by making it an offence to intentionally or recklessly[20] disturb an EPS while it is occupying a structure or place which it uses for shelter or protection, or to obstruct access to any structure or place the species uses for shelter or protection.

Table 6: European Protected Species relevant to the UK

Animals		**Plants**	
All bat species	Great Crested Newt	Yellow marsh saxifrage	Creeping marshwort
Large blue butterfly	Otter	Shore dock	Slender naiad
Wild cat	Smooth snake	Killarney fern	Fen Orchid
Dolphins, porpoises and whales (all species)	Sturgeon fish	Early gentian	Floating-leaved water plantain

[20] Under the Countryside and Rights of Way Act 2000 (CROW Act) extended the protection to cover reckless damage or disturbance

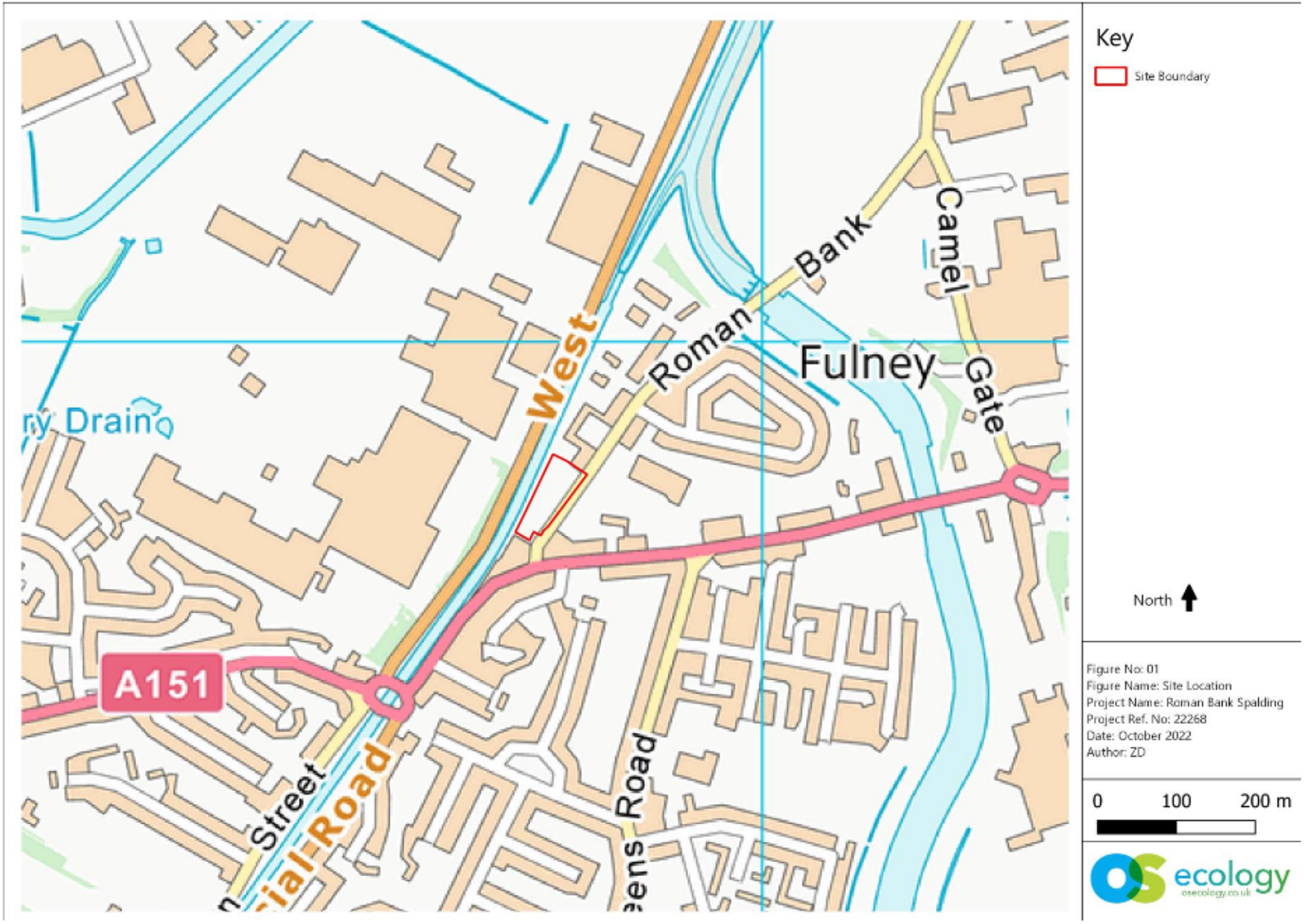
Dormouse	Natterjack toad	Lady's slipper	
Sand lizard	Pool Frog		
Fisher's Estuarine Moth	Snail, Lesser Whirlpool Ram's-horn		
Marine turtles			

Other Protected Species

Table 7: Other Protected Species

Species	Legislation	Level of Protection
Water vole	Wildlife and Countryside Act 1981 (as amended) Wild Mammals (Protection) Act 1996	The species is listed on Schedule 5 of the Wildlife and Countryside Act (1981) makes the following actions offences: • intentionally killing, injuring, or taking water vole • intentionally or recklessly damaging, destroying or obstructing access to any structure or place used for shelter or protection • disturbing water vole whilst they are using any structure or place used for shelter or protection Under the Wild Mammals (Protection) Act, water vole are protected from unnecessary suffering by a number of methods.

Appendix 2 – Figures


Key
Site Boundary
North
Figure No: 01
Figure Name: Site Location
Project Name: Roman Bank Spalding
Project Ref. No: 22268
Date: October 2022
Author: ZD
0
100
200 m
West
Roman
Bank
Camel
Fulney
Gate
A151
Street
Road
Road



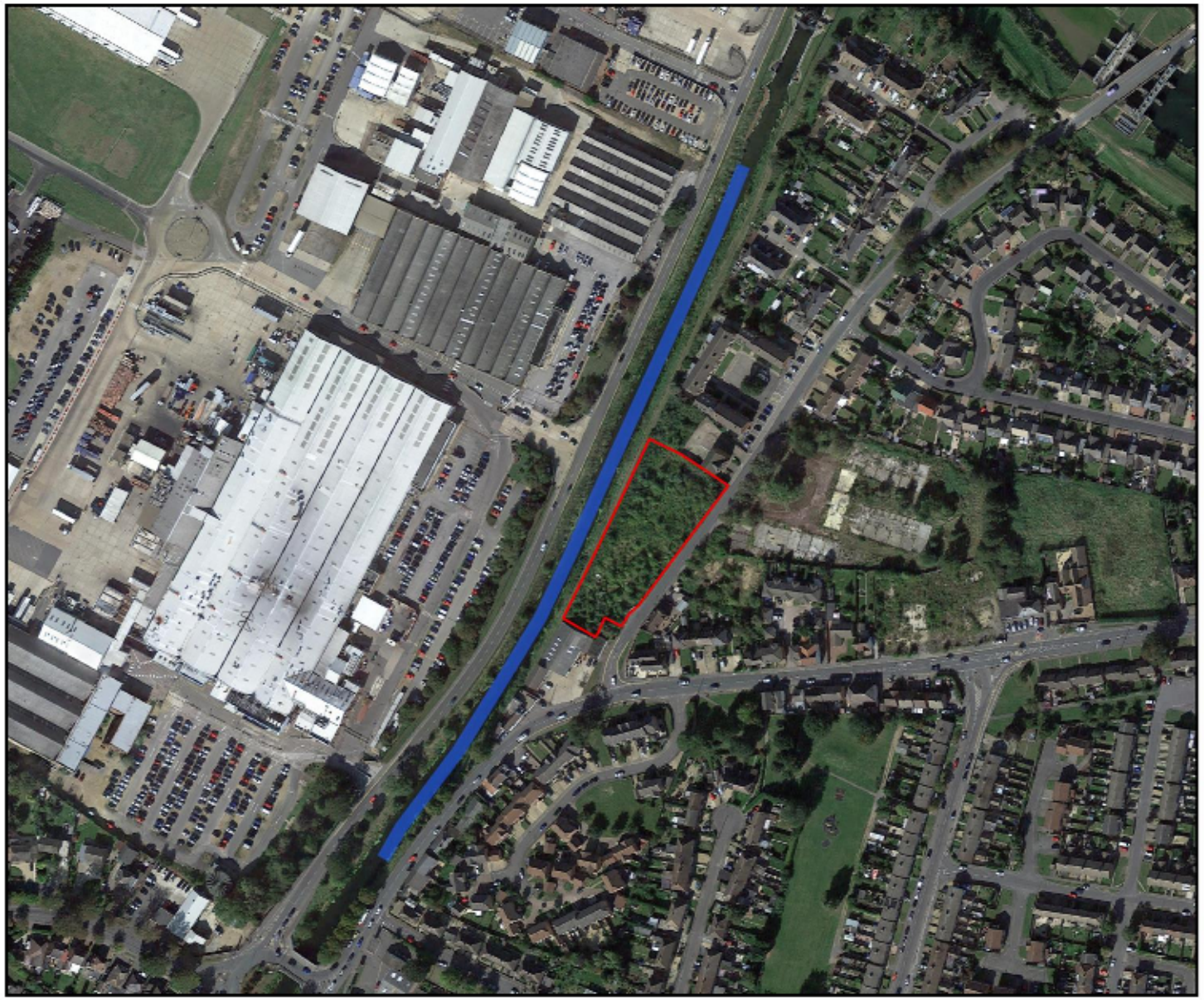
Key

Site Boundary

North

Figure No: 02
Figure Name: Site Boundary
Project Name: Roman Bank Spalding
Project Ref. No: 22268
Date: September 2022
Author: ZD

0 10 20 m



Key

Site Boundary

WC Survey Area

North

Figure Name: Watercourse Survey Area
Project Name: Roman Bank, Spalding
Project Ref. No: 22268
Date: October 2022
Author: ZD

0 50 100 m


Key
Site Boundary
Survey Area
Watercouse Results
Otter Spraint
Kingfisher
North
Figure No: n/a
Figure Name: Watercourse Survey Results
Project Name: Roman Bank, Spalding
Project Ref. No: 22268
Date: November 2022
Author: ZD
0
50
100 m