

Environmental Statement

Volume 2, Appendix 1.2: Ecological Desk Study

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Glossary

Term	Meaning
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Onshore HVDC Cable Corridor	The proposed corridor within which the onshore High Voltage Direct Current cables would be located.
Onshore Infrastructure Area	The proposed infrastructure area within the Order Limits landward of Mean High Water Springs. The Onshore Infrastructure Area comprises the transition joint bays, onshore HVDC Cables, converter stations, HVAC Cables, highways improvements, utility diversions and associated temporary and permanent infrastructure including temporary compound areas and permanent accesses.
Proposed Development	The element of Xlinks' Morocco-UK Power Project within the UK. The Proposed Development covers all works required to construct and operate the offshore cables (from the UK Exclusive Economic Zone to Landfall), Landfall, onshore Direct Current and Alternating Current cables, converter stations, and highways improvements.
Site of Special Scientific Interest	A site designation specified and protected in the Wildlife and Countryside Act 1981. These sites are of particular scientific interest due to important biological (e.g. a rare species of fauna or flora), geological or physiological features.
Special Areas of Conservation	A site designation specified in the Conservation of Habitats and Species Regulations 2017. Each site is designated for one or more of the habitats and species listed in the Regulations. The legislation requires a management plan to be prepared and implemented for each Special Area of Conservation to ensure the favourable conservation status of the habitats or species for which it was designated. In combination with Special Protection Areas and Ramsar sites, these sites contribute to the national site network.
Special Protection Areas	A site designation specified in the Conservation of Habitats and Species Regulations 2017, classified for rare and vulnerable birds, and for regularly occurring migratory species. Special Protection Areas contribute to the national site network.
Study area	This is an area which is defined for each environmental topic which includes the Order Limits as well as potential spatial and temporal considerations of the impacts on relevant receptors. The study area for each topic is intended to cover the area within which an impact can be reasonably expected.
Xlinks' Morocco UK Power Project	The overall scheme from Morocco to the national grid, including all onshore and offshore elements of the transmission network and the generation site in Morocco (referred to as the 'Project').

Acronyms

Acronym	Meaning
ASNW	Ancient Semi-natural woodland
BAP	Biodiversity Action Plan
DBRC	Devon Biodiversity Record Centre
ES	Environmental Statement
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
LNR	Local Nature Reserve
MAGIC	Multi-Agency Geographic Information for the Countryside
MCZ	Marine Conservation Zone
OSWI	Other Sites of Wildlife Interest
PAWS	Plantations on ancient woodland sites
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
UK	United Kingdom
UWS	Unconfirmed Wildlife Site

Units

Units	Meaning
ha	Hectares
km	Kilometres
m	Metre

1 ECOLOGICAL DESK STUDY

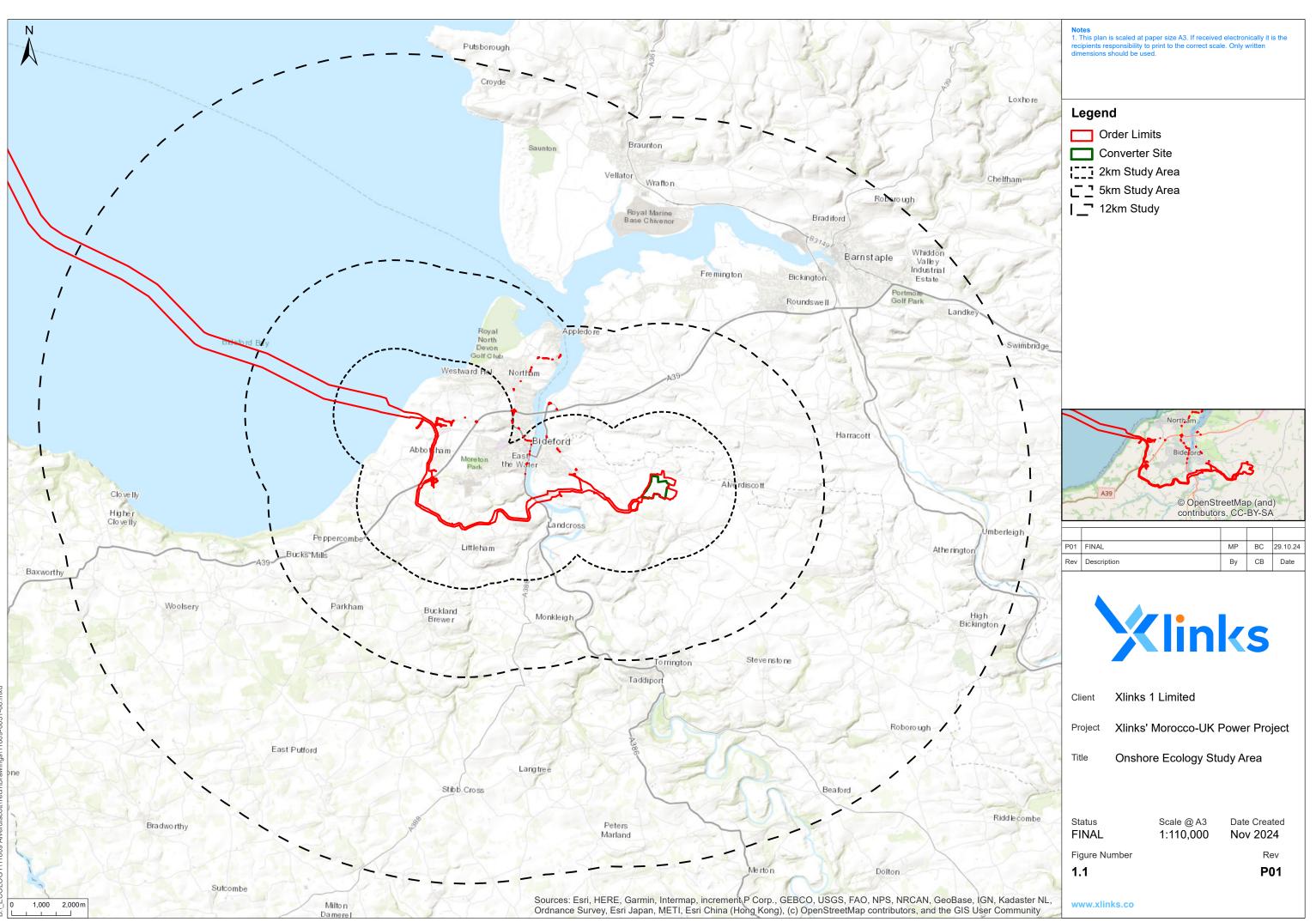
1.1 Introduction

- 1.1.1 This document forms Volume 2, Appendix 1.2: Ecological Desk Study of the Environmental Statement (ES) prepared for the United Kingdom (UK) elements of Xlinks' Morocco-UK Power Project (the 'Project'). For ease of reference, the UK elements of the Project are referred to as the 'Proposed Development, which is the focus of the Environmental Statement (ES). The ES presents the findings of the Environmental Impact Assessment process for the Proposed Development.
- 1.1.2 This document presents the methodology and results of the onshore ecology desk study undertaken for the Proposed Development. The results of the desk study have been used to inform Volume 2, Chapter 1: Onshore Ecology and Nature Conservation of the ES.
- 1.1.3 The objectives of the ecological desk study were to:
 - locate records of protected or otherwise notable species from within 2 km of the Onshore Infrastructure Area;
 - locate records of bat and otter records from within 10 km of the Onshore Infrastructure Area; and
 - locate statutory and non-statutory designated sites within 2 km, 5 km and 12 km of the Onshore Infrastructure Area.
- 1.1.4 This report outlines the methods used in obtaining data, lists the consultees that were contacted and presents the data that was obtained.

1.2 Study Area

- 1.2.1 The onshore ecology and nature conservation study area is detailed within Volume 2, Chapter 1: Onshore Ecology and Nature Conservation. The study area includes the following.
 - Locally designated sites, including Local Nature Reserves and Local Wildlife Sites (LWSs), and less mobile protected or otherwise notable species located within 2 km of the Onshore Infrastructure Area.
 - Nationally designated sites, including Sites of Special Scientific Interest (SSSIs) and National Nature Reserves, and records of particularly mobile protected or otherwise notable species (e.g. bats and otters) located within 5 km of the Onshore Infrastructure Area.
 - Internationally designated sites located within 12 km of the Onshore Infrastructure Area.
- 1.2.2 In accordance with guidelines prescribed by the Bat Conservation Trust (2007), a search was carried out for statutory sites designated for bats located within 10 km of the Onshore Infrastructure Area
- 1.2.3 The onshore ecology and nature conservation study area is presented in **Figure 1.1**.

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1.3 Methodology

Overview

- 1.3.1 A combination of desk studies and field surveys were undertaken to ascertain the presence or likely absence of notable habitats and species within their respective study and survey areas.
- 1.3.2 The results of the desk study are presented in this technical report. However, additional detail related to desk studies, specific to each species, can be found within Volume 2, Appendices 1.3 to 1.11 of the ES.

Data Request

- 1.3.3 Data was requested from Devon Biodiversity Record Centre (DBRC).
- 1.3.4 In addition to the above data request, the Natural England and Multi-Agency Geographic Information for the Countryside (MAGIC) websites were consulted for additional information regarding Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs). The Joint Nature Conservation Committee (JNCC) website was also consulted for details of any Special Protection Areas within 2 km of the Onshore Infrastructure Area.
- 1.3.5 The legal or conservation status of the species for which records were received was determined using the Spreadsheet of Conservation Designations for UK Taxa (JNCC, 2010).

Limitations

- 1.3.6 The desktop sources used to inform this technical report comprise third party controlled data, purchased for use for this Proposed Development. The Applicant cannot be held liable for any inaccuracies in this data.
- 1.3.7 Desk study species data shows where species have been recorded. The absence of records, however, may be due to the absence of surveys in that area or a lack of reporting of results and incidental sighting.
- 1.3.8 The absence of data does not therefore mean an absence of a species. The findings of this technical report have not been relied upon alone to determine species presence or absence but have been used in conjunction with the Phase 1 Habitat survey (see Volume 2, Appendix 1.1: Phase 1 Habitat Survey of the ES) and habitat and species specific surveys (see Volume 2, Appendices 1.3 to 1.11 of the ES).

1.4 Results

Consultation Responses

1.4.1 DBRC provided a list of protected and notable species as well as information on statutory and non-statutory sites.

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- 1.4.2 A number of species of conservation importance or otherwise notable were recorded within the 2 km search radius of the Onshore Infrastructure Area. A summary of these records is provided in **Table 1.2** to **Table 1.6**.
- 1.4.3 In order to simplify the results, only records of species from the last 10 years are shown. In addition, only data with a six figure grid reference resolution or higher are provided, since locations given at a lower resolution do not allow accurate calculation of distance to the site boundary.

Designated Sites

- 1.4.4 There are seven statutory designated sites for nature conservation value within 2 km of the Onshore Infrastructure Area. The closest of these are Mermaid's Pool to Rowden Gut SSSI and Kynoch's Foreshore Local Nature Reserve (LNR), both situated within the Onshore Infrastructure Area. There are 27 statutory designated sites situated within 12 km of the Onshore Infrastructure Area. Within 10 km, there are 22 statutory designated sites.
- 1.4.5 Numerous non-statutory sites are located within the 2 km search radius of the Onshore Infrastructure Area. The closest of these being Haddacott Moor County Wildlife Site (CWS), Lodge Plantation Unconfirmed Wildlife Site (UWS), and Torridge Estuary CWS, all of which are located within or adjacent to the Onshore Infrastructure Area.
- 1.4.6 A summary of these sites is provided in **Table 1.1** below and the location of each site is shown in **Figure 1.2** and **Figure 1.3**.

Table 1.1: Statutory designated sites and non-statutory designated sites within the onshore ecology study area, respectively

Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
Statutory Sites				
Mermaid's Pool to Rowden Gut	SSSI	152.2	Complete sequence through the Bideford Formation.	0
Kynoch's Foreshore	LNR	37.4	The LNR includes the largest saltmarsh in Torridge District and one of the most significant areas of saltmarsh in the whole Taw Torridge Estuary complex.	0
Bideford To Foreland Point	Marine Conservation Zone (MCZ)	10400.0	An area containing a broad array of protected marine habitats and species.	0.72
Westward Ho! Cliffs	SSSI	28.7	Coastal geomorphology and Quaternary deposits.	1.19
Taw/Torridge Estuary	SSSI	1375.2	Estuary with mudflats, beaches, and saltmarsh with bird interest.	1.25
Kenwith Valley	LNR	10.6	Woodland and scrub with wetland birds and invertebrates.	1.60
Northam Burrows	SSSI	418.2	Coastal habitats with plant and bird interest.	1.96

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Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
Tintagel- Marsland- Clovelly Coast	SAC	2380.4	Vegetated sea cliffs with unusual sessile oak woodland and dry heaths.	3.39
Hobby To Peppercombe	SSSI	224.0	This 6 km section of the North Devon coast supports extensive sessile oak Quercus petraea woodlands which contain nationally important communities of Atlantic climate old-woodland lichens.	3.39
Braunton Burrows	SAC	1346.6	One of the largest dune systems in Britain, about 5 km long and 1.5 km wide, with lime-rich dunes up to 30 m high, and an extensive system of variably-flooded slacks, grassland and scrub, inland of a wide sandy foreshore.	4.88
Braunton Burrows	SSSI	1339.7	a key site for coastal geomorphology and its assemblage of nationally rare species.	4.88
Fremington	LNR	7.2	Important for its wetland habitat and wading bird assemblage.	6.20
Fremington Claypit	SSSI	1.1	One of the most important Pleistocene sites in south west England. Of paleontological importance.	6.61
Park Gate Quarry	SSSI	0.9	Paleontologically important.	6.78
Fremington Quay Cliffs	SSSI	12.3	Paleontologically important.	7.41
Culm Grasslands	SAC	772.5	Designated for its wet heaths, Molinia meadows, and the presence of marsh fritillary.	7.59
Thorne And Doves Moors	SSSI	78.4	One of the largest remaining areas of unimproved grassland and mire on the Culm Measures of North Devon. It has considerable botanical diversity and a rich associated fauna, including several nationally rare or scarce invertebrate species.	7.59
Mambury And Stowford Moors	SSSI	39.8	Contains a nationally rare and distinctive type of habitat mosaic, consisting of various herb-rich grassland and heath communities.	7.60
Common Moor, East Putford	SSSI	55.0	One of a few remnant sites for a type of wet heathland restricted to North Devon and Pembrokeshire. These heathlands characteristically have a composite nature where wet and dry heathland communities are interspersed with tall herb fen. The site supports a diverse invertebrate fauna.	7.73
Greenaways And Freshmarsh, Braunton	SSSI	13.4	This site is of special interest for its herb- rich marshy grasslands and also the rich water-plant communities occurring in the drainage ditches. These habitats are of	8.34

Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
			particular importance as they now have a very restricted distribution in Devon.	
Hunshaw Wood	SSSI	17.9	This woodland is a relic of the ancient semi-natural oak woodlands of north-west Devon. It contains a large number of plants typically associated with such ancient woodland sites.	8.62
Kismeldon Meadows	SSSI	32.6	This site is important as an area of traditionally managed, unimproved, grassland mire and marsh of high botanical value.	9.73
Saunton to Baggy Point Coast	SSSI	148.2	This site is of special interest for its geological exposures and botanical features, including maritime heathland, grassland and lichens.	10.20
Bradiford Valley	SSSI	23.6	This site is important for its ancient sessile oak woodland and associated breeding birds.	10.28
Common Moor Langtree	SSSI	16.2	This site is important as an area of unimproved grassland which is of high botanical value and of a type which is becoming increasingly rare.	10.80
Chapel Hill	SSSI	0.2	This site contains the largest population of pennyroyal <i>Mentha pulegium</i> known in Devon. This is a nationally vulnerable plant species.	11.25
Caen Valley Bats	SSSI	0.1	The site is notified as a nationally important summer maternity roost and winter hibernacula for the greater horseshoe bat <i>Rhinolophus ferrumequinum</i> .	11.52
Non-Statutory S	Sites			
Haddacott Moor	CWS	32.6	Culm grassland and semi-improved grassland (former Culm grassland)	0
Lodge Plantation	UWS	2.8	Old plantation - open canopy dry/rough grassland	0
Torridge Estuary	CWS	111.6	Estuary and saltmarsh habitats	0
Abbotsham Cliff	CWS	13.5	Mosaic of unimproved neutral and acidic grassland, coastal grassland, wet flushes and scrub	0.001
Hallsannery	CWS	13.1	Parkland with good numbers of veteran trees	0.003
Ashridge Field	UWS	6.4	Dry/rough grassland/scrub and possible wet woodland	0.06
Shepheard's Meadow	UWS	2.1	Dry grassland	0.11
Gammaton Reservoir	CWS	6	Open water, unimproved neutral grassland, culm grassland, semi-improved grassland, fen and scrub.	0.12

Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
Lendon	UWS	2.4	Bracken and scrub	0.12
Jennetts Reservoir	UWS	6.2	Open water and fen/swamp habitats	0.13
Littlecroft	UWS	0.7	Dry/rough grassland/scrub	0.15
Bowood Farm	UWS	2.5	Dry grassland/scrub/SNBW	0.20
Upcott Wood (E)	Potential CWS	7.9	Semi-natural ancient woodland and secondary broadleaved woodland	0.22
Pixey Copse	Potential CWS	32.8	Semi-natural ancient woodland	0.23
Tennacott Wood	CWS	7.9	Ancient semi-natural broadleaved woodland	0.23
Kenwith Barton	UWS	1.2	Open water	0.24
Upcott Wood (W)	CWS	2	Ancient and secondary semi-natural broadleaved woodland	0.25
Upcott Wood	Ancient Semi-natural woodland (ASNW)	3.7	Ancient & Semi-Natural Woodland	0.27
Cornborough Cliff	CWS	23	Maritime grassland and heath, unimproved acid grassland, semi-improved grassland, scrub and bracken	0.29
Nuttaberry	UWS	9.1	Dry grassland/scrub/rough grassland/bracken	0.29
Pixey Copse	ASNW	34.8	Ancient & Semi-Natural Woodland	0.30
Beara (W)	UWS	3.4	Rough grassland/dry grassland/scrub	0.34
River Yeo Marsh	UWS	8	Potential saltmarsh	0.37
Kenwith Valley	UWS	27.9	Open water/dry grassland/marshy grassland/scrub et	0.43
Grenville College	UWS	88	Parkland with possible vetern trees, planted woodland and gardens	0.50
Heale Wood	ASNW	2.2	Ancient & Semi-Natural Woodland	0.50
Alverdiscott Field	Other Sites of Wildlife Interest (OSWI)	2.3	Semi-improved neutral grassland	0.51
Port Farm	UWS	0.8	Rough grassland	0.55
Pollyfield	UWS	1.2	Rough grassland/scrub	0.56
Yeo Vale	CWS	19.4	Parkland with good numbers of veteran and ancient trees	0.56
Cockington Plantation	UWS	8.9	Broadleaved woodland	0.60
Gammaton Road	UWS	1.4	Rough grassland	0.60

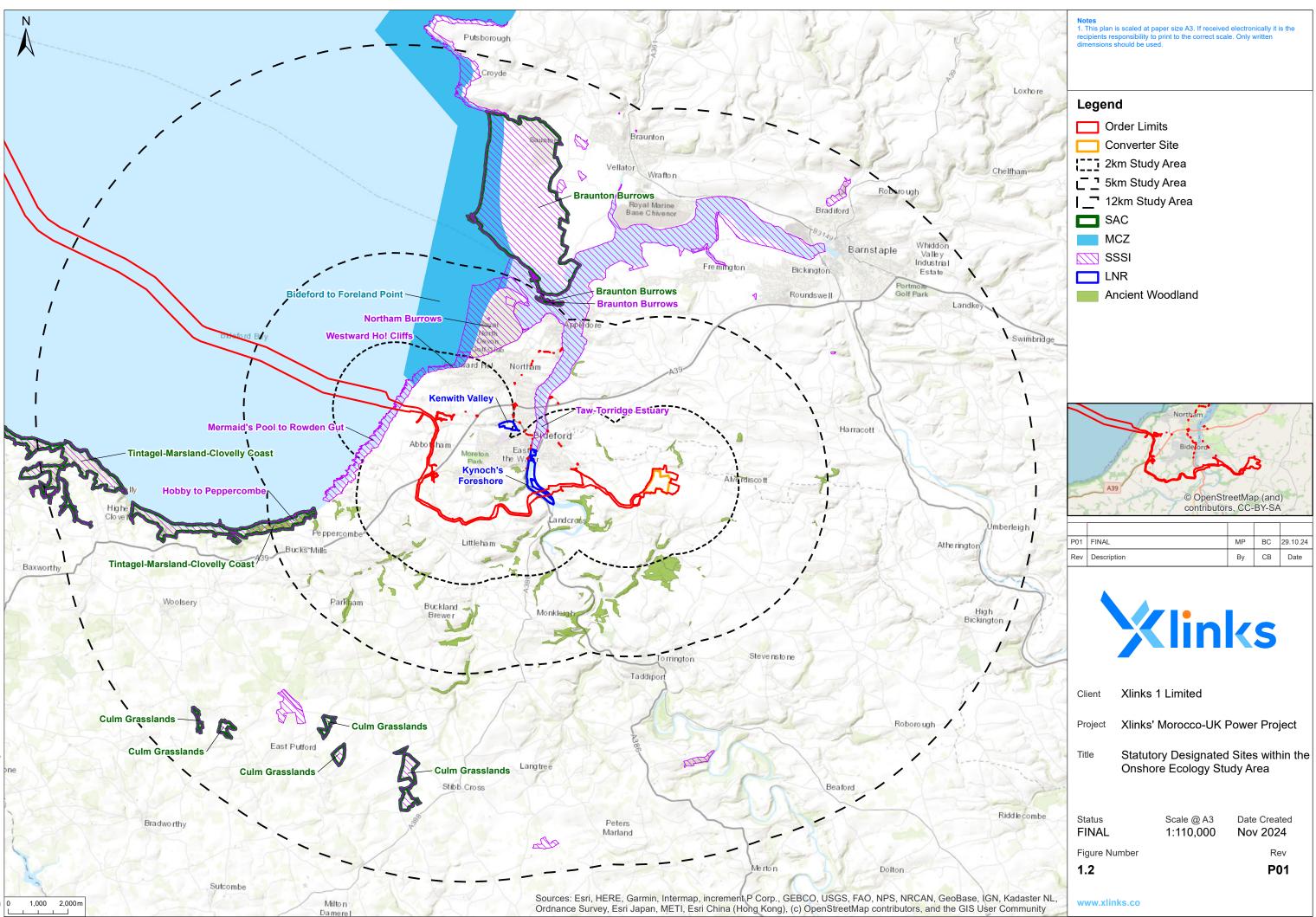
Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
Godborough Castle And Turner's Wood	CWS	13.3	Mosaic of unimproved calcareous grassland, semi-improved grassland & broadleaved semi-natural woodland	0.71
Ford House Wood	CWS	6.9	Ancient semi-natural broadleaved woodland	0.75
Ford House Wood	ASNW	4.8	Ancient & Semi-Natural Woodland	0.75
Badgers Hill	OSWI	5.7	Secondary broadleaved woodland, semi- improved neutral grassland, damp grassland and scattered scrub	0.77
Pillmouth Wood	ASNW	6.7	Ancient & Semi-Natural Woodland	0.79
Pillmouth Wood	CWS	6.4	Ancient semi-natural broadleaved woodland. Heronry.	0.81
Souther Down	UWS	0.9	Dry grassland/scrub	0.81
Nethercleave Wood	ASNW	2	Ancient & Semi-Natural Woodland	0.88
Greenacres	UWS	13.9	Brackish grazing marsh with ditches/Rough grassland	0.89
Ley Wood	CWS	3.6	Wet and dry ancient semi-natural broadleaved woodland	0.91
Yeo Vale Wood	ASNW	4.6	Ancient & Semi-Natural Woodland	0.91
Stone Wood	UWS	8.2	Ancient woodland	0.95
Easter Down Wood	UWS	6.2	Broadleaved woodland	0.96
Osbourne Lane	UWS	1.6	Rough grassland/dry grassland/scrub/SNBW	0.98
Halfpenny Marsh	CWS	6.4	Saltmarsh, coastal fen, reedbed, broadleaved woodland, disused canal and limekilns.	0.99
Down Plantation	UWS	2.7	Broadleaved woodland	1.00
Eastridge Farm	UWS	3.4	Scrub/dry grassland/SNBW	1.02
Great Huxhill	UWS	6.4	Dry grassland/scrub	1.06
Stony Cross	UWS	0.6	Mire/scrub/tall herbs/rough grassland	1.06
Edge Mill Wood	ASNW	3.4	Ancient & Semi-Natural Woodland	1.11
Pillhead Valley	UWS	48.4	Rushy pasture/grazing marsh	1.20
Ley Wood	pCWS	2	Semi-natural ancient woodland	1.24
Lower Guscott	UWS	4	Dry grassland (& Marshy grassland)	1.24
Ashridge (W)	UWS	3.2	Wet unimproved and semi-improved neutral grassland	1.27
Road Wood	UWS	22.8	Ancient semi-natural woodland and broadleaved wood	1.27
Bartridge (N)	OSWI	2.1	Wet & dry unimproved neutral grassland partly planted with conifers	1.28

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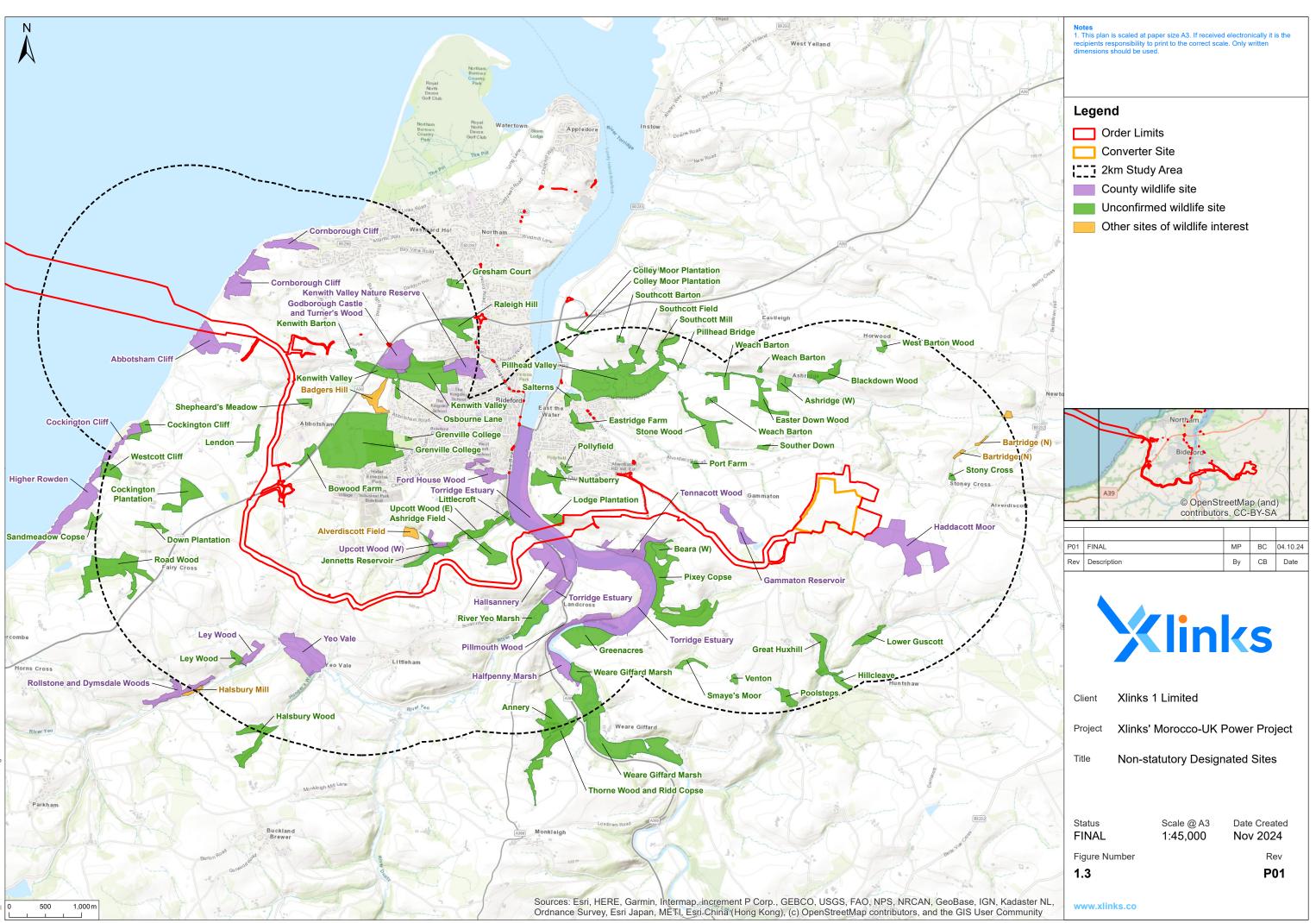
Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
Weare Giffard Marsh	UWS	49	Possible floodplain grazing marsh	1.28
Blackdown Wood	UWS	5.7	Broadleaved woodland	1.31
Weach Barton	UWS	5	Broadleaved woodland	1.39
Smaye's Moor	UWS	2.1	Rough/dry grassland	1.41
Salterns	UWS	2.4	Rough grassland/bracken/scrub/SNBW	1.43
Venton	UWS	1	Rough grassland	1.47
Cockington Cliff	UWS	3.3	Coastal grassland, bracken, scrub and heath	1.51
Annery	UWS	11.6	Parkland	1.60
Raleigh Hill	UWS	7.5	Dry/rough/marshy grassland	1.60
Kenwith Valley Nature Reserve	CWS	10	Open water, semi-improved grassland, planted broadleaved woodland, reedbed, marshy grassland and scrub. Bird & dragonfly interest.	1.61
Cockington Cliff	CWS	5.3	Maritime grassland and heath, scrub and bracken	1.62
Southcott Field	UWS	3.8	Semi-improved neutral grassland	1.65
Poolsteps	UWS	3.7	Rough grassland/dry grassland/scrub/Semi-natural broadleaved woodland	1.66
Pillhead Bridge	UWS	0.6	Unimproved acid grass and marshy grass	1.68
Rollstone And Dymsdale Woods	CWS	8.4	Wet and dry ancient semi-natural broadleaved woodland	1.68
Rollstone Wood	ASNW	2.4	Ancient & Semi-Natural Woodland	1.68
Hillcleave	UWS	1.9	Dry grassland/scrub	1.71
Garnacott Wood	ASNW	3	Ancient & Semi-Natural Woodland	1.74
Westcott Cliff	UWS	4.7	Coastal grassland and scrub	1.76
Halsbury Wood	ASNW	9.7	Ancient & Semi-Natural Woodland	1.83
Huntshaw Wood	Plantations on ancient woodland sites (PAWS)	58.8	Ancient Replanted Woodland	1.83
Halsbury Wood	UWS	9.8	Semi-natural ancient woodland	1.84
Southcott Mill	UWS	2.7	Rushy pasture/dry grassland/scrub/SNBW	1.84
Halsbury Mill	OSWI	1.3	Damp semi-improved neutral grassland, rush-pasture and tall herb fen, with some recent broadleaved planting	1.85
Gresham Court	UWS	2	Dry grassland/scrub and broadleaved woodland	1.87
The Rookery	ASNW	8	Ancient & Semi-Natural Woodland	1.88

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Site name	Туре	Area (ha)	Description	Distance from Onshore Infrastructure Area (km)
Sandmeadow Copse	UWS	2.5	Broadleaved woodland	1.93
Thorne Wood And Ridd Copse	UWS	12.8	Semi-natural ancient woodland	1.95
Thorne Wood/Bidd Copse	PAWS	8.8	Ancient Replanted Woodland	1.96
Southcott Barton	UWS	0.7	Rushy pasture	1.97
Southcott Barton	UWS	13.1	Dry grassland/scrub	1.97
Higher Rowden	CWS	17.6	Maritime grassland and heath, scrub and bracken	1.99



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Records of Protected and Notable Species

1.4.7 Records of protected and other notable species within the study area are summaries in **Table 1.2** to **Table 1.6** below. Species in the following categories have been included:

Protected Species

- Wildlife and Countryside Act 1981 (as amended), Schedule 1 (WCA1).
- Wildlife and Countryside Act 1981 (as amended), Schedule 5 (WCA5).
- Wildlife and Countryside Act 1981 (as amended), Schedule 8 (WCA8).
- EC Habitats Directive 1992 (Hdir) (Annex IV or V).
- Conservation of Habitats and Species Regulations 2010 (Schedule II or III) (Hreg II or III).
- Directive on the Conservation of Wild Birds 1979 (as amended) (Annex I).

Other Notable Species

- EC Habitats Directive 1992 (Hdir) (Annex II).
- Natural Environment and Rural Communities Act 2006 (NERC41).
- UK Biodiversity Action Plan Priority Species.
- Local Biodiversity Action Plan Priority Species.
- UK Biodiversity Action Plan Species of Conservation Concern.
- Birds of Conservation Concern (Red or Amber lists).
- Red Data Book invertebrate species (RDB1, RDB2 or RDB3).
- Nationally Scarce invertebrate species (Notable/Na, Notable/Nb or Notable/N).
- International Union for Conservation of Nature (IUCN) Red List of threatened species.

Birds

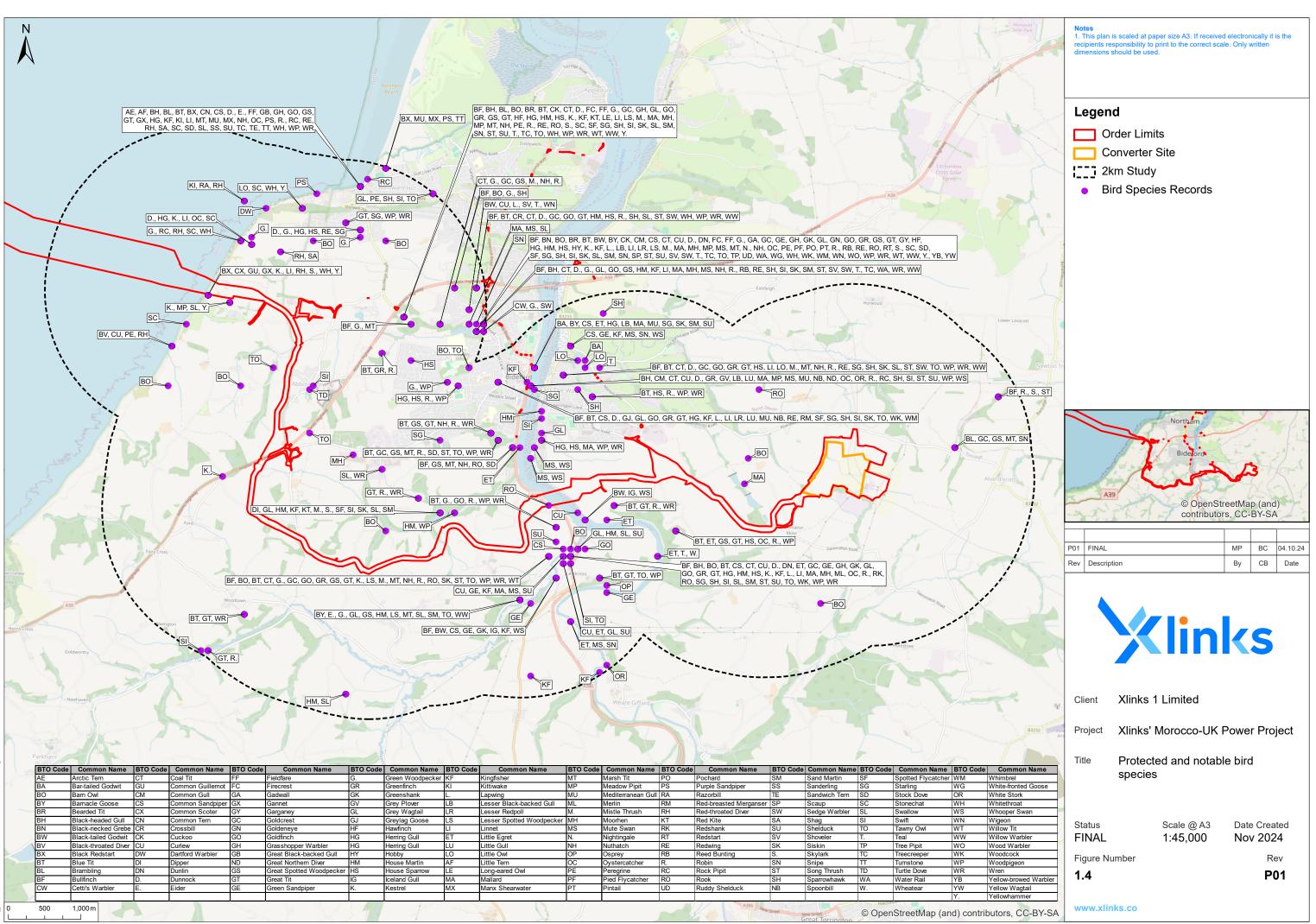
- 1.4.8 A total of 15 protected or otherwise notable species of bird have been provided by DBRC within the last 10 years and 2 km boundary of the Onshore Infrastructure Area. They are listed in **Table 1.2** and shown in **Figure 1.4**.
- 1.4.9 In terms of conservation status, two species in the study area are red listed under Birds of Conservation Concern and five species are amber listed (Eaton et al. 2009). Red listed bird species of conservation concern represent the most threatened species in Britain and Ireland, typically because either the number of birds is rapidly falling or their ranges are contracting. Amber listed bird species of conservation concern represent a moderate decline or a moderate contraction of the species range.
- 1.4.10 A number of protected or otherwise notable species of bird have been recorded at Godborough Castle and Turner Wood CWS approximately 2 km east of the Onshore Infrastructure Area. The area comprises of a mosaic of unimproved calcareous grassland, semi-improved grassland and broadleaved semi-natural

woodland together with some young plantations, hedges, gorse patches and ponds (*DCC*, 2008). Notable farmland bird species recorded on site include starling (*Sturnus vulgaris*). Starlings are one of nineteen species listed as RSPB Farmland Bird Indicators and are species dependent on farmland, and not able to thrive in other habitats.

- 1.4.11 The Hallsannery CWS, within 1 km of the Onshore Infrastructure Area also has recent records of notable species such as mallard (*Anas platyrhynchos*). Hallsannery is an estate with 50 acres of gardens, parkland, woodland and pasture. The estate is adjacent to the River Torridge (and the Torridge Estuary CWS) which has records of osprey (*Pandion haliaetus*). Notable woodland species recorded on site include species such as the dunnock (*Prunella modularis*) and starling (*Sturnus vulgaris*) were recorded on site and favour a variety of habitats such as woods, hedgerows, parks and gardens, near water or areas of mixed agriculture.
- 1.4.12 Within the town of Bideford, several species have been recorded including barn owl (*Tyto alba*), wren (*Troglodytes troglodytes*), woodpigeon (*Columba palumbus*) and osprey (*Pandion haliaetus*). There have been previous records for barn owl within the Onshore HVDC Cable Corridor and further barn owl records scattered across the study area. Barn owls are listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended), amber listed and a Devon Biodiversity Action Plan (BAP) species.

Common name	Scientific name	Nearest distance from Onshore Infrastructure Area (km)	Year of most recent record	Conservation Status	Protection
Barn owl	Tyota alba	0.93	2017	Den BAP, Amber	WCA1
Blue Tit	Cyanistes caeruleus	1.10	2015		
Coal Tit	Periparus ater		2013		
Great Spotted Woodpecker	Dendrocopos major	1.10	2015		
Great Tit	Parus major	1.10	2015		
Herring Gull	Larus argentatus	0.86	2014	Red	
House Sparrow	Passer domesticus	0.86	2014	UK BAP, Red, NERC41	
Mallard	Anas platyrhynchos	0.86	2014	Amber	
Nuthatch	Sitta europaea	1.10	2015		
Osprey	Pandion haliaetus	1.56	2015		
Robin	Erithacus rubecula	1.10	2015		
Starling	Sturnus vulgaris	1.55	2014	UK BAP, Red, NERC41	
Tawny Owl	Strix aluco	1.01	2013	Amber	
Woodpigeon	Columba palumbus	0.86	2014	Amber	
Wren	Troglodytes troglodytes	0.86	2015	Amber	

Table 1.2: Protected or other notable bird species records from the last 10 years within 2 km of the Onshore Infrastructure Area



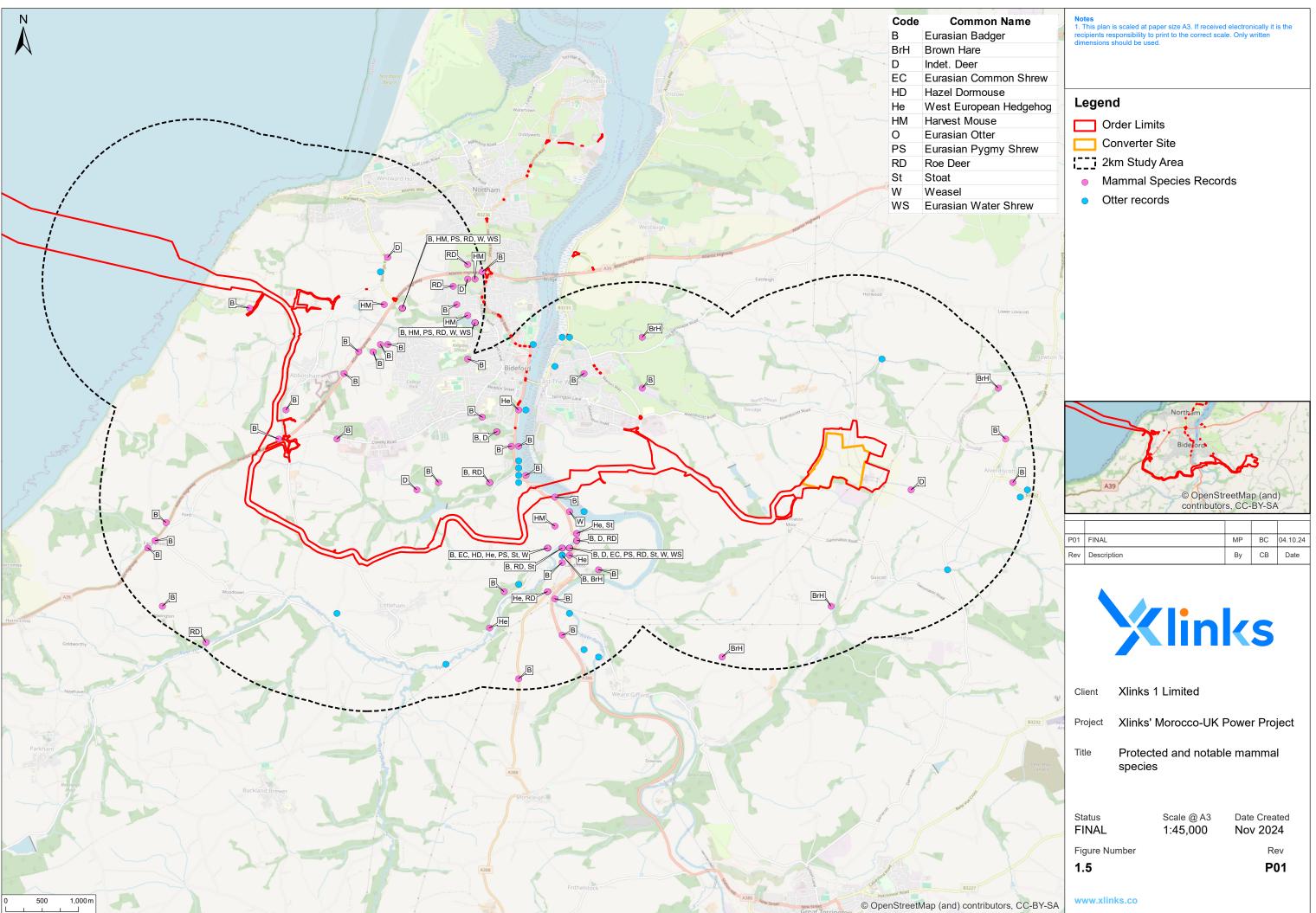
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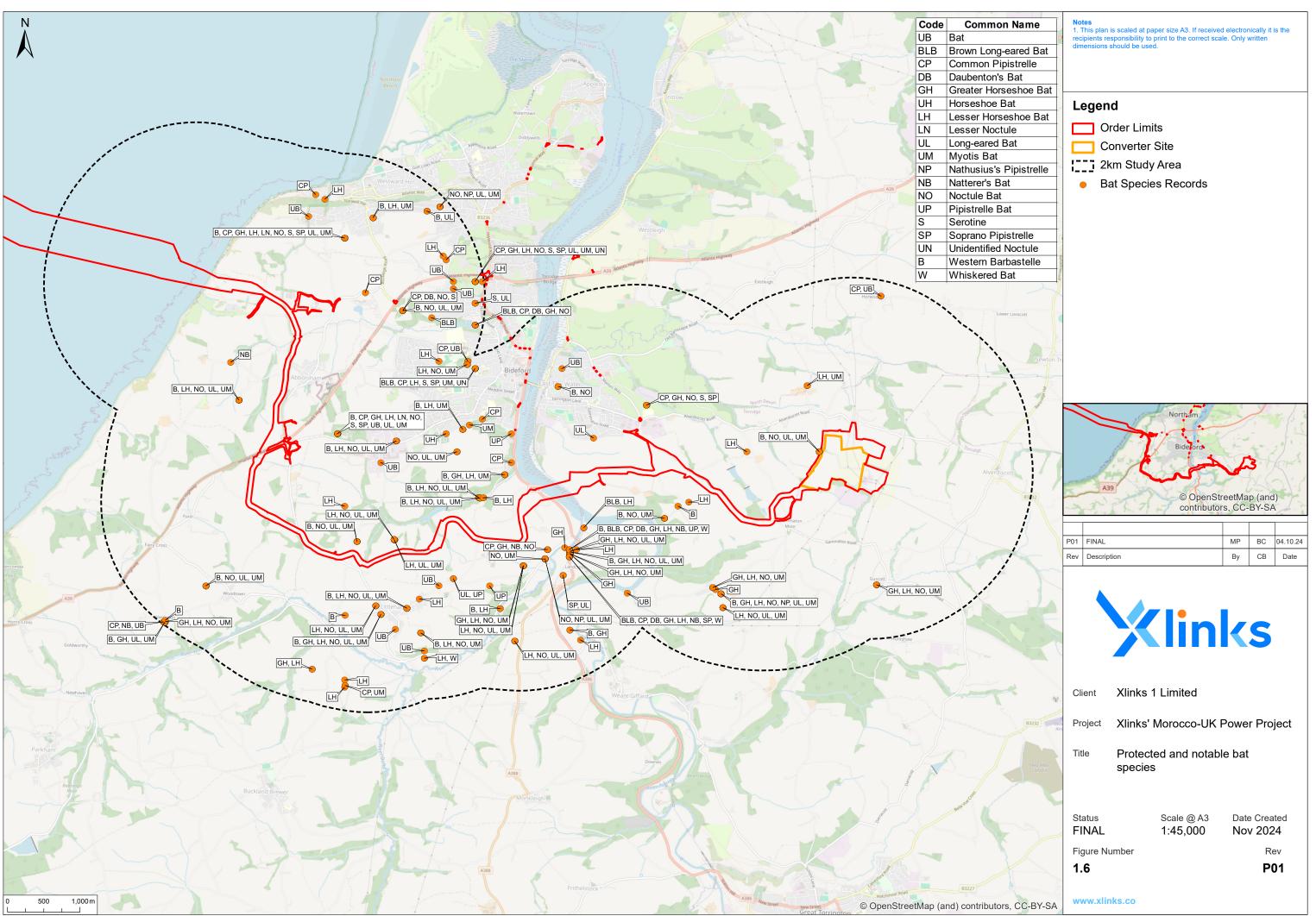
Mammals

- 1.4.13 A total of seventeen protected or other notable species of mammal bave been recorded within the study area. These are listed in **Table 1.3** and shown in **Figure** 1.5. Thirteen of these species are listed in Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). The search area was increased for bat and Eurasian otter (*Lutra lutra*) species to 10 km (shown in **Figure 1.6**).
- 1.4.14 Bat records are well scattered across the study area and include: common pipistrelle (*Pipistrellus pipistrellus*), lesser horseshoe bats (*Rhinolophus hipposideros*) and natterer's (*Myotis nattereri*). Bats recorded over a wider area also include brown long-eared (*Plecotus auritus*), Daubenton's (*Myotis daubentonii*), greater horseshoe (*Rhinolophus ferrumequinum*), noctule (*Nyctalus noctula*) and whiskered bats (*Myotis mystacinus*). All bat species are protected under the Wildlife and Countryside Act 1981 (as amended) Schedule 5 and the Conservation of Habitats and Species Regulations 2010 Schedule II.
- 1.4.15 Many of the bat records are found in close vicinity to the River Torridge as this provides favourable habitat for bat species. There are a number of bat records in close vicinity to or within Bideford which is located close to the northern edge of the Onshore HVDC Cable Corridor. Species in this area include brown long-eared (*Plecotus auritus*), Daubenton's (*Myotis daubentonii*), greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*Rhinolophus hipposideros*), noctule (*Nyctalus noctula*), pipistrelle (*Pipistrellus pipistrellus*) and serotine (*Eptesicus serotinus*).
- 1.4.16 Bat records include brown long-eared (*Plecotus auritus*) and noctule (*Nyctalus noctula*), which are UK BAP priority species. Pipistrelle bat species were also recorded, of which the Soprano pipistrelle (*Pipistrellus pygmaeus*) is a UK BAP species.
- 1.4.17 The most recent bat records, using the 10 km search area were recorded in Barnstaple throughout 2020.
- 1.4.18 With respect to other mammals, there was one record for harvest mouse (*Micromys minitus*) near Godsborough Castle. Harvest mouse is a UK BAP priority species.
- 1.4.19 The results of the 10 km search for otter records, there have been fifteen records of otter over the last 10 years. These are spread across the study area with the most recent record in 2020 at RHS Rosemoor.

Common name	Scientific name	Nearest distance from Onshore Infrastructure Area (km)	Year of most recent record	Conservation Status	Protection
A Bat	Myotis	1.90	2015		
A Long-eared Bat	Pleotus	1.24	2020	UK BAP, NERC41	Wildlife & Countryside Act Schedule 5 (WCA5), Hdir (Annex Iva), Hreg II
A Noctule Bat	Nyctalus	1.90	2015		
A Pipistrelle Bat	Pipistrellus	0.89	2016	UK BAP, NERC41	WCA5, Hdir (Annex IVa), Hreg II
Brown Long- eared Bat	Plecotus auritus	1.01	2015	UK BAP, NERC41	WCA5, Hdir (Annex Iva), Hreg II
Common Pipistrelle	Pipistrellus pipistrellus	1.01	2020	UK BAP, NERC41	WCA5, Hdir (IVa), Hreg II
Daubenton's Bat	Myotis daubentonii	1.01	2013		WCA5, Hdir (Annex Iva), Hreg II
Eurasian otter	Lutra lutra	0.29	2019	UK BAP, Devon BAP, NERC41, Hdir (Annex II)	WCA5, Hreg II
Greater Horseshoe bat	Rhinolophus ferrumequinum	0.43	2020	UK BAP, Devon BAP, Hdir (Annex II), NERC41	WCA5, Hdir (Annex IVa), Hreg II
Harvest Mouse	Micromys minutus	0.39	2018	UK BAP, NERC41	
Lesser Horseshoe Bat	Rhinolophus hipposideros	0.65	2020	UK BAP, NERC41, Hdir (Annex II),	WCA5, Hdir (Annex IVa), Hreg II
Lesser Noctule	Nyctalus leisleri	0.54	2020		
Natterer's Bat	Myotis nattereri	1.01	2016		WCA5, Hdir (Annex IVa), Hreg II
Nathusius's Pipistrelle	Pipistrellus nathusii	0.35	2020	UK BAP, NERC41, Hdir (Annex II),	WCA5, Hdir (Annex IVa), Hreg II
Noctule Bat	Nyctalus noctula	0.01	2020		
Serotine	Eptesicus serotinus	1.90	2020		WCA5, Hdir (IVa), Hreg II
Soprano Pipistrelle	Pipistrellus pygmaeus	1.01	2020		WCA5, Hdir (IVa), Hreg II
Stoat	Mustela erminea	0.93	2015		
Western Barbastelle	Barbastella barbastellus	0.65	2020		WCA5, Hdir (IVa), Hreg II
Whiskered Bat	Myotis mystacinus	1.01	2013		WCA5, Hdir (IVa), Hreg II

Table 1.3: Protected mammal species records from the last 10 years within 2 km of the Onshore Infrastructure Area





Herpetofauna

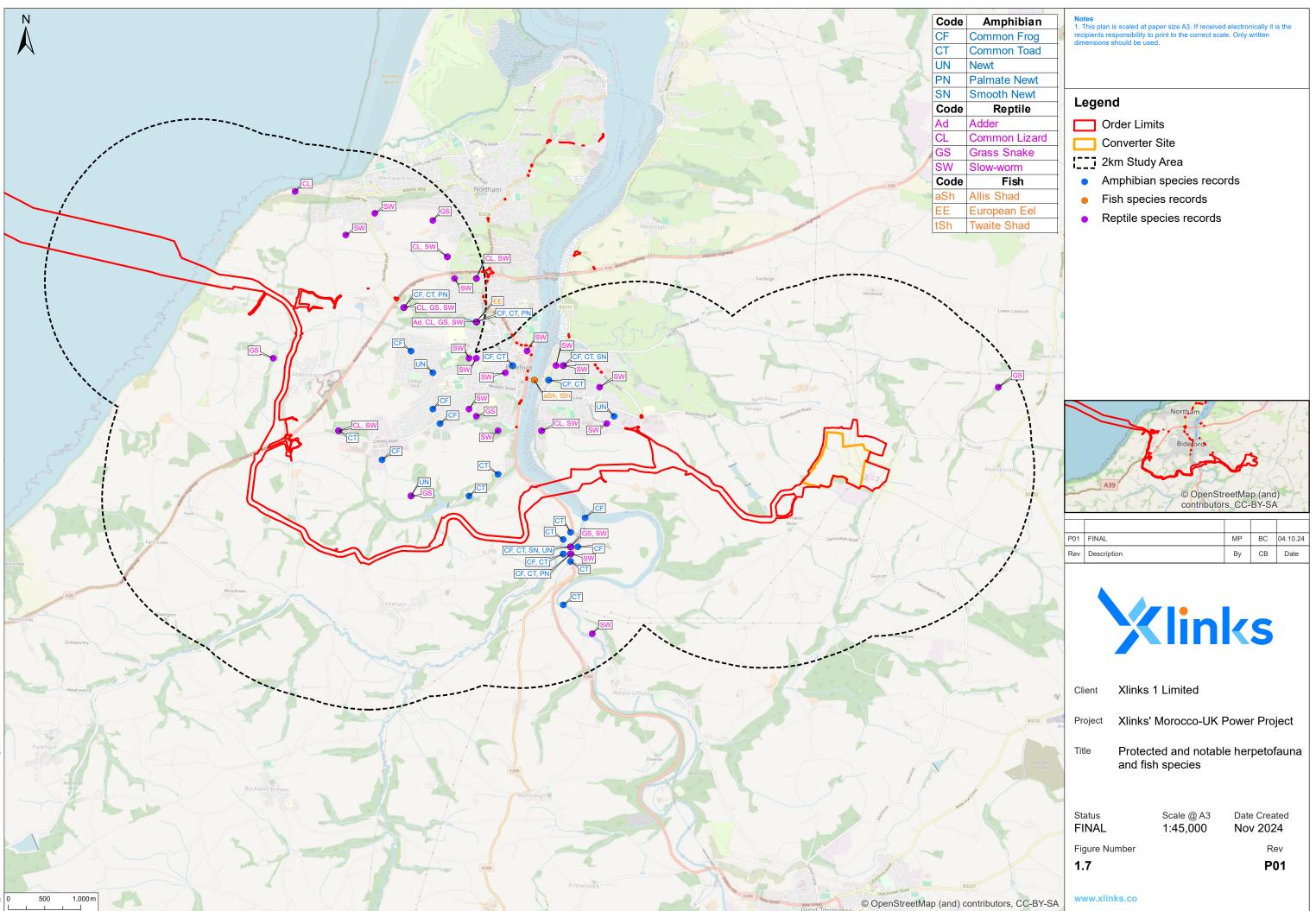
- 1.4.20 A total of four protected or otherwise notable species of herpetofauna (three species of reptile and one species of amphibian) have been recorded within the study area. These are listed in **Table 1.4** and shown in **Figure 1.7**. All of the species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and thus afforded protection under Section 9 of the Act. The common lizard (*Zootoca vivipara*), grass snake (*Natrix natrix*) and slow worm (*Anguis fragilis*) are protected under Section 9(5) and part of Section 9(1). The common toad (*Bufo bufo*) is protected under Section 9(5) only.
- 1.4.21 Within the town of Bideford common frog, common toad, smooth newt, common lizard and slow worm have all been recorded.

Table 1.4: Protected or other notable herpeofauna species records from the last 10years within 2 km of the Onshore Infrastructure Area

Common name	Scientific name	Nearest distance from Onshore Infrastructure Area (km)	Year of most recent record	Conservation Status	Protection
Common Toad	Bufo bufo	0.93	2013	UK BAP, NERC 41	WCA 5 (section 9(5) only)
Common Lizard	Zootoca vivipara	0.86	2014	NERC 41	WCA 5 (section 9(5) only)
Grass Snake	Natrix helvetica	0.93	2015	NERC 41	WCA 5 (section 9(5) only)
Slow-worm	Anguis fragilis	0.86	2014	NERC 41	WCA 5 (section 9(5) only)

Fish

1.4.22 No protected species of fish have been recorded in the last 10 years within 2 km of the Onshore Infrastructure Area by DBRC.

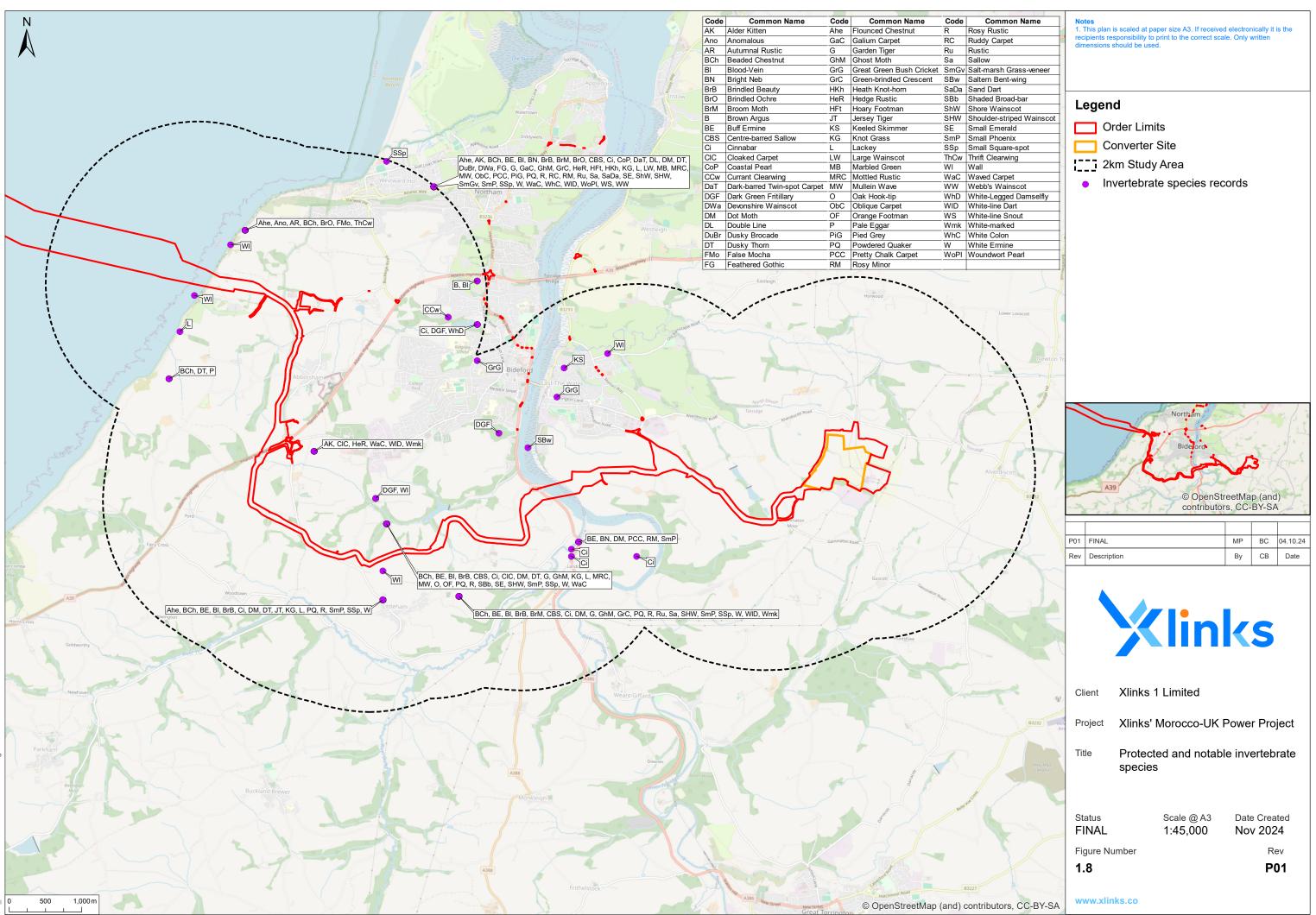


Invertebrates

1.4.23 Seven notable invertebrate species were recorded in the study area and are listed in **Table 1.5** and shown in **Figure 1.8**.

Table 1.5: Notable invertebrate species records from the last 10 years within 2 km of the Onshore Infrastructure Area

Common name	Scientific name	Nearest distance from Onshore Infrastructure Area (km)	Year of most recent record	Conservation Status
Bright Neb	Argolamprotes micella	0.92	2013	
Buff Ermine	Spilosoma lutea	0.92	2019	NERC 41
Dot Moth	Melanchra persicariae	0.92	2013	NERC 41
Pretty Chalk Carpet	Melanthia procellata	0.92	2013	NERC 41
Rosy Minor	Litoligia literosa	0.92	2013	NERC 41
Saltern Bent- wing	Bucculatrix maritima	0.65	2016	
Small Phoenix	Ecliptopera silaceata	0.92	2020	NERC 41



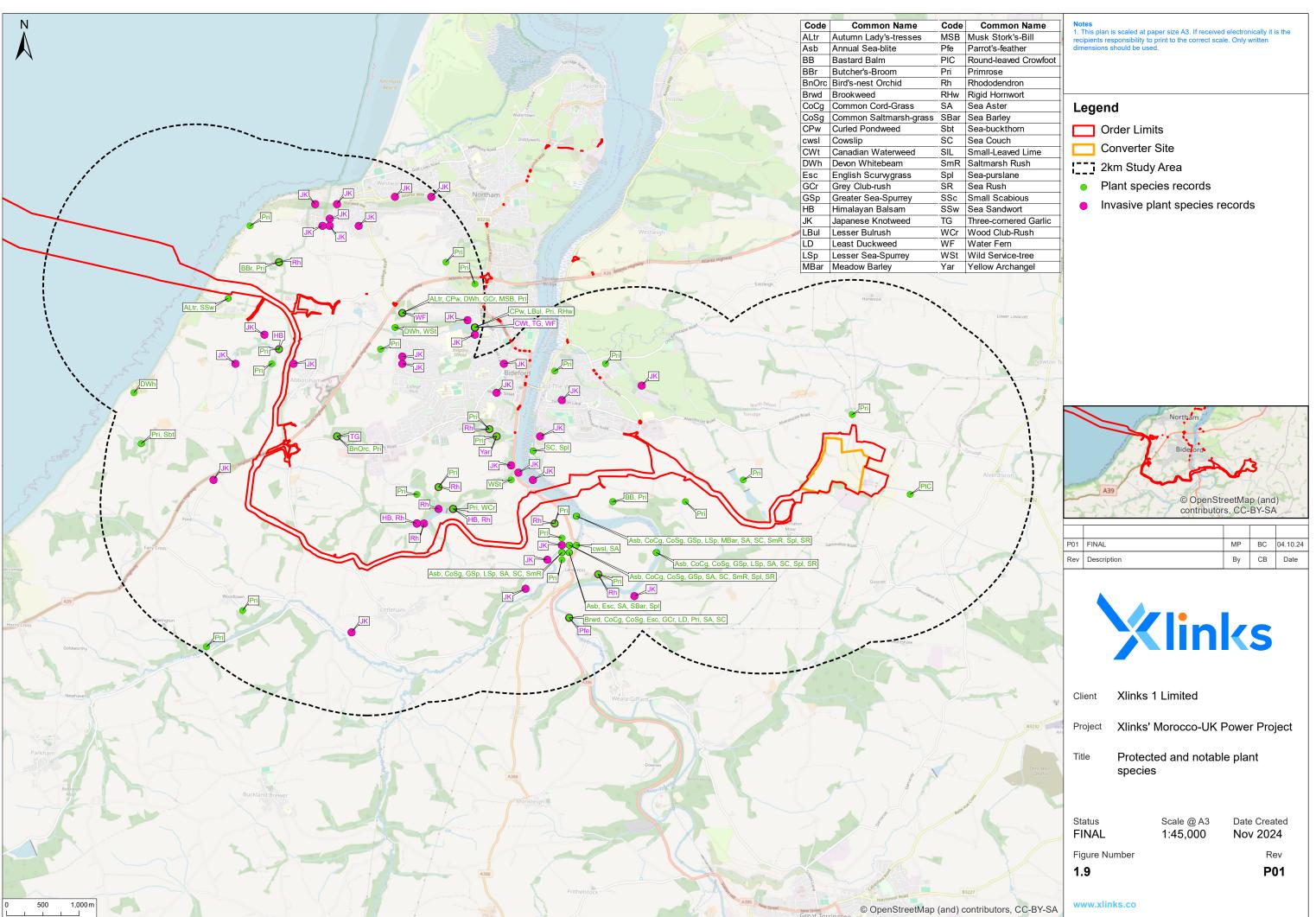
Plant species

- 1.4.24 A total of nine notable plant species have been recoded within the study area and are listed in **Table 1.6** and shown in **Figure 1.9**.
- 1.4.25 At Halfpenny Marsh County Wildlife Site further along the estuary the following county notable species have been recorded; brookweed (*Samolus valerandi*), common saltmarsh-grass (*Puccinellia maritima*), common saltmarsh-grass (*Puccinellia maritime*), grey club-rush (*Schoenoplectus tabernaemontani*), sea aster (*Aster tripolium*) and sea couch (*Elytrigia atherica*).
- 1.4.26 Japanese Knotweed (*Fallopia japonica*) has been recorded several times within Westward Ho!, most recently in 2019. Japanese Knotweed is listed under the Wildlife and Countryside Act 1981 (as amended) Schedule 9. Plants listed in this schedule are prohibited from being released into the wild. Japanese Knotweed is an invasive species therefore if it is found to be present within the Onshore Infrastructure Area; a suitable eradication strategy would need to be implemented.

Table 1.6: Notable plant species records from the last 10 years within 2 km of theOnshore Infrastructure Area

Common name	Scientific name	Nearest distance from Onshore Infrastructure Area (km)	Year of most recent record	Conservation Status
Brookweed	Samolus valerandi	1.74	2015	County notable, IUCN (Least concern)
Common Saltmarsh-grass	Puccinellia maritima	1.74	2015	County notable, IUCN (Least concern)
Grey Club-rush	Schoenoplectus tabernaemontani	1.74	2015	County notable, IUCN (Least concern)
Indian Balsam	Impatiens glandulifera	1.59	2015	
Japanese Knotweed	Fallopia japonica	1.25	2019	Wildlife & Countryside Act Schedule 9
Primrose	Primula vulgaris	1.74	2015	Devon BAP, IUCN (Least concern)
Rhododendron	Rhododendron ponticum	1.10	2015	Wildlife & Countryside Act Schedule 9
Sea Aster	Aster tripolium	1.74	2015	County notable, IUCN (Least concern)
Sea Couch	Elytrigia atherica	1.74	2015	County notable, IUCN (Least concern)

Abbreviations used in **Table 1.2** to **Table 1.6**: WCA5: Wildlife & Countryside Act Schedule 5; WCA8: Wildlife & Countryside Act Schedule 8;; NERC 41: Natural Environment & Rural Communities Act Species of Principal Importance; UK BAP: UK Biodiversity Action Plan priority species; Hdir (Annex): Habitats Directive Annex 2, 4, 5; Hreg II: The Conservation (Natural Habitats, &) Regulations 2017 (Schedule 2);



1.5 Conclusions

- 1.5.1 The ecological desk study for the onshore elements of the Proposed Development indicated that there are seven statutory designated sites that fall within 2 km of the Onshore Infrastructure Area. These comprise four SSSIs, two LNRs, and one MCZ. In addition, the Natural England website indicates that Seven Oaks is a proposed LNR. This site is not currently shown on the Natural England mapping and its status is uncertain but it is understood that this site would be crossed by the proposed Onshore HVDC Cable Corridor.
- 1.5.2 Numerous non-statutory designated sites were identified within the study area, comprising a mixture of ASNW, CWS, and UWS, three of which are located within or adjacent to the Onshore Infrastructure Area and 26 within 0.5 km. The Torridge Estuary CWS would be crossed by the Onshore HVDC Cable Corridor.
- 1.5.3 The desk study indicated fifteen protected or notable bird species were recorded in the last ten years within 2 km of the Onshore Infrastructure Area.
- 1.5.4 Protected and notable mammal species within 2 km of the Onshore Infrastructure Area include otter, and various species of bat. The majority of species recorded are concentrated to the south of the area.
- 1.5.5 A total of four protected or otherwise notable species of herpetofauna have been recorded within the study area; common lizard; grass snake; slow worm; common toad. All of the species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
- 1.5.6 Seven records for notable invertebrate species were recorded, firstly the wall brown butterfly which is a UK BAP species and Great Green Bush Cricket which is a Devon BAP species.
- 1.5.7 Nine protected or notable species of plant were recorded within the study area.

1.6 References

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