



Land at Hartnoll's Farm, Tiverton, Devon

Ecological Appraisal

Date: 21 March 2014

For: Waddeton Park Ltd

Ref: eg12464JW

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ABBREVIATIONS

BAP	Biodiversity Action Plan
CEMP	Construction Environmental Management Plan
CRoW	Countryside and Rights of Way Act
CWS	County Wildlife Site
EU	European Union
MAGIC	Multi-Agency Geographic Information for the Countryside
MCIEEM	Member of Chartered Institute of Ecology and Environmental Management
MCIWEM	Member of Chartered Institution of Water and Environmental Management
NERC	Natural Environment and Rural Communities Act
NPPF	National Planning Policy Framework
OSWI	Other Sites of Wildlife Interest
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TN	Target Note
UK	United Kingdom
UWS	Unconfirmed Wildlife Sites
WCA	Wildlife and Countryside Act

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EXECUTIVE SUMMARY

Engain was instructed by Waddeton Park Ltd to undertake an ecological appraisal of land at Hartnoll's Farm of a proposed development site as part of the Tiverton East Urban Extension, Devon.

The extended phase 1 habitat survey included an evaluation of habitats present and is extended to evaluate the potential for protected and notable species. The ecological appraisal also evaluates the potential implications of the proposed development upon designated wildlife sites within 2 km – 8 km of the site.

The site is of moderate ecological value overall, with some habitat diversity and features of particular ecological value, including Devon hedgerows, mature trees and semi-improved woodland. The site has good ecological connectivity with the wider landscape via the Grand Western canal corridor, hedgerows and open farmed countryside.

Designated Sites

There are two statutory designated and 16 non-statutory designated sites within 2 km of the site. Due to the distance of the proposed site from the majority of designated sites and the disturbance and use of intervening habitat eg streams and rivers, the development is unlikely to have a negative effect upon these sites.

The Tiverton Branch Railway Unconfirmed Wildlife Site (UWS) is located within the site boundary extending from east to west, partly bisecting the southern sections of the site. This site will be protected from the development with habitat retention and creation at the edges of the UWS and with alternative green space provided to limit impacts from resident's use. The site will be retained within a well connected habitat corridor linking to the Grand Western Canal corridor.

Residents of the proposed development are likely to use public footpaths that pass through the Grand Western Canal County Wildlife Site adjacent to the proposal site. Public green space will be provided as part of the proposed development which is likely to limited the extent of additional use. It is considered unlikely to be significant to these sites.

Tidcombe Lane Fen Site of Special Scientific Interest (SSSI) lies approximately 0.8 km to the west. A drainage strategy will ensure that water discharged from the site will not adversely effect water flow, quantity or quality into Ailsa Brook and Tidcombe Lane Fen SSSI to the west.

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Protected Species and Habitats

Appropriate detailed species surveys will be carried out for bats, great crested newts (*Triturus cristatus*), dormice (*Muscardinus avellanarius*), badgers (*Meles meles*), otters (*Lutra lutra*) and water voles (*Arvicola amphibious*).

Ecological Enhancement

The following enhancement measures could be considered within the plans:

- Creation of new habitat to result in an increase in overall habitat diversity with new species rich Devon hedges, new woodland planting, species rich grassland, scrub and water features;
- Green linkages or 'wildlife corridors' linking open space to habitats in the landscape surrounding the site;
- The inclusion of appropriate locally native plant species in landscape planting plans. The local Biodiversity Action Plan (BAP) could be used as a guide to appropriate species/habitats;
- Beneficial management of the adjacent Grand Western Canal for wildlife;
- Installation of bat, bird and insect boxes on trees and buildings at the site; and
- Management and enhancement of hedgerows and other retained habitats to improve ecological quality and structure.

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1 INTRODUCTION

- 1.1 Engain was requested by Waddeton Park Ltd to undertake an ecological appraisal of a proposed development site on land at Hartnoll's Farm as part of the Tiverton East Urban Extension, Devon. This report sets out the findings of an extended phase 1 ecological survey and a review of ecological data records for the site.
- 1.2 The site is being considered for mixed use development.
- 1.3 The ecological appraisal includes an evaluation of habitats present and the potential for protected species. This report presents the findings of the ecological survey with the collated data records, the evaluation of the current ecological status of the site, the assessment of the potential effects of the use of the developed area upon sensitive ecological resources within 2 km to 8 km of the site, and any additional ecological investigation and/or mitigation. This report also sets out the proposed ecological enhancement for the site.

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2 SITE LOCATION AND GENERAL DESCRIPTION

Site Location

- 2.1 The site is located to the east of Tiverton, approximately 2 km to the east of the town centre. The majority of site currently consists of arable land. The Ordnance Survey grid reference for the centre of the site is SS 978 133.

General Description

- 2.2 The total area of the proposed development at the site is approximately 89 hectares.
- 2.3 The site is bounded to the north by Post Hill and an unnamed road to the west. The Grand Western Canal and Country Park creates the southern and eastern boundary. Hartnoll's Business Park and Hartnoll's Farm itself are located in the north-western area of the site and on the eastern boundary respectively. These are not included within the survey site. There are three neighbouring residential properties at the north western boundary area of the site.
- 2.4 In a broader context the site area is well connected to the wider landscape by the adjacent canal, hedgerows, woodland and tributaries of the River Lowman to the west. The wider landscape consists of arable and cattle grazed farmland.
- 2.5 The soil at the site consists of two types of soil: freely draining slightly acid loamy soils; and loamy and clayey floodplain soils (UK Government's Countryside Geographic Information website (MAGIC))¹.

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3 LEGISLATION AND POLICY

Relevant Legislation

- 3.1 The two principal European Union (EU) Directives relating to nature conservation are the EU Habitats Directive (1992)² and the EU Birds Directive (1979)³. Both of these Directives are transposed into National legislation through the Conservation of Habitats and Species (Amendment) Regulations 2011⁴. The Birds Directive is also implemented through the Wildlife and Countryside Act (WCA) 1981⁵ (as amended).
- 3.2 In addition, the Wildlife and Countryside Act 1981 provides protection to other habitats and species at a national level. The Countryside and Rights of Way Act 2000 (CRoW)⁶ adds additional enforcement, making offences arrestable, increasing time limits for some prosecutions and increasing penalties.
- 3.3 Badgers and their sett are protected under the Protection of Badgers Act 1992⁷ as amended by The Hunting Act 2004⁸.
- 3.4 The EU Habitats Directive makes provision for the designation of wildlife conservation areas as Special Areas of Conservation (SAC). The EU Birds Directive makes provision for the designation of conservation areas for rare and vulnerable birds as Special Protection Areas (SPAs).
- 3.5 The Wildlife and Countryside Act 1981 with further protection from the CRoW Act 2000 makes provision for the designation of Sites of Special Scientific Interest (SSSI).
- 3.6 The Natural Environment and Rural Communities Act (NERC) 2006⁹ extends the biodiversity duty set out in the CRoW Act 2000 to public bodies and statutory undertakers to take due regard to the conservation of biodiversity. The planning authority has a duty to ensure that there is no net loss of biodiversity on a site, no net loss in habitat connectivity and there is provision for adequate biodiversity enhancement.

Relevant Policy

- 3.7 Regional and local planning authorities are to follow key principles to ensure that the potential impacts of planning decisions on biodiversity conservation

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are fully considered. The National Planning Policy Framework (NPPF)¹⁰ sets out the Government's policies for the protection and enhancement of biodiversity through the planning system. The NPPF encourages the planning system to contribute to and enhance natural and local environments, through minimising the impacts on biodiversity and providing net gains in biodiversity where possible.

- 3.8 Planning authorities should follow key principles to ensure that the potential impacts of planning decisions on biodiversity conservation are considered. Circular 06/05: Biodiversity and Geological Conservation¹¹ provides guidance on the application of the law relating to planning and nature conservation and complements the NPPF.
- 3.9 The presence of species protected under UK and European legislation are a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm of the species or habitat. Therefore the results of ecological appraisals and protected species surveys are required by planning authorities to inform a planning application.
- 3.10 The UK Post-2010 Biodiversity Framework is the UK Government's response to their renewed commitment to the Convention on Biological Diversity, following a summit in Nagoya, Japan in 2010, which identified targets to halt biodiversity loss. The UK Framework identifies the requirements to galvanise and complement the strategies for England, Scotland, Ireland and Wales, in pursuit of the targets.
- 3.11 The Natural Environment White Paper and Biodiversity 2020: A strategy for England's wildlife and ecosystem services¹², are the country level strategies for England. The 56 habitats and 943 species listed under Section 41 of the NERC Act are those identified as requiring action in the UK Biodiversity Action Plan and continue to be regarded as conservation priorities in England under the UK Framework.
- 3.12 Local Biodiversity Action Plans (BAPs) give valuable information on local conservation priorities. Devon Biodiversity Action Plan¹³ is the local BAP relevant to this site.

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4 METHODOLOGY

Desk Study of Existing Ecological Records

- 4.1 A desk study of existing ecological records for the site and the immediate surrounding land (to within a radius of 2 km for protected and notable species and non-statutory sites and 5 km for statutory designated habitats (8 km for sites designated for bats) was conducted in April 2013. An assessment of site plans and aerial photographs has been undertaken in conjunction with review of web based information.
- 4.2 During this process, the Devon Biodiversity Record Centre has been contacted in conjunction with a review of the National Biodiversity Network¹⁴ and Natural England's Nature on the Map¹⁵ to obtain records for protected and notable species and information on sites with non-statutory conservation designations.
- 4.3 Information on sites with statutory conservation designations was found using the UK Government's Countryside Geographic Information website (MAGIC).

Extended Phase 1 Habitat Survey

- 4.4 An extended Phase 1 habitat survey was conducted on the 5th, 19th & 20th July 2012 by Tessa Pepler, BSc (Hons) MSc MCIEEM, Jen Weaver BSc (Hons) MCIEEM and Alex Crossman BSc (Hons) MCIEEM, all experienced ecologists. Jen Weaver has since visited the site, during August and September 2013 to verify the survey findings.
- 4.5 The survey is based on the phase 1 habitat survey methodology (Joint Nature Conservancy Council 2007)¹⁶. In this, the main habitat types present within the survey area are mapped using standard codes. The additional (extended) work relates to the assessment of the suitability of habitats present to support protected species and includes searching for the more obvious signs of such species.
- 4.6 Target notes (shown on the ecological figure accompanying this report) are used to indicate ecological points of interest and describe details of the habitats found.

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- 4.7 Particular protected species considered during the survey included badgers (*Meles meles*), dormice (*Muscardinus avellanarius*), great crested newts (*Triturus cristatus*), otters (*Lutra lutra*), water voles (*Arvicola amphibious*), reptiles, nesting birds and bats. The potential or actual presence of any other species which could present a constraint to the proposed development was also noted (eg invasive species).

Limitations and Assumptions

- 4.8 Engain cannot verify the accuracy of third party information.
- 4.9 Extended phase 1 habitat surveys are not definitive and represent a snapshot of the ecological status of a site. Data records help to provide a historical context, however the absence of a species does not ensure that it does not use the site.

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5 ECOLOGICAL FINDINGS

5.1 The following section describes the main habitats and notable species (or signs of) recorded during the survey and information collated from the desk study. Appendix 1 provides a plan of the habitats present on the site and should be referred to throughout this section. Target Notes (TN 1 to TN 3) show particular points of ecological interest.

Desk Study Findings

5.2 Ecological data records were provided by MAGIC map and Devon Biodiversity Record Centre and the following summarises this information.

Statutory Designated Site Records

5.3 There are two statutory designated wildlife sites within 2 km of the site. Table 5-1 provides a summary of the statutory designated wildlife sites.

Table 5-1 Statutory Designated Wildlife Sites within 5 km of the Site.

Site Name	Statutory Designation	Distance and Direction from Site	Size (Ha)	Designating Features
Tidcombe Lane Fen (SS91/077)	Site of Special Scientific Interest	800 m to the west	7	Species-rich fen and willow carr
Grand Western Canal Country Park	Local Nature Reserve	Immediately adjacent to the south east	51.4	Waterfowl and bird species, hedgerows, bankside vegetation, otters, orchids and insects.

Non-Statutory Designated Site Records

5.4 There are 16 non-statutory designated sites within 2 km of the site. Table 5-2 provides a summary of the non-statutory designated wildlife sites.

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Table 5-2 Non-Statutory Designated Wildlife Sites within 2 km of the Site

File Code	Site Name	Area (ha)	Description	Status
SS91/076	Knightshayes Park	79.1	Parkland with veteran trees. Lichen, saproxylic invertebrate and bat interest	CWS
SS91/078	Snake's Wood	5.5	Ancient semi-natural woodland, wet in areas	CWS
SS91/079	Grand Western Canal	27.5	Canal with associated wetland flora & marshy grassland	CWS/Country Park
SS91/083	The Guoil	10.8	Ancient and secondary broadleaved woodland along a steep-sided river valley	CWS
SS91/096	South Hill Plantation and Field	5.8	Secondary broadleaved woodland and semi-improved neutral grassland	OSWI
ST01/043	Lower Coombe Farm Wood	1.1	Broadleaved woodland	UWS
SS91/091	May's Copse	7.9	Broadleaved woodland	UWS
SS91/092	Turley Down	3.2	Broadleaved woodland	UWS
SS91/081	Cranmore Castle Wood	5.1	Broadleaved woodland	UWS
SS91/086	Bingwell Wood	3.5	Broadleaved woodland	UWS
SS91/088	Tidcombe Brake & Ridge Copse	4.9	Broadleaved woodland	UWS
SS91/089	Warnicombe Plantation	2.8	Broadleaved woodland	UWS
SS91/090	Thornes Wood	3.4	Broadleaved woodland	UWS
SS91/080	Tiverton Branch Railway	2.7	Species-rich disused railway line	UWS
New Site	Knightshayes	39.7	Parkland with veteran trees.	Proposed CWS
	Willand - Cullompton Marsh	261	Possible floodplain grazing marsh	UWS

Key: CWS – County Wildlife Site
OSWI - Other Sites of Wildlife Interest
UWS – Unconfirmed Wildlife Sites

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Habitats and Species of Principal Importance

5.5 There are several habitats of principal importance and Devon Local Biodiversity Action Plan habitats within 1 km of the site recorded on the Natural England Nature on the Map. Habitats of principle importance are marked with (*) and Devon Biodiversity Action Plan habitats with a (**):

- Deciduous woodland*; and
- Ancient and semi-natural woodland.

5.6 There are several habitats of principal importance and Devon Biodiversity Action Plan species within the site. Habitats of principal importance are marked with (*) and Devon BAP habitats with a (**):

- Hedgerows*;
- Species rich hedges**;
- Purple moor grass and rush pasture,*
- Traditional orchard*;
- Fens*;
- Deciduous woodland*; and
- Streams/rivers* **.

5.7 Species of principal importance and Devon BAP species the following species that are relevant to the habitat within and adjacent to the site. UK BAP species are marked with (*) and Devon BAP species with a (**):

- House sparrow (*Passer domesticus*)*;
- Bullfinch (*Pyrrhula pyrrhula*)*;
- Starling (*Sturnus vulgaris*)*;
- Song thrush (*Turdus philomelos*)*;
- Yellowhammer (*Emberiza citronella*)*;
- Linnet (*Carduelis cannabina*)*;
- Skylark (*Alauda arvensis*)*;
- Barn owl (*Tyto alba*)**;
- Brown hare (*Lepus europaeus*)* **;
- Hedgehog (*Erinaceus europaeus*);
- Harvest mouse (*Micromys minutus*)*;
- Dormouse (*Muscardinus avellanarius*)* **;

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- Otter* **;
- Water vole* **;
- Bat species* **;
- Golden hair lichen (*Teloschistes flavicans*)**;
- Primrose (*Primula vulgaris*)**; and
- Fresh water pearl mussel (*Margaritifera margaritifera* L.)**.

Habitats and Flora

Manmade Structures

- 5.8 An aqueduct was located on the eastern boundary of the site located at the intersection between a dismantled railway line and the Grand Western Canal (Appendix 1, TN 1).

Watercourses

- 5.9 The southern and eastern boundary of the site borders the Grand Western Canal. There is a towpath that runs in between the canal and the site boundary. Species recorded along the canal included bulrush, yellow flag iris.

Grassland

- 5.10 The majority of the site comprises improved grassland, much of it grazed by cattle. Species recorded within the improved grassland included perennial ryegrass (*Lolium perenne*), chickweed (*Stellaria* sp.), dandelion (*Taraxacum officinale*), thale cress (*Arabidopsis thaliana*), hogweed (*Heracleum sphondylium*), meadow grasses (*Poa* sp.), common nettle (*Urtica dioica*), cleavers (*Galium aparine*) and red dead nettle (*Lamium purpureum*) around the edges.
- 5.11 There were several arable fields planted with rape with come field margins present, containing speedwell (*Veronica* sp.), thistle (*Cirsium* sp.), and broad-leaved dock (*Rumex obtusifolius*). The crop contained several arable weeds including shepherd's purse (*Capsella bursa-pastoris*), creeping buttercup (*Ranunculus repens*), and cleavers.

Hedgerows

- 5.12 Hedgerows contained ash (*Fraxinus excelsior*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), rose (*Rosa* sp.), hazel (*Corylus avellana*),

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honeysuckle (*Lonicera periclymenum*), holly (*Ilex aquifolium*), gorse (*Ulex europaeus*), beech (*Fagus sylvatica*) and willow (*Salix* sp.).

- 5.13 Several hedgerows are on Devon banks with diverse ground flora and support stone walls.
- 5.14 Ground flora within the hedgerows comprised cleavers, common nettle, broad leaved dock, red campion (*Silene dioica*), red dead nettle, hogweed, ground elder (*Aegopodium podagraria*), lords and ladies (*Arum maculatum*), dogs mercury (*Mercurialis perennis*), lesser celandine (*Ranunculus ficaria*), cow parsley (*Anthriscus sylvestris*), bush vetch (*Vicia sepium*), hemlock (*Conium maculatum*), bramble (*Rubus fruticosus* agg) and primrose (*Primula vulgaris*).

Stands of Mature/Immature Trees

- 5.15 The disused railway line which partially bisects the southern end of the site and the tree lined corridor along the Grand Western Canal is dominated by mature ash and pedunculate oak (*Quercus robur*) as well as a diverse woodland ground flora and hazel and hawthorn dominated understorey.

Tall Herb, Tall Ruderal, Short Perennial

- 5.16 There is a towpath on the northern bank of the Grand Western Canal with dense verge vegetation. Species recorded included hemlock (*Conium maculatum*), common nettles, lesser celandine (*Ranunculus ficaria*), bluebell (*Hyacinthoides non-scripta*), hogweed, broad-leaved dock, cleavers, red campion (*Silene dioica*) and common spotted orchid (*Dactylorhiza fuchsii*).

Scrub

- 5.17 There are several areas of dense and scattered scrub within the site. The majority of these areas are dominated by bramble. Other species present include field rose (*Rosa arvensis*).

Invasive and Notifiable Species

- 5.18 There was no evidence of invasive plant species during the survey even though/although the time of year was optimal/sub-optimal for species such as Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*).

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Fauna

Bats

- 5.19 There was no evidence of bats using the site during the site visit. There are several mature trees within the site that may provide suitable places of shelter for bats. Some of the trees have holes, cracks and fissures that could potentially be utilised by bats. Of specific interest are mature oak trees.
- 5.20 The woodland, ditches and hedgerows with associated grassland margins on site may potentially be used as flight paths and foraging corridors by bats.

Dormice

- 5.21 No evidence of dormice (*Muscardinus avellanarius*) was found during the site visit. The habitat suitability for this species within and adjacent to the site is considered to be good. Dormice are likely to use the hedgerows and woodland on site.

Great Crested Newts

- 5.22 There are several wet ditches on site with low potential to support great crested newts. A slurry pit on site is considered unsuitable for the species due to the level of pollution and eutrophication present.

Otter

- 5.23 The survey found that there was very limited suitable habitat to be potentially used by otters for spraint (faeces) sites and lying-up sites. There were no potential holt (exposed tree root systems or similar structures on watercourses and banks) sites found.

Water Vole

- 5.24 There is limited potential for water voles along wet ditches on site. It is likely that several burrows noted along wet ditches belong to brown rat (*Rattus norvegicus*).
- 5.25 There was no evidence of non-native mink (*Mustela vison*) found at the site.

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Birds

- 5.26 The site has the potential for nesting birds and contains suitable nesting habitat in trees, scrub and hedgerows as well as limited potential within open farmland. Various bird species are anticipated to use these areas within the site for nesting and feeding during the breeding season (approximately March to August).
- 5.27 Magpie (*Pica pica*), carrion crow (*Corvus corone*), robin (*Erithacus rubecula*), wood pigeon (*Columba palumbus*), great tit (*Parus major*), blue tit (*Parus caeruleus*), wren (*Troglodytes troglodytes*) and blackbird (*Turdus merula*) were observed within the site during the survey.

Reptiles

- 5.28 No evidence of reptiles was recorded on site during the survey. The mosaic of habitats within the site including hedges, scrub, tall ruderals, rough semi improved grassland and shrubs is suitable for reptile species, in particular for foraging, basking and hibernating slow worms (*Anguis fragilis*) and grass snake (*Natrix natrix*).

Badgers

- 5.29 Evidence of badgers was found on site during the survey. A possible main, active sett was noted within woodland to the south of the site. Signs of badger foraging activity (eg tracks and remains of feeding), recent excavation, footprints or hairs were also noted on site.

Other Mammals

- 5.30 Species such as the harvest mouse and hedgehog (Section 41 and UK BAP species) may use the arable farmland on site.

Invertebrates

- 5.31 The site was suitable to support a diversity of invertebrates, possibly including protected and notable species.

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6 EVALUATION, MITIGATION AND ENHANCEMENT

6.1 This section describes the ecological value and sensitivities of the site, and outlines further investigations or mitigation related to the proposed development. The designated habitats in proximity to the site are firstly evaluated, followed by habitats on site and lastly protected species are evaluated.

Designated Sites

6.2 There are two statutory designated and 16 non-statutory designated sites within 2 km of the site. Due to the distance of the proposed site from the designated sites the development is unlikely to cause a negative effect upon the sites.

6.3 There are two statutory designated and 16 non-statutory designated sites within 2 km of the site. Due to the distance of the proposed site from the majority of designated sites and the disturbance and use of intervening habitat eg streams and rivers, the development is unlikely to have a negative effect upon these sites.

6.4 Tidcombe Lane Fen Site of Special Scientific Interest (SSSI) lies approximately 0.8 km to the west. A drainage strategy will ensure that water discharged from the site will not adversely effect water flow, quantity or quality into Ailsa Brook and Tidcombe Lane Fen SSSI to the west.

6.5 The Tiverton Branch Railway Unconfirmed Wildlife Site (UWS) is located within the site boundary extending from east to west, partly bisecting the southern sections of the site. This site will be protected from the development with habitat retention and creation at the edges of the UWS and with alternative green space provided to limit impacts from resident's use. The site will be retained within a well connected habitat corridor linking to the Grand Western Canal corridor.

6.6 Residents of the proposed development are likely to use public footpaths that pass through the Grand Western Canal County Wildlife Site adjacent to the proposal site. Public green space will be provided as part of the proposed development which is likely to limited the extent of additional use. It is considered unlikely to be significant to these sites.

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Habitat Quality

- 6.7 The site and surrounding countryside support a diverse, native, species-rich network of hedgerows, many of which are highly likely to be of ecological importance under the Hedgerow Regulations 1997. Mature trees and woodland are also of particular ecological significance. The majority of these habitats will be retained, protected and enhanced within the development. A Construction Environmental Management Plan (CEMP) will be produced to manage such sensitive ecological issues.

Bats

- 6.8 There is the potential for bats to use mature trees and hedgerows within the site for perching, foraging and commuting flight lines to connected habitats. Hedgerows and mature trees will be retained and enhanced, wherever possible, and it is considered that there will be minimal impact to bats using the site.
- 6.9 Native bat species receive full protection under UK and European legislation including the WCA 1981 (as amended), the CRoW Act 2000, and the Conservation of Species and Habitats (Amendment) Regulations 2011. It is an offence to wilfully or recklessly disturb or harm individual bats or to destroy, damage or obstruct a place of shelter used by bats, even if bats are absent.
- 6.10 Transect surveys will be carried out for bats within the site.
- 6.11 As a precautionary approach prior to removal, it is recommended that mature trees should be assessed and potentially inspected for the presence of bats. Contractors will be made aware of their responsibilities and if bats are encountered, further ecological advice will be sought.
- 6.12 The majority of trees will be retained and incorporated into well connected habitat corridors within the development. Bat boxes will be installed within retained trees in the site in order to enhance the site for bats.

Great Crested Newts

- 6.13 There are several wet ditches and a canal within 250 m of the site boundary. The terrestrial habitat within parts of the site is considered suitable for great crested newts.

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- 6.14 Great crested newts are protected by the WCA 1981 (as amended), the CRoW Act 2000, and the Conservation of Species and Habitats (Amendment) Regulations 2011 against intentional or reckless harm and destruction or obstruction of places used for shelter.
- 6.15 A presence/absence survey in the spring using a combination of egg searching, netting and torchlight survey is recommended of the ponds if access can be arranged. Should newts be found on site, additional mitigation may then be provided, such as a suitable trapping and translocation programme agreed with statutory organisations.

Otter

- 6.16 No signs of otters was found on site during the survey. There is limited potential for this species on site along wet ditches. Otters are protected by the WCA 1981 (as amended), the CRoW Act 2000, and the Conservation of Species and Habitats (Amendment) Regulations 2011. It is an offence to willfully or recklessly harm an otter and to destroy, damage or obstruct places used for shelter by otters. An otter survey will be carried out to inform any proposals.
- 6.17 A Construction Environmental Management Plan (CEMP) is recommended to address control of any potential impacts that could occur to the riparian habitat within and adjacent to the site during construction.

Water Vole

- 6.18 Wet ditches on site have limited suitability as habitat for water voles. A survey will be carried out, combined with the otter survey, according to best practice guidelines.
- 6.19 Water voles are protected by the WCA 1981 (as amended) and the CRoW Act 2000. It is an offence to willfully or recklessly harm a water vole and to destroy, damage or obstruct places used for shelter by water voles.
- 6.20 A CEMP is recommended to address control of any potential impacts that could occur to the riparian habitat within and adjacent to the site during construction.

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Nesting Birds

- 6.21 Birds may use a number of habitat types within the site for the purposes of nesting and feeding.
- 6.22 It is an offence under UK legislation to wilfully destroy or damage the nest of a wild bird while it is being built or is in use in any location (WCA 1981 (as amended) and the CRow Act 2000).
- 6.23 Many UK birds are identified as species of principal importance for conservation under Section 41 of the NERC Act 2006 and are UK BAP species.
- 6.24 It is recommended that where potential nesting habitat needs to be removed or altered, this should be undertaken outside of the breeding season (which runs approximately from March to August inclusive).
- 6.25 A breeding bird survey will be carried out to inform an evaluation of the potential impacts of the proposals on the farmland bird assemblage.
- 6.26 If ground clearance works are necessary during the breeding season, potential bird nesting habitat should be assessed for nesting birds prior to works commencing. Should nesting birds be present, works that could cause disturbance will be halted until the young have fledged and the nest is no longer in use.
- 6.27 Guidance on the protection of birds will be provided in a CEMP and an EMP will include objectives for enhancement of habitat for nesting birds.

Reptiles

- 6.28 The site contains some rough grassland margins and scrub and woodland edge habitats that may be used by reptiles eg grass snake and slow worm.
- 6.29 All native UK reptile species are protected by UK legislation including the WCA 1981 (as amended) and the CRow Act 2000, against intentional or reckless harm.
- 6.30 A reptile survey will be conducted to inform the proposals. The survey will determine species presence/absence and population size.

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- 6.31 Guidance on the protection of reptiles during construction and operation will be provided through an agreed CEMP.

Badgers

- 6.32 There is an active main sett recorded within the southern woodland corridor on the site.
- 6.33 Badgers and their setts are protected under the Protection of Badgers Act 1992 as updated by The Hunting Act 2004, which makes it an offence to kill, injure or take a badger or to interfere with a badger sett.
- 6.34 A badger survey will be carried out and the results will be presented in a confidential report that will not be placed within the public domain. A badger mitigation plan and a badger licence from Natural England may be required, should badgers be present on site.

Ecological Enhancement Options

- 6.35 The site is currently of overall moderate ecological value and has the potential for ecological enhancement. The development will accommodate the following enhancement measures:
- Creation of new habitat to result in an increase in overall habitat diversity with new species rich Devon hedges, new woodland planting, species rich grassland, scrub and water features;
 - Green linkages or 'wildlife corridors' linking open space to habitats in the landscape surrounding the site;
 - The inclusion of appropriate locally native plant species in landscape planting plans. The local Biodiversity Action Plan (BAP) could be used as a guide to appropriate species/habitats;
 - Beneficial management of the adjacent Grand Western Canal for wildlife;
 - Installation of bat, bird and insect boxes on trees and buildings at the site; and
 - Management and enhancement of hedgerows and other retained habitats to improve ecological quality and structure.

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7 CONCLUSIONS

- 7.1 The existing ecological value of the proposed development site is considered to be moderate. Devon hedgerows, mature trees and woodland and are of particular significance at the site. There is potential for protected species on site including dormice, great crested newts, water voles, otters and bats.
- 7.2 Suitably detailed species surveys are being carried out for these protected species to establish the extent of activity and methods to avoid effects from the proposed development. This will be provided in a Protected Species Report.
- 7.3 It is the responsibility of those involved with the development works to ensure that due diligence is demonstrated in complying with wildlife protection and nature conservation legislation at every stage of the project. Such legislation applies even in the absence of related planning conditions.
- 7.4 The site has the potential for ecological enhancement through good landscape design practice and principles. Such ecological enhancement will take account of connectivity with the surrounding landscape and biodiversity.

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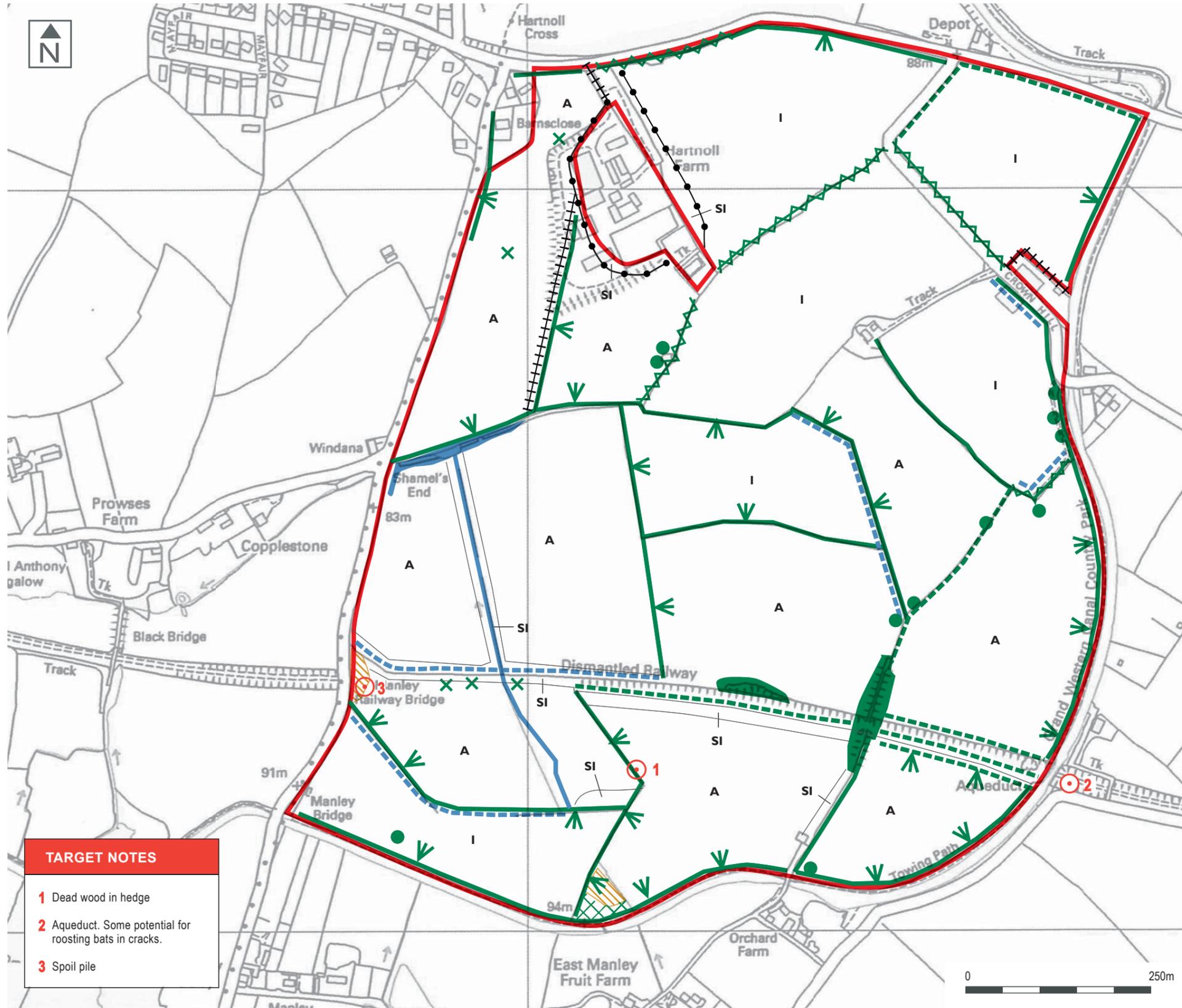
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APPENDICES

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Appendix 1: Habitat Plan



TARGET NOTES

1 Dead wood in hedge

2 Aqueduct. Some potential for roosting bats in cracks.

3 Spoil pile

- Site boundary
- Broadleaved woodland
- Broadleaved trees
- Dense scrub
- Scattered scrub
- Tall ruderals
- Native, intact, species-rich hedge with trees
- Native, defunct, species-poor hedge
- Native, intact, species-poor hedge
- Native, intact, species-rich hedge
- Species-poor hedge and trees
- A Arable
- I Improved grassland
- SI Rough semi-improved grassland
- Standing water
- Dry ditch
- Wet ditch
- Fence
- Earth bund
- 1-4 Target notes

ON BEHALF OF

Strategic Land Partnerships

PROJECT

**Tiverton East Urban Extension
(Area 4 - South East)**

TITLE

Extended Phase 1 Habitat Survey

SCALE	DATE	PROJECT NO	APPROVED
See scale bar	June 2012	eg12464	TP

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Appendix 2: Photographs



Photograph 1: Grassy arable field margin to the north of the Tiverton Branch Railway Unconfirmed Wildlife Site (UWS).



Photograph 2: Looking east across Tiverton Branch Railway UWS.

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Photograph 3: Species poor hedge, arable field, grassland margin and corrugated iron barn, looking towards the tree line along the Grand Western Canal to the east.