



**AQUIND Limited**

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# **AQUIND INTERCONNECTOR**

## **Biodiversity Position Paper**

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(q)

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**AQUIND Limited**

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WSP

WSP House

70 Chancery Lane

London

WC2A 1AF

+44 20 7314 5000

[www.wsp.com](http://www.wsp.com)

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# 1. INTRODUCTION

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- 1.1.1.1. AQUIND Limited ('the Applicant') submitted an application for the AQUIND Interconnector Order (the 'Order') pursuant to Section 37 of the Planning Act 2008 (as amended) (the 'PA2008') to the Secretary of State ('SoS') on 14 November 2019 (the 'Application'). The Application was accepted by the Planning Inspectorate ('PINS') on 12 December 2019.
- 1.1.1.2. The Application seeks development consent for those elements of AQUIND Interconnector (the 'Project') located in the UK and the UK Marine Area (the 'Proposed Development').
- 1.1.1.3. The Project is a new 2,000 MW subsea and underground High Voltage Direct Current ('HVDC') bi-directional electric power transmission link between the South Coast of England and Normandy in France. By linking the British and French electric power grids it will make energy markets more efficient, improve security of supply and enable greater flexibility as power grids evolve to adapt to different sources of renewable energy and changes in demand trends. The Project will have the capacity to transmit up to 16,000,000 MWh of electricity per annum, which equates to approximately 5% and 3% of the total consumption of the UK and France respectively.
- 1.1.1.4. The Proposed Development includes:
- HVDC Marine Cables from the boundary of the UK Exclusive Economic Zone ('EEZ') to the UK at Eastney in Portsmouth;
  - Jointing of the HVDC Marine Cables and HVDC Onshore Cables;
  - HVDC Onshore Cables;
  - A Converter Station and associated electrical and telecommunications infrastructure;
  - High Voltage Alternating Current ('HVAC') Onshore Cables and associated infrastructure connecting the Converter Station to the Great Britain electrical transmission network, the GB National Electricity Transmission System ('NETS'), at Lovedean Substation; and
  - Smaller diameter Fibre Optic Cables ('FOC') to be installed together with the HVDC and HVAC Cables and associated infrastructure.

- 1.1.1.5. The purpose of this Position Paper is principally to show how the Proposed Development has taken opportunities to conserve and enhance biodiversity in line with National Planning Policy. Biodiversity is the variety of life in all its forms and encompasses all species of plants and animals and the complex ecosystems of which they are a part. This Position Paper has been informed by baseline and post-development calculations of biodiversity units using Biodiversity Metric 2.0 (Natural England 2019), which provides an indication of the biodiversity outcomes for the Proposed Development.
- 1.1.1.6. The Position Paper also responds to Relevant Representations made by Natural England (RR-181) and the Environment Agency (RR-165) to the DCO application ('Application').
- 1.1.1.7. In their relevant representation, Natural England welcomed the commitment to a Landscape and Biodiversity Strategy in the Application, however considered that this should include measures for mitigating impacts on protected species and habitats and include biodiversity compensation measures for any residual biodiversity losses. Natural England stated that where residual biodiversity losses cannot be fully mitigated on site, consideration could be given to setting up a fund to secure wider ecological enhancements through projects in each district area. Natural England recommend that the Biodiversity Metric Version 2.0 be used to calculate the biodiversity value of sites.
- 1.1.1.8. In their relevant representation, the Environment Agency highlighted that they had previously requested consideration of opportunities for biodiversity net gain ('BNG') / enhancement, considered to be in keeping with NPS EN-1 (para 5.3.4) and wished to see details of the opportunities identified, and which opportunities will be carried forward by the Applicant.
- 1.1.1.9. The report is structured as follows:
- Section 2 – Legislation, Policy and Guidance
  - Section 3 – Proposed Development Approach to Biodiversity
  - Section 4 – Biodiversity Metric Methodology
  - Section 5 – Biodiversity Metric Results
  - Section 6 – Summary
  - Appendix 1 – Study Area Plan
  - Appendix 2 – Biodiversity Metric Calculator Toolkit

## 2. LEGISLATION, POLICY AND GUIDANCE

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### 2.1. LEGISLATION

- 2.1.1.1. The Environment Bill for England, once it receives royal assent, will make provision for planning permissions in England to be subject to a condition requiring the biodiversity gain objective to be met, which secures a BNG of 10%. This requirement, however, is to relate to planning permissions granted under the Town and Country Planning Act 1990 only, and in its recent consultation on the Environment Bill (dated July 2019), the Government confirmed that nationally significant infrastructure projects ('NSIPs') have been purposefully excluded from and will remain outside of the scope of this mandatory requirement.
- 2.1.1.2. There is therefore no expected future legal requirement for the Proposed Development to deliver BNG at this time.

### 2.2. NATIONAL POLICY

#### Overarching National Policy Statement for Energy EN-1, 2011

- 2.2.1.1. The Overarching National Policy Statement EN-1 ('NPS EN-1'), published in 2011 by the Department of Energy & Climate Change, sets out the national policy for energy infrastructure which has effect in relation to the Proposed Development.
- 2.2.1.2. Section 5.3 of EN-1 addresses 'Biodiversity and geological conservation'.
- 2.2.1.3. Paragraph 5.3.3 of EN-1 states that the Environmental Statement ('ES') should clearly set out "*...any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity*".
- 2.2.1.4. The Proposed Development has been subject to Environmental Impact Assessment ('EIA') and the ES clearly sets out the likely significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.
- 2.2.1.5. Appropriate mitigation is either embedded in the Proposed Development or additional, as detailed in Chapters 16 (Onshore Ecology) (APP-131). This Position Paper does not form part of the EIA and does not include mitigation measures above those already set out in the ES required to mitigate likely significant adverse effects.

- 2.2.1.6. As a general principle, NPS EN-1 sets out that energy projects should aim to avoid significant harm to biodiversity interests, including through mitigation and consideration of reasonable alternatives (paragraph 5.3.7 of EN-1); where significant harm cannot be avoided, then appropriate compensation measures should be sought. NPS EN-1 also sets out that appropriate mitigation measures should be included as an integral part of the Proposed Development. Section 3.0 of this Position Paper sets out the main mitigation measures which are an integral part of the Proposed Development in line with the mitigation hierarchy.
- 2.2.1.7. Paragraph 5.3.4 of EN-1 states *“The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests”*. This Position Paper (Section 3.0) sets out how the Applicant has taken advantage of opportunities to conserve and enhance biological diversity (biodiversity) in connection with the Proposed Development.
- 2.2.1.8. A full assessment of the Proposed Development against NPS EN-1 is provided in the Planning Statement (APP-108) which accompanies the Application.
- 2.2.1.9. Section 104 of the Planning Act 2008 confirms what the SoS must have regard to when deciding an application for an order granting development consent if a national policy statement has effect in relation to the development to which the application relates, as is the case in relation to the Proposed Development. Section 104 (2)(d) provides that the SoS must have regard to any other matters which the SoS thinks are both important and relevant to his decision. The NPPF and local planning policies are other matters that the SoS may think is important and relevant.
- 2.2.1.10. Accordingly, in addition to explaining the relevant policies in NPS EN-1, which the SoS must have regard to<sup>1</sup> and decide his application in accordance with save to the extent provided otherwise by Section 104 of the Planning Act 2008<sup>2</sup>, this document also provides an explanation of the relevant policies contained in the NPPF and relevant local planning policies for the areas in which the Proposed Development is located. Whether such policies are both important and relevant is a matter for the SoS to determine.
- 2.2.1.11. National and local policies that are relevant to biodiversity are set out and considered below. In the event of a conflict between local policies or any other documents and an NPS, the NPS EN-1 prevails for the purposes of decision making given the national significance of the infrastructure (paragraph 4.1.5 of NPS EN-1).

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<sup>1</sup> Planning Act 2008, Section 104(2)(a)

<sup>2</sup> Planning Act 2008, Section 104(3)

## A Green Future: Our 25 Year Plan to Improve the Environment, 2018

- 2.2.1.12. The Government’s overarching policy for biodiversity in England is set out in “A Green Future: Our 25 Year Plan to Improve the Environment”<sup>3</sup>. The 25 Year Environment Plan embeds an ‘environmental net gain’ principle for development, including housing and infrastructure. As part of the Plan, the Government is committed to action including ensuring that *“existing requirements for net gain for biodiversity in national planning policy are strengthened, including consulting on whether they should be mandated alongside any exemptions that may be necessary”*. This was undertaken as part of consultation on the draft Environment Bill and specifically addressed exemptions which were deemed necessary, including infrastructure projects.
- 2.2.1.13. As discussed above, the proposed legislative provisions in this regard, including their application to planning permissions, are provided for within the Environment Bill.

### National Planning Policy Framework

- 2.2.1.14. Relevant policies in the NPPF state that *“Planning policies and decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity”* (170. NPPF, 2019).
- 2.2.1.15. Given the position set out in relation to the Environment Bill regarding BNG, which it has been expressly stated is not to be a mandatory requirement for nationally significant infrastructure, any legal requirement for the provision of net gains is not considered to be relevant in relation to the Proposed Development.
- 2.2.1.16. In addition, and taking into account the position clearly set out in the Governments consultation on the Environment Bill (dated July 2019) discussed above at paragraph 2.1.1.1, the applicable national policy in relation to biodiversity and which it is considered should prevail are the policies contained in NPS EN-1.

### Local Biodiversity Policies

- 2.2.1.1. **Portsmouth Plan (Portsmouth Core Strategy) Adopted January 2012 - Policy PCS13 A Greener Portsmouth** states that the council will ensure *“that development retains and protects the biodiversity value of the development site and produces a net gain in biodiversity wherever possible. Any unavoidable negative impacts on biodiversity as a result of development should be appropriately mitigated”*.
- 2.2.1.2. **Havant Local Plan (Core Strategy) Adopted March 2011 – Policy CS11 Protecting and enhancing the special environment and heritage of Havant Borough** states that development protects and where possible enhances the landscape, habitats, features of biological, hydrological or geological interest and heritage assets will be granted planning permission.



- 2.2.1.3. **Havant Pre-Submission Draft Local Plan 2036** - *Draft policy E15 Ecological Conservation* states that “development on any site in the Borough should conserve and enhance the natural environment wherever possible. Planning permission on any site in the Borough will be permitted where the development results in a net gain in biodiversity wherever possible”.
- 2.2.1.4. **East Hampshire Local Plan Part 1: EHDC and SDNPA Joint Core Strategy Adopted June 2014** - *Policy CP21 Biodiversity* states that ‘new development will be required to ensure wildlife enhancements are incorporated into the design to achieve a net gain in biodiversity by designing in wildlife and by ensuring that any adverse impacts are avoided where possible or, if unavoidable, they are appropriately mitigated for, with compensatory measures only used as a last resort’.
- 2.2.1.5. **East Hampshire Emerging Draft Local Plan 2017-2036** - The Draft Local Plan is at an early stage. The current draft sets out EHDC’s preferred strategy, policies and allocations. *Draft Policy S19 Biodiversity, geodiversity and nature conservation* – requires new development to conserve, protect, enhance and contribute to biodiversity, geodiversity and the natural environment.
- 2.2.1.6. **Winchester Local Plan Part 1: WCC and SDNPA Joint Core Strategy Adopted March 2013** - *Policy CP16* states that “the Local Planning Authority will support development which maintains, protects and enhances biodiversity across the District, delivering a net gain in biodiversity”.

# 3. PROPOSED DEVELOPMENT

## APPROACH TO BIODIVERSITY

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### 3.1. PROPOSED DEVELOPMENT APPROACH TO BIODIVERSITY

- 3.1.1.1. The Order Limits extend through urban areas within Portsmouth towards Waterlooville, largely covering urbanised habitats such as hardstanding and patches of amenity grassland. The north section of the Onshore Cable Corridor runs through lowland meadow grassland and arable land before reaching the Converter Station at Lovedean. The Converter Station Area at the north of the Order Limits is situated on arable land and covers fields used for crops and pasture with bordering hedgerows. Further details of the important features are provided in Chapter 16 of the ES (Onshore Ecology) (APP-131).
- 3.1.1.2. The baseline habitat data shows that there are three types of Priority Habitat within the Order Limits. For more information on the location of these habitats, see ES Chapter 16 (Onshore Ecology).
- An area of Lowland Meadow UKHab type (UK Habitat Classification) Priority Habitat within Denmead Meadows Site of Importance for Nature Conservation ('SINC'). This is given a very high distinctiveness score requiring bespoke mitigation within the Biodiversity Metric;
  - An area of lowland calcareous grassland habitat of Priority Habitat quality as calcareous grassland Priority Habitat and listed within a "No Main Habitat But Additional Habitats Present" Priority Habitat data set; and
  - Hedgerows.
- 3.1.1.3. Extensive ecological assessment work has been carried out to determine the potential impacts on biodiversity. A Preliminary Ecological Appraisal ('PEA') was undertaken to assess the biodiversity value of the land within the Order Limits for nature conservation. Further targeted Condition Assessment surveys were carried out in June 2020. The submitted ES and ES Addendum (document reference 7.8.1) details the ecological survey work carried out to determine likely impacts and proposes appropriate mitigation. This includes a wealth of biodiversity assessment work in relation to a range of species, designated sites and habitats. For more information, see Chapter 16 (Onshore Ecology) of the ES and the ES Addendum.
- 3.1.1.4. The Proposed Development has been designed, as far as is practicable, to avoid or reduce effects on biodiversity features through impact avoidance and design development. The Proposed Development involves temporary impacts on habitats



along the Onshore Cable Corridor (from the Landfall to the Converter Station Area) in connection with the installation of the Onshore Cables; where some habitats will be temporarily removed to facilitate cable installation. These habitats would be reinstated following completion of the works in a short-term period, with such restoration requirements to be secured via Requirement 22 of the draft Order (APP-019). Permanent habitat loss would also be associated with the footprint of the Converter Station.

- 3.1.1.5. Land within the Onshore Cable Corridor will be returned to the landowner on completion of the work and therefore opportunities for habitat enhancement and long-term management are limited.
- 3.1.1.6. Impacts will be avoided by tunnelling under important habitats (using Horizontal Directional Drilling ('HDD')). This HDD approach will be used to conserve some areas of unimproved calcareous grassland, hedgerows and the marine and intertidal habitats. As habitat loss is avoided for these habitats, they are not addressed in the biodiversity assessment.
- 3.1.1.7. Construction Environmental Management Plans ('CEMP') will be produced in accordance with the Onshore Outline CEMP submitted with the Application (APP-505) for each of the relevant parts of the Proposed Development. The Onshore Outline CEMP sets out the measures that will be taken forward into the CEMPs to conserve biodiversity during construction. An Ecological Clerk of Works will monitor implementation of the measures identified in the CEMPs.
- 3.1.1.8. An Outline Landscape and Biodiversity Strategy ('OLBS') (APP-506) accompanies the Application. Primarily offsetting effects on habitats in connection with Work No.2 (the Converter Station), the OLBS sets out the measures that will mitigate the effects and enhance the value of landscape and biodiversity features with management prescription and reference to monitoring, management responsibilities and review requirements. The OLBS and Chapter 15 (Landscape and Visual Amenity) of the ES (APP-130) include a set of indicative plans, including the Indicative Landscape Mitigation Plans for Option B(i) and Option B(ii) (APP-281 and 282), which indicatively detail new habitat to be provided and existing habitats to be retained and enhanced.
- 3.1.1.9. In addition to the OLBS, sensitive habitats of particular biodiversity interest are subject to specific mitigation strategies developed in consultation with Natural England. These strategies are outlined in Chapter 16 (Onshore Ecology) of the ES and the ES Addendum. These include restoration of hedgerows, restoration of lowland meadow habitat within Denmead Meadows and enhancement of grassland with green hay post-development at the Converter Station Area.

- 3.1.1.10. Following consent and prior to commencement of construction, a Biodiversity Management Strategy which accords with the OLBS will be produced. The Strategy will reflect the ecological mitigation and enhancement measures detailed in the ES and included in the OLBS and will be submitted for approval in respect of that work. The Requirement to submit a Biodiversity Management Strategy may be discharged for each relevant individual phase of the relevant works. Phases of works would be confirmed by the undertaker pursuant to a separate Requirement before works landwards of mean high-water springs commence.

## **3.2. BESPOKE MITIGATION AT DENMEAD MEADOWS**

- 3.2.1.1. The importance of Lowland Meadow Priority Habitat at Denmead Meadows has led to its exclusion from the Biodiversity Metric, with reasoning for this decision discussed in Section 4.3.

- 3.2.1.2. An area of Lowland Meadow Priority Habitat will be lost and then reinstated for the provision of an HDD compound in the south of Denmead Meadows, to the north of Hambledon Road (the northern compound receiving the HDD will not sit on lowland meadow habitat). Prior to installation of the compound, seed will be harvested from lowland meadow plants and stored. Compound installation will proceed by stripping and storing turves for the duration of works, and storing any topsoil and subsoil removed separately (storage will not be on the lowland meadow habitat). Ground protection will be used to prevent compaction of remaining soils. Upon completion of works, soil horizons will be replaced, topped by the stored turves, and replanting undertaken using the stored seed. These measures will restore the compound area to lowland meadow habitat.

## **3.3. IMPLEMENTATION OF THE MITIGATION HIERARCHY**

- 3.3.1.1. The Proposed Development has applied the mitigation hierarchy and looks to avoid impacts on Priority Habitats. All areas of Deciduous Woodland Priority Habitat are avoided and retained post development. Areas of hedgerow are avoided where possible within the Onshore Cable Corridor, hedgerow losses are minimised via a reduction in the working area in these locations.

- 3.3.1.2. Areas of high value unimproved neutral grassland within Denmead Meadows SINC are avoided, by the application of HDD. This avoids substantial parts of this area of high ecological value.

- 3.3.1.3. Other high value habitats, such as intertidal and marine habitats, are avoided through the Proposed Development design, via the HDD work. This application of the mitigation hierarchy has minimised ecological impacts.

- 3.3.1.4. The post-development position includes creation of a range of semi-natural habitats within and adjacent to the Converter Station and at the Landfall area. Woodland creation and hedgerow planting, strengthen and connect these high value habitats. Commuting routes for species are enhanced and areas of priority habitat are connected and strengthened.
- 3.3.1.5. Table 3.1 summarises how the Proposed Development has implemented the mitigation hierarchy to biodiversity and has embedded measures to avoid, minimise, remediate and as a last resort compensate for adverse impacts. This table considers all stages of the Proposed Development, including design, construction and operation, and also highlights where the Applicant has taken opportunities to conserve biodiversity interests.

**Table 3.1 - General Approach to Biodiversity Mitigation Hierarchy**

Stage of Mitigation Hierarchy	Measures
<b>Avoid - Where possible, habitat damage should be avoided</b>	<b>Construction Stage</b>
	<i>Route selection and optioneering.</i> Potential effects on biodiversity features were considered in relation to the reasonable alternatives studied for the substation, landfall and cable route options. Two cable route options were shortlisted, 3D and 1D, with 3D selected due, in part, to it having fewer potential effects on biodiversity.
	<i>Cable corridor highway routing.</i> Countryside route options for the cable corridor were considered but not chosen, and instead the Onshore Cable will be placed predominantly along roads. Avoids large-scale effects on biodiversity and isolated effects to already developed areas.
	<i>Use of HDD.</i> Key locations where HDD will be used are at Denmead Meadows, between Farlington and Kendall's Wharf (under Langstone Harbour) and at part of Milton Common. HDD requires entrance and exit sites and associated construction compounds for the duration of the drill, but does not otherwise require clearance or disturbance of above-ground habitats.
<i>Protection of ancient woodland –</i> A minimum buffer of 15m between the Order Limits and Ancient Woodland has been maintained to avoid effects on this irreplaceable feature which is located adjacent to the Converter Station Area. Under no circumstances would	

Stage of Mitigation Hierarchy	Measures
	<p>any works or storage take place within 15 m of the ancient woodland adjacent to the Converter Station Area.</p> <p><i>Seasonal working restrictions.</i> These apply to works adjacent to Langstone Harbour and at Denmead Meadow to control and avoid potential disturbance effects on wintering birds and wet meadow plant communities respectively.</p> <p><i>Night working restriction.</i> Restrictions would apply in rural areas without street lighting to avoid disturbance of potential bat foraging and commuting habitat through construction lighting. Construction work will be restricted to daylight hours between dawn and dusk within areas without existing lighting (e.g. Denmead Meadows and the Converter Station Area) during the bat active season (April to October) to avoid disturbance effects of noise and lighting on bats.</p> <p><i>Construction Lighting Design at Farlington Playing Fields.</i> Cowled and focused lighting will be used to maintain a dark corridor around the edge of this urban park area to avoid potential effects on foraging and commuting bats.</p> <p><i>Vegetation clearance and breeding birds.</i> Where possible vegetation clearance will be undertaken outside the bird breeding season to avoid potential effects on nesting birds and their eggs. If not possible, vegetation will not be cleared unless surveyed and clear of bird nests.</p> <p><i>Precautionary Methods of Working (PMoW) for Reptiles and Hedgehog.</i> Precautionary methods would be used to move these animals from the working area and avoid potential injury and mortality to them, thus maintaining local populations.</p> <p><i>Closure of outlier badger sett.</i> This will avoid potential death or injury of badgers but will not affect the conservation status of the local clan using them.</p>

Stage of Mitigation Hierarchy	Measures
	<p><b>Operational Stage</b></p> <p><i>Converter Station Lighting</i> - To avoid disturbance of foraging and commuting bats at the Converter Station Area, the Converter Station would not be lit at night under normal operational conditions. Lighting will only be turned on at night during exceptional circumstances, such as urgent maintenance activities that are rare events, and there will be no permanent nocturnal lighting of the Converter Station.</p>
<p><b>Minimise - Where possible, habitat damage and loss should be minimised</b></p>	<p><b>Construction Stage</b></p> <p><i>Design of Order Limits.</i> Minimisation of construction compound sizes and Onshore Cable Corridor limits of deviation has been undertaken to avoid habitat loss. Successive revisions of the draft Order Limits occurred through 2018 and 2019 to achieve this.</p> <p><i>Dust suppression.</i> Water sprays will be used to manage dust and prevent it drifting from the construction site to surrounding areas where sensitive habitats are present.</p> <p><i>Pollution prevention and control measures.</i> Best practice methods that minimise the risk of pollution through accidental spillage of materials or surface runoff during construction works will be implemented.</p> <p><i>CEMP.</i> Measures will be formalised in a CEMP to be followed by the contractor and monitored by a Clerk of Works.</p> <p><b>Operational Stage</b></p> <p>No measures applicable.</p>
<p><b>Remediate and compensate - Where possible, any damaged or lost habitat should be restored or compensated for.</b></p>	<p><b>Construction Stage</b></p> <p><i>Replanting of Hedgerows and Landscaping at Converter Station.</i> Following construction, hedgerow planting will be undertaken to repair gaps which were necessary to facilitate installation of the Onshore Cable. Replanting will use native plant species and will provide a diverse range of woody species to maintain the species-rich</p>

Stage of Mitigation Hierarchy	Measures
	<p>nature of hedgerows. In addition, implementation of the OLBS will see grassland, woodland and other habitats installed at the converter station.</p>
	<p><i>Denmead Meadows lowland meadow restoration.</i> To be implemented as outlined in Section 3.2 above.</p>
	<p><b>Operational Stage</b></p>
	<p><i>Habitat management at Denmead Meadows.</i> Habitat management will be undertaken over a three year period post development to ensure habitat re-establishes correctly and lowland meadow is maintained. Botanical monitoring would be undertaken to document vegetation community post construction.</p>
	<p><i>Application of green hay.</i> To improve the conservation status of remaining grassland affected by works at the Converter Station Area green hay will be applied post construction.</p>

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# 4. BIODIVERSITY METRIC ASSESSMENT

## METHODOLOGY

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### 4.1. INTRODUCTION

- 4.1.1.1. As part of the biodiversity assessment for the Proposed Development a quantitative biodiversity assessment has been undertaken using the Natural England (NE) Biodiversity Metric 2.0 (December 2019) (hereafter referred to as the 'BM2.0'). The BM2.0 provides a way of calculating a 'biodiversity baseline' and accounting for biodiversity losses and gains resulting from development or land management changes.
- 4.1.1.2. The 'User Guide' associated with this BM2.0 version release has been applied. It should be noted that BM2.0 is a 'beta test' trial of the metric and will therefore be subject to further change and enhancement in the future following user feedback.
- 4.1.1.3. BM2.0 uses the UK Habitat Classification (hereafter referred to as 'UKHab') scheme to classify habitat types and these have therefore been used in this Position Paper.

### 4.2. APPLICABILITY OF THE BIODIVERSITY METRIC TO THE PROPOSED DEVELOPMENT

- 4.2.1.1. The application of a Biodiversity Metric approach to the Proposed Development has challenges. This is due to the temporary impact on habitats along the Onshore Cable Corridor; where areas of land are removed and then re-instated in a relatively short timeframe on completion of the installation of the Onshore Cables. These temporary impacts are recognised to influence the outcome of the BM2.0 and may not therefore accurately assess the impact of the Proposed Development. This is due to risk factors applied within BM2.0 associated with difficulty and time required to re-instate habitats. In addition to this, land within the Onshore Cable Corridor is intended to be returned to the landowner on completion of the work and therefore there are very limited opportunities for habitat enhancement in those areas.
- 4.2.1.2. The nature of the Proposed Development therefore requires some reasonable adjustment of the application of the BM2.0. These adjustments are discussed further in the approach applied below.

### 4.3. STUDY AREA

- 4.3.1.1. The area assessed is illustrated within the Study Area Plan provided at Appendix 1 and is subsequently referred to in this Position Paper as the 'Study Area'. This area was reduced from the full extent of the Order Limits by excluding sections of the Proposed Development where HDD will not affect above ground habitats. This
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method was considered appropriate and justified for these areas given there will be no associated above ground impacts.

4.3.1.2. It is recognised that the Proposed Development currently includes impacts on very high distinctiveness habitats (losses of unimproved neutral grasslands, considered to be lowland meadows Priority Habitat within Denmead Meadows). A bespoke mitigation strategy, developed in consultation with Natural England, is being designed for the loss of these habitats, which BM2.0 would otherwise categorise as ‘an unacceptable loss’ for the purposes of the metric. Therefore, habitats within Denmead Meadows are not included within the biodiversity calculation.

4.3.1.3. The quantitative assessment then focused on other habitats within the Order Limits. These hold the highest ecological value or are lost for a longer period.

4.3.1.4. There are a small number of instances where there are two options for the Onshore Cable Corridor. Where this is the case, the Study Area Plan has included the option considered to have the most significant negative impact on biodiversity in order to apply the precautionary approach and present a realistic worst-case scenario. These decisions have been evidenced and documented.

## **4.4. METHODOLOGY**

4.4.1.1. The assessment used the BM2.0 for the calculations.

### **4.4.2. BASELINE DATA**

4.4.2.1. The baseline data used to inform the BM2.0 has primarily been based upon the Phase 1 Habitat Plan (APP-410). The Phase 1 Assessment included field data alongside use of aerial imagery. National Vegetation Classification (NVC) data was available for some targeted areas of higher botanical value across the Study Area. Primary field data was used as the key data set wherever it was available. This data was converted to UKHab following the guidance within BM2.0. For the majority of the Study Area, habitat condition data was assigned via the assumption that all medium and high distinctiveness habitats were in moderate condition and all low distinctiveness habitats were in poor condition. A targeted Condition Assessment survey was also carried out in June 2020 at the Converter Station Area. Where primary field data was available to apply an assessment following the field work, this was carried out by an experienced habitat ecologist.

### **4.4.3. CALCULATING BIODIVERSITY UNITS**

4.4.3.1. BM2.0 requires the calculation of Biodiversity Units based on the following factors and compares the change in habitat type from the baseline to the development:

- Distinctiveness – (high, medium, low) based on habitat type;
- Condition Score – (good, moderate, poor) based on habitat condition assessment;
- Area or length – hectares of habitat type or length for hedges and rivers;



- Connectivity (high, medium or low) based on the connection between the habitat and other areas of habitat. This was assessed using standard assumptions set out by Natural England; and
- Strategic significance (high medium or low) defined as within or outside areas of local strategic importance for biodiversity.

4.4.3.2. For the areas that are created or enhanced in connection with the Proposed Development, in addition to the above factors, additional risk factors are included within the calculation. These include:

- The difficulty of creating the habitat (high, medium or low);
- The time taken for the habitat to reach its target condition (between 1 and 32 years); and
- The location of the creation or enhancement (within the National Character Area or local planning authority area, in the neighbouring area or outside these areas).

4.4.3.3. The area or extent of habitat change includes:

- Temporary loss and re-instatement (shown in dotted blue); and
- Permanent habitat change due to either construction activities or landscaping, based on the Indicative Landscape Mitigation Plan Option B(i) (Figure 15.48 (north) and 15.49 (south) (Examination Library Reference APP-281 and APP-282)) and not directly shown on the Study Area Plan).
- Where, in a small number of instances, there were two options for the Onshore Cabling Corridor, the Study Area included the option considered to have the most adverse impact on biodiversity. These decisions have been evidenced. The same applies for the options in relation to the Converter Station, where Option (i), which is likely to have a greater impact due to hedgerow loss, is used.

4.4.3.4. Areas of retained habitat which will not be impacted by the work (shown in purple). These areas of retained habitat are shown within the Study Area Plan to demonstrate the wider habitat context of the order limits, to evidence that the precautionary reasonable worst-case scenario has been presented. These areas of retained habitat are not included within BM2.0;

4.4.3.5. Low and some types of medium distinctiveness habitats are often removed and reinstated as part of the normal management of that habitat. For example, this includes removal of crops from a field, and cutting down scrub to let it regrow as part of its required management. Low distinctiveness habitats or scrub habitats to be temporarily removed, due to the installation of the Onshore Cable Route, and then re-instated following completion of the works, have been excluded from the calculation where there are short term impacts and given removal works are likely to

form part of the standard management practices for these types of habitats irrespective of the Proposed Development.

- 4.4.3.6. The quantitative assessment then focused on the remaining habitats within the Study Area which hold the highest ecological value or are likely to be lost for a longer period.

## **4.5. ADDITIONAL VARIABLES**

- 4.5.1.1. The interim approach to setting connectiveness, set out in the 'User Guide', was applied whereby all high distinctiveness habitats were given a Moderate Connectivity Value and all medium, low and very low distinctiveness habitats were assigned a Low Connectivity Value.

- 4.5.1.2. The strategic significance for all habitats was considered to be low and a value of 1 applied, in the absence of supplementary data.

- 4.5.1.3. The post-development position (the extent of land within the Order Limits after the Proposed Development has been built) has been largely based on the Indicative Landscape Mitigation Plan Option B(i). Areas of temporary loss within those habitats, due to construction methods, storage and access have been included based on discussions from the Engineering Team.

## **4.6. LIMITATIONS**

- 4.6.1.1. BM2.0 is a 'beta test' software trial and is still in development. Known errors in the calculation tool have been avoided and are detailed where relevant.

## 5. BIODIVERSITY METRIC RESULTS

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### 5.1. INTRODUCTION

- 5.1.1.1. Baseline biodiversity value calculations in the BM2.0 toolkit concluded that the Study Area had a total area of 100ha. Around 50ha will be retained during the Proposed Development, the remaining 50ha will be lost, either temporarily and re-instated or permanently.
- 5.1.1.2. The Proposed Development looks to avoid impacts on Priority Habitats. All areas of Deciduous Woodland Priority Habitats were avoided and therefore retained post-development. For the lowland calcareous grassland Priority Habitat, there will be a temporary loss of habitat.

### 5.2. STUDY AREA ASSESSMENT

- 5.2.1.1. The baseline biodiversity units for the area-based habitats equated to a total of 410.80 units. The baseline for hedgerow units equated to a total of 83.35 units.
- 5.2.1.2. The post-development intervention will result in creation/retention of 333.06 area-based units, which equates to a loss of 77.74 area-based units. Therefore, the Proposed Development returned a value of -18.92% for all area-based habitats.
- 5.2.1.3. The post-development intervention will result in creation/retention of 87.60 hedgerow units, which equates to a gain of 4.25 hedgerow units. Therefore, the Proposed Development returned a value of +5.1% for hedgerow units and an increase in the length of hedge from 8.11km to 10.1 km.
- 5.2.1.4. The post-development intervention will result in creation/retention of 22.41 calcareous grassland units, which equates to a gain of 17.06 calcareous grassland units. Therefore, the Proposed Development returned a value of +157% for calcareous grassland units and an increase in the area of calcareous grassland from 0.44 ha to 9.07 ha.
- 5.2.1.5. The detailed assessment of all habitats can be found in Appendix 2.

### 5.3. PRIORITY HABITAT ASSESSMENT

- 5.3.1.1. The area or length of each priority habitat (as applicable) and the value of the units attributable to those priority habitats before and after the Proposed Development is presented in Table 5.1.

**Table 5.1 - Summary of Priority Habitats BM2.0 Results**

<b>Biodiversity Units within Priority Habitats</b>	<b>Baseline area</b>	<b>Baseline Value (units)</b>	<b>Post development area</b>	<b>Post-development Value (units)</b>	<b>Outcome for Biodiversity Units</b>
<b>Calcareous Grassland Priority Habitats</b>	0.44 ha	8.71	9.07 ha	22.41	+ 17.06
<b>Hedgerow Priority Habitats</b>	8.11 km	83.35	10.1 km	87.60	+4.25

- 5.3.1.2. Post-development biodiversity value calculations in relation to the Priority Habitats for which BM2.0 is applied concluded that the Proposed Development would retain 0.17 Calcareous Grassland Priority Habitats Biodiversity Units and 62.06 Hedgerow Priority Habitat Biodiversity Units.
- 5.3.1.3. Creation of calcareous grassland priority habitats account for 19.04 units. Hedgerow priority habitat creation accounts for 21.27 units. In addition, there are hedgerow enhancement measures which account for 4.27 units.
- 5.3.1.4. The Proposed Development therefore results in a design that can achieve a net gain for the assessed hedgerow and calcareous grassland Priority Habitats.

## 6. SUMMARY

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- 6.1.1.1. This Position Paper shows how the Proposed Development has taken opportunities to conserve and enhance biodiversity in line with National Planning Policy. This Position Paper has been informed by baseline and post-development calculations of biodiversity units using Biodiversity Metric 2.0 (Natural England 2019) in priority habitats, which provides an indication of the post-development biodiversity outcomes for the Proposed Development.
- 6.1.1.2. The mitigation hierarchy has been applied and evidenced, with clear steps to avoid, minimise and remediate and compensate biodiversity impacts. This is in line with national and local policy and guidance.
- 6.1.1.3. The OLBS sets out the measures that will mitigate the effects and enhance the value of landscape and biodiversity features with management prescription and reference to monitoring, management responsibilities and review requirements.
- 6.1.1.4. Sensitive habitats of particular biodiversity interest are subject to specific mitigation strategies developed in consultation with NE. These include restoration of hedgerows, restoration of lowland meadow habitat within Denmead Meadows and enhancement of grassland with green hay post-development at the Converter Station Area.
- 6.1.1.5. The most significant impact will be to Denmead Meadows SINC, excluded from these calculations, as a bespoke strategy, developed in consultation with NE, is being designed for these very high distinctiveness habitats.
- 6.1.1.6. The Proposed Development will result in an increase of hedgerows of almost 2 km and an increase of calcareous grassland priority habitat grassland of over 8 ha.
- 6.1.1.7. Following DCO consent and prior to commencement of construction, a Biodiversity Management Strategy, which accords with the OLBS, will be produced.

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Crosher, I., Gold, S., Heaver, M., Heydon, M., Moore, L., Panks, S., Scott, S., Stone, D., and White, N. (2019). The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value technical supplement – Beta version. Natural England

Crosher, I., Gold, S., Heaver, M., Heydon, M., Moore, L., Panks, S., Scott, S., Stone, D., and White, N. (2019). The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. User guide – Beta version, Natural England.

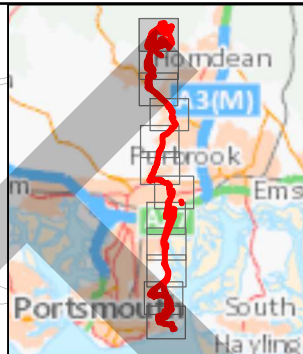
UK Habitat Classification Working Group (2018). UK Habitat Classification – Habitat Definitions V1.0 at <https://ecountability.co.uk/ukhabworkinggroup-ukhab>

WSP 2019. Indicative Landscape Mitigation Plan Option B(i) Drawing Reference EN020022-ES-15.48 and EN020022-ES-15.49.

WSP 2019. Phase 1 Habitat Map

# Appendix 1 – Study Area Plan





- Key**
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Mixed woodland - semi-natural
  - Scrub - dense/continuous
  - Broadleaved Parkland/scattered trees
  - Neutral grassland - semi-improved
  - Improved grassland
  - Poor semi-improved grassland
  - Hard standing
  - Cultivated/disturbed land - arable
  - Cultivated/disturbed land - amenity grassland
  - Buildings
  - Bare ground

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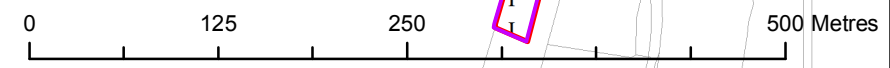
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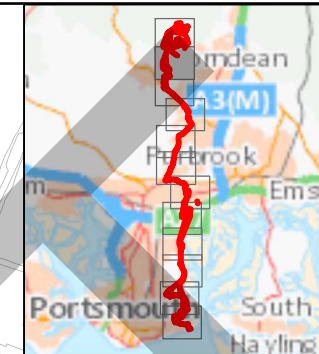
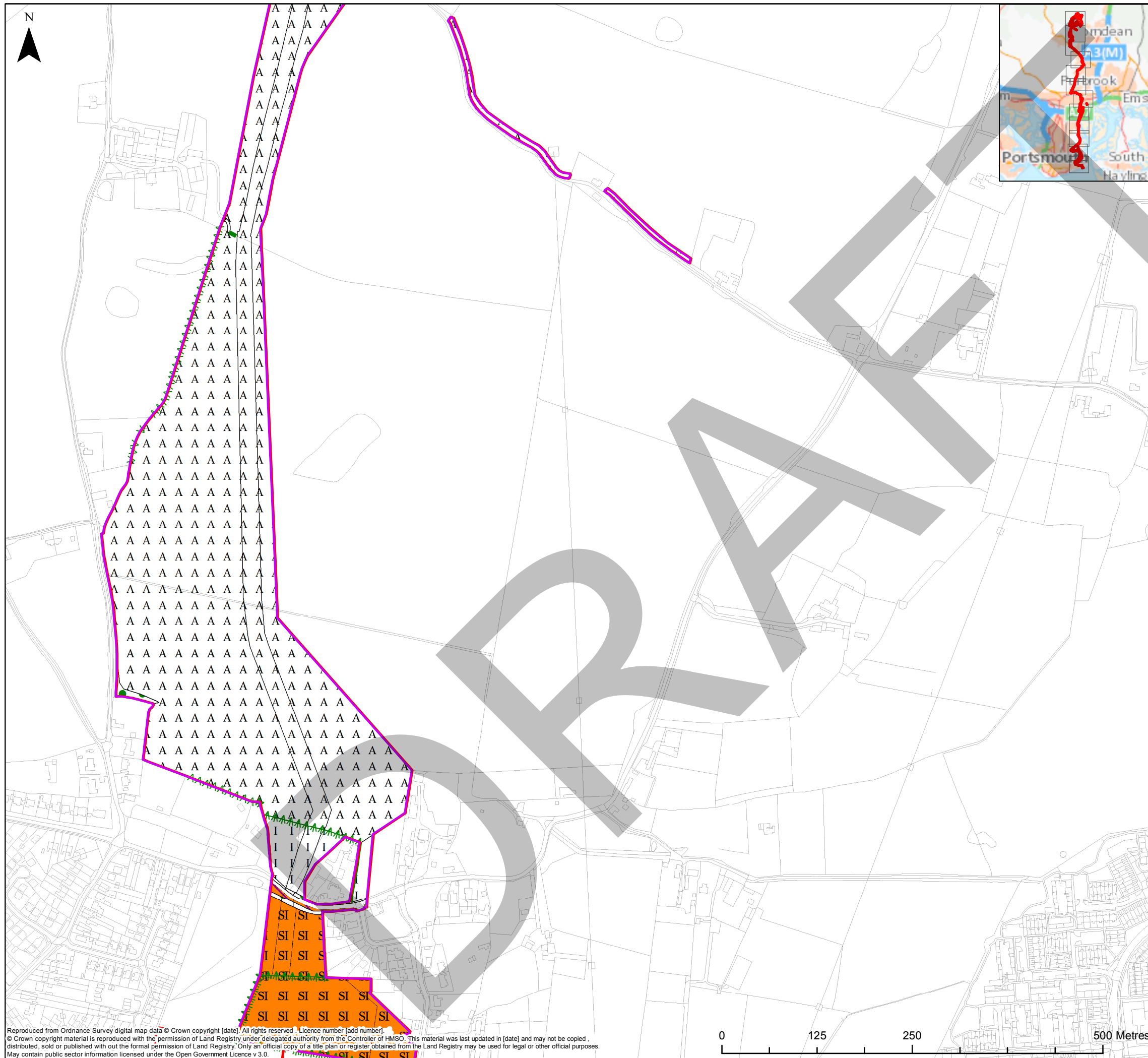
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**Key**

- Study Area
- Order Limits
- Broadleaved Parkland/scattered trees
- Neutral grassland - unimproved
- Neutral grassland - semi-improved
- Improved grassland
- Marsh/marshy grassland
- Cultivated/disturbed land - arable
- Cultivated/disturbed land - amenity grassland
- Bare ground

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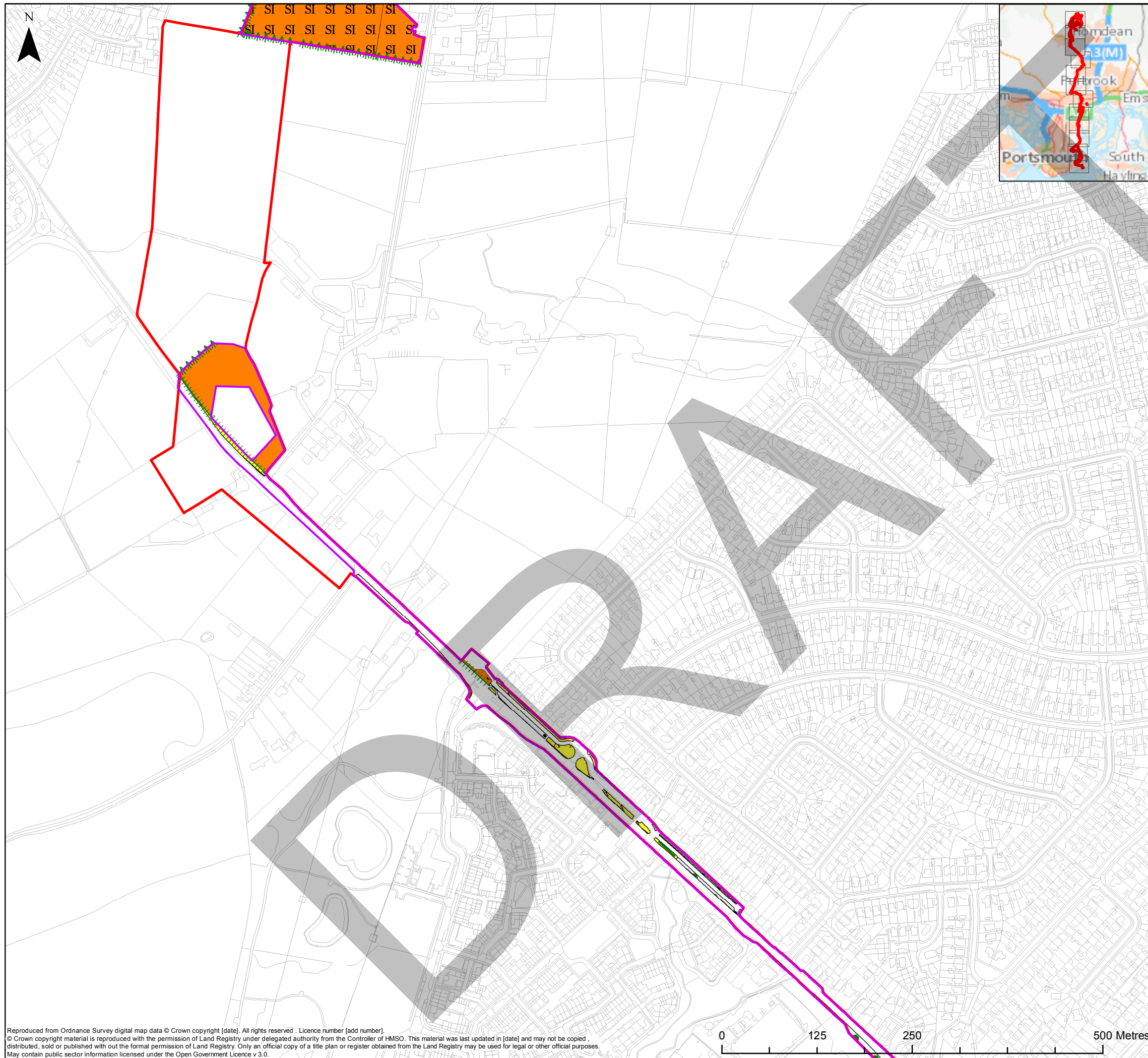
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**Key**

- Study Area
- Order Limits
- Broadleaved Parkland/scattered trees
- Neutral grassland - unimproved
- Neutral grassland - semi-improved
- Cultivated/disturbed land - amenity grassland
- Buildings

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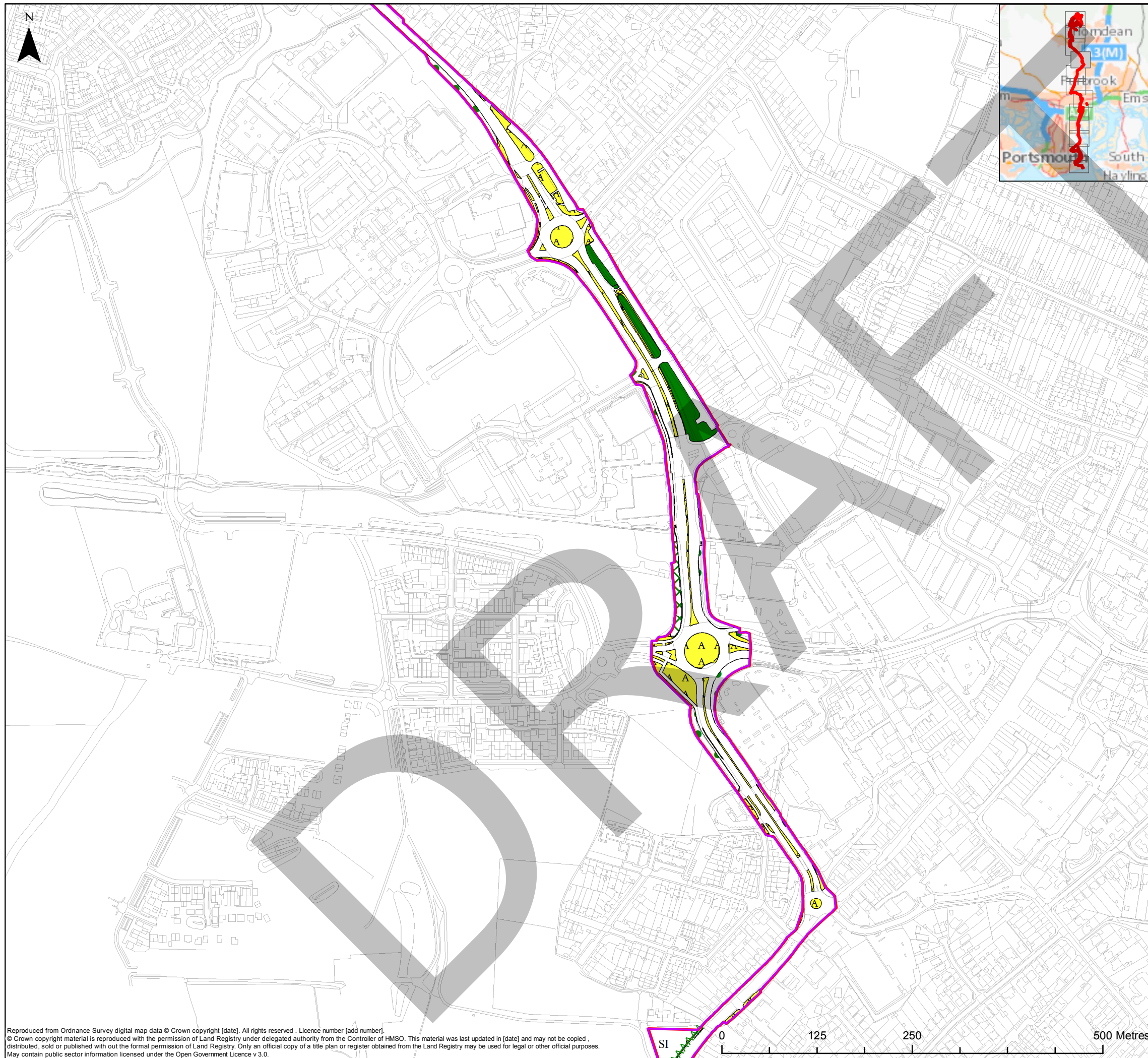
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- Key
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Scrub - dense/continuous
  - Broadleaved Parkland/scattered trees
  - Poor semi-improved grassland
  - Cultivated/disturbed land - amenity grassland
  - Buildings

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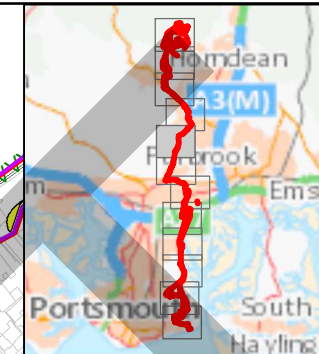
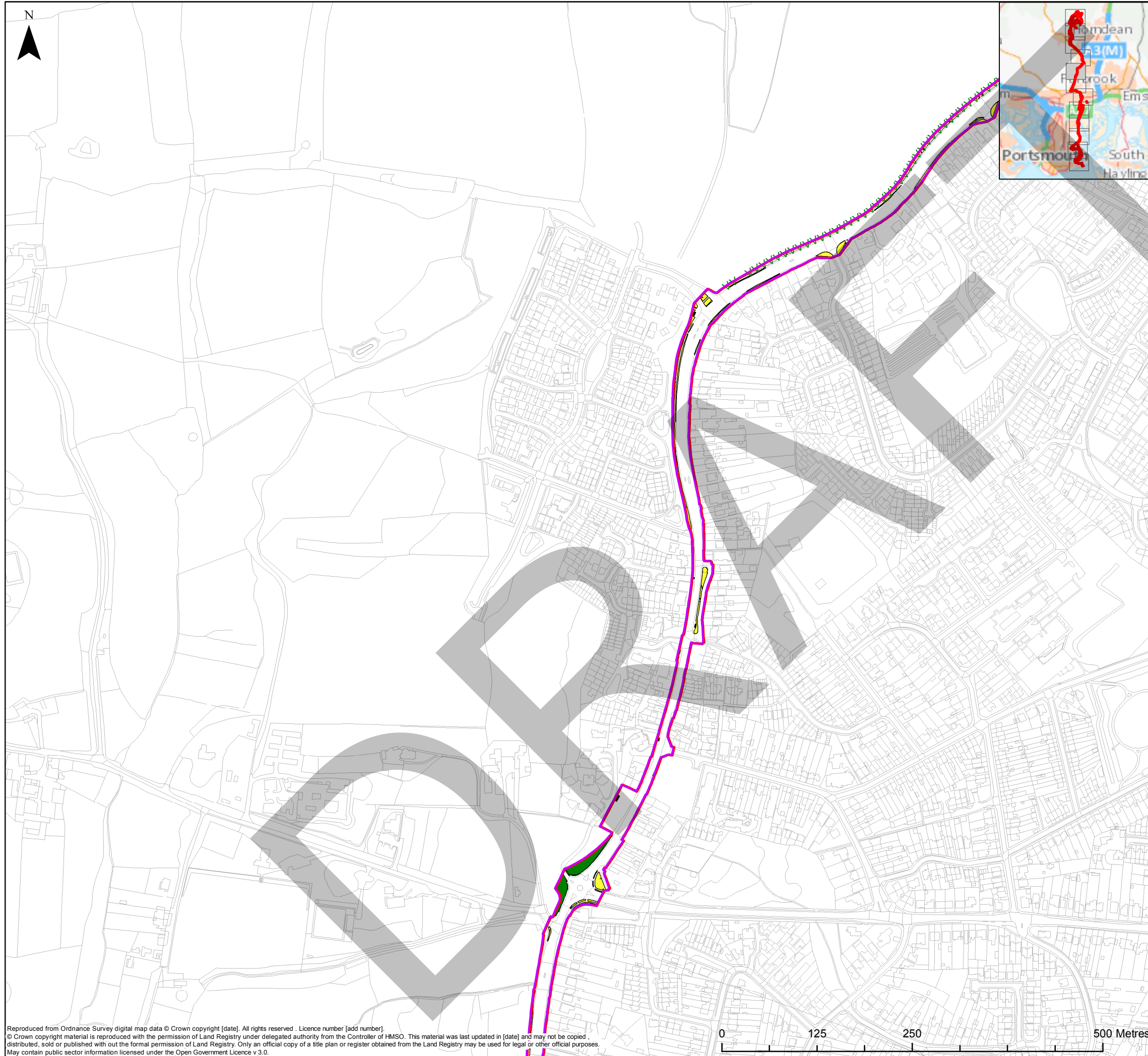
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- Key
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Broadleaved Parkland/scattered trees
  - Poor semi-improved grassland
  - Cultivated/disturbed land - amenity grassland
  - Buildings

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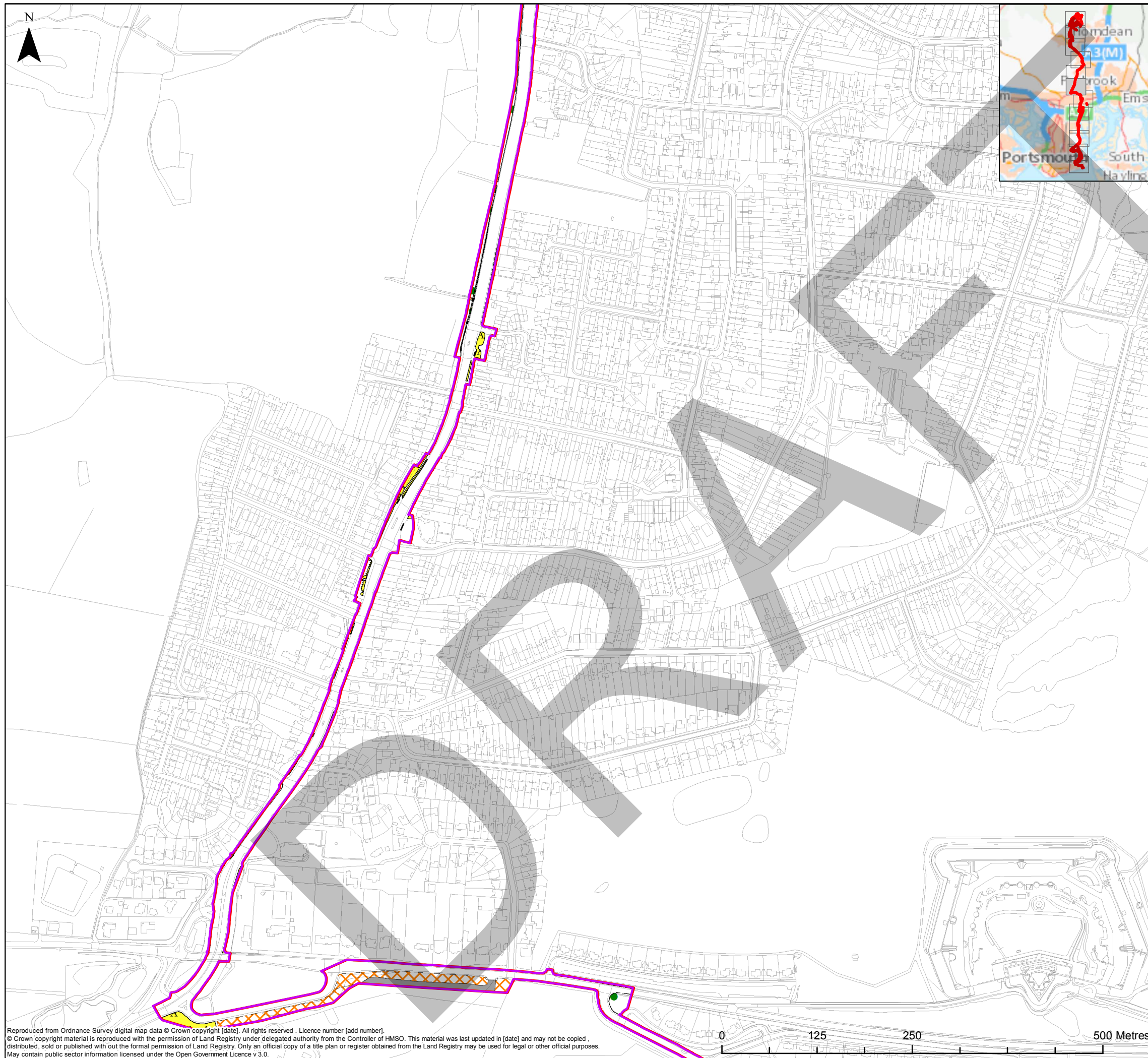
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- Key
- Study Area
  - Order Limits
  - Broadleaved Parkland/scattered trees
  - Calcareous grassland - semi-improved
  - Hard standing
  - Cultivated/disturbed land - amenity grassland
  - Buildings
  - Bare ground

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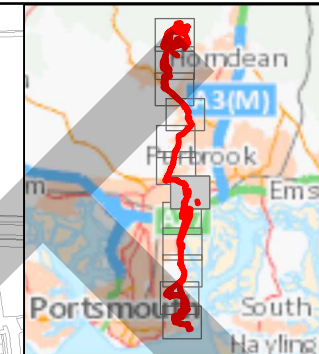
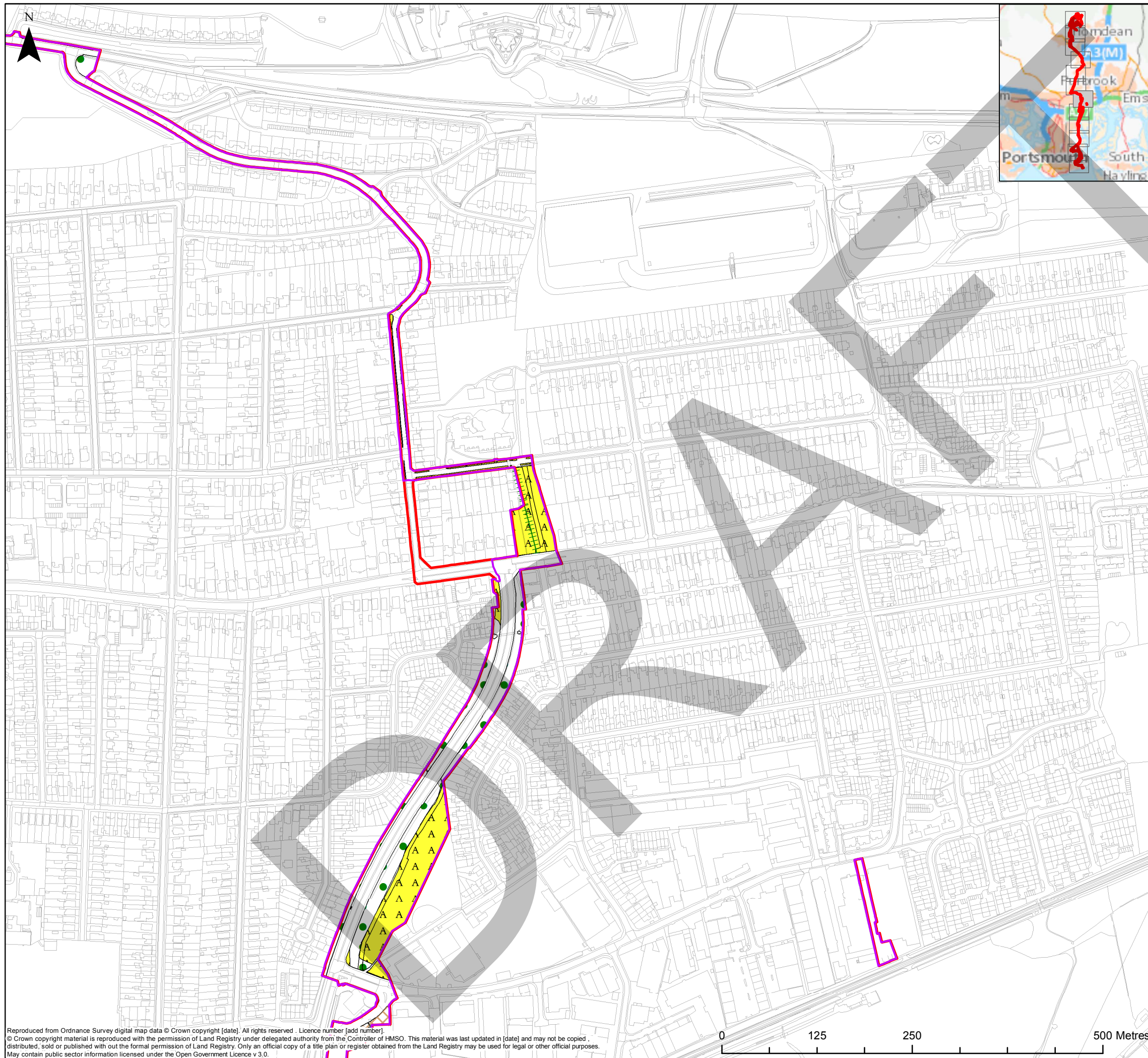
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- Key**
- Study Area
  - Order Limits
  - Broadleaved Parkland/scattered trees
  - Cultivated/disturbed land - amenity grassland
  - Introduced shrub
  - Buildings

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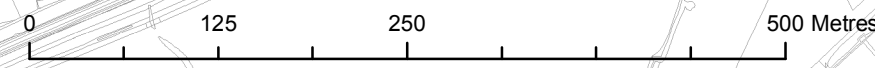
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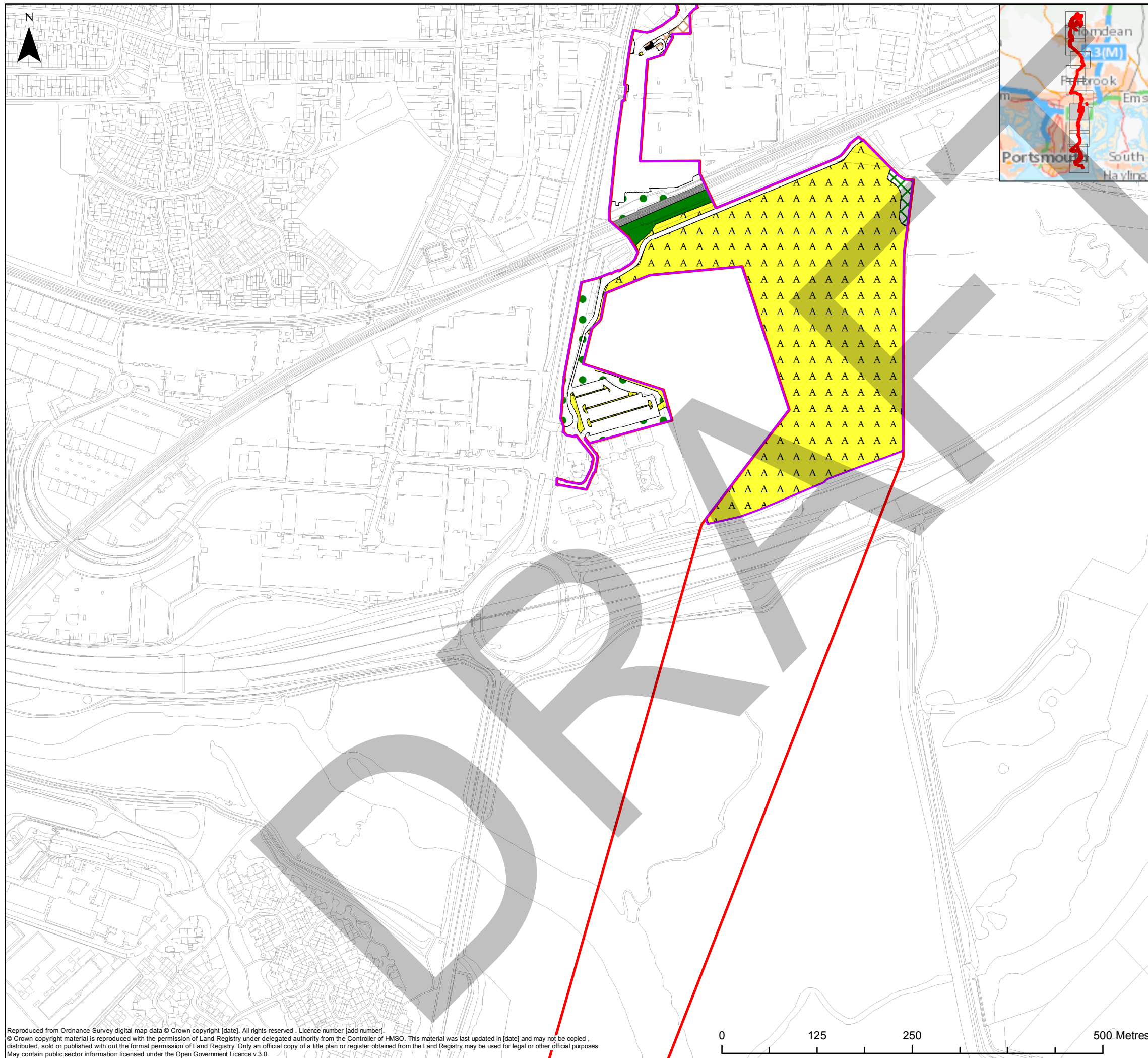
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- Key
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Scrub - dense/continuous
  - Broadleaved Parkland/scattered trees
  - Cultivated/disturbed land - amenity grassland
  - Introduced shrub
  - Buildings
  - Rail

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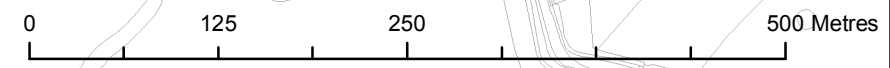
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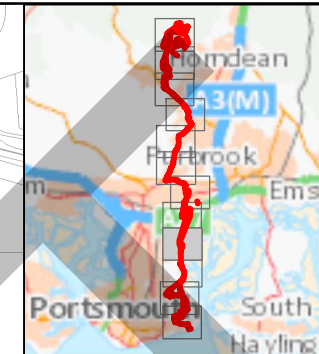
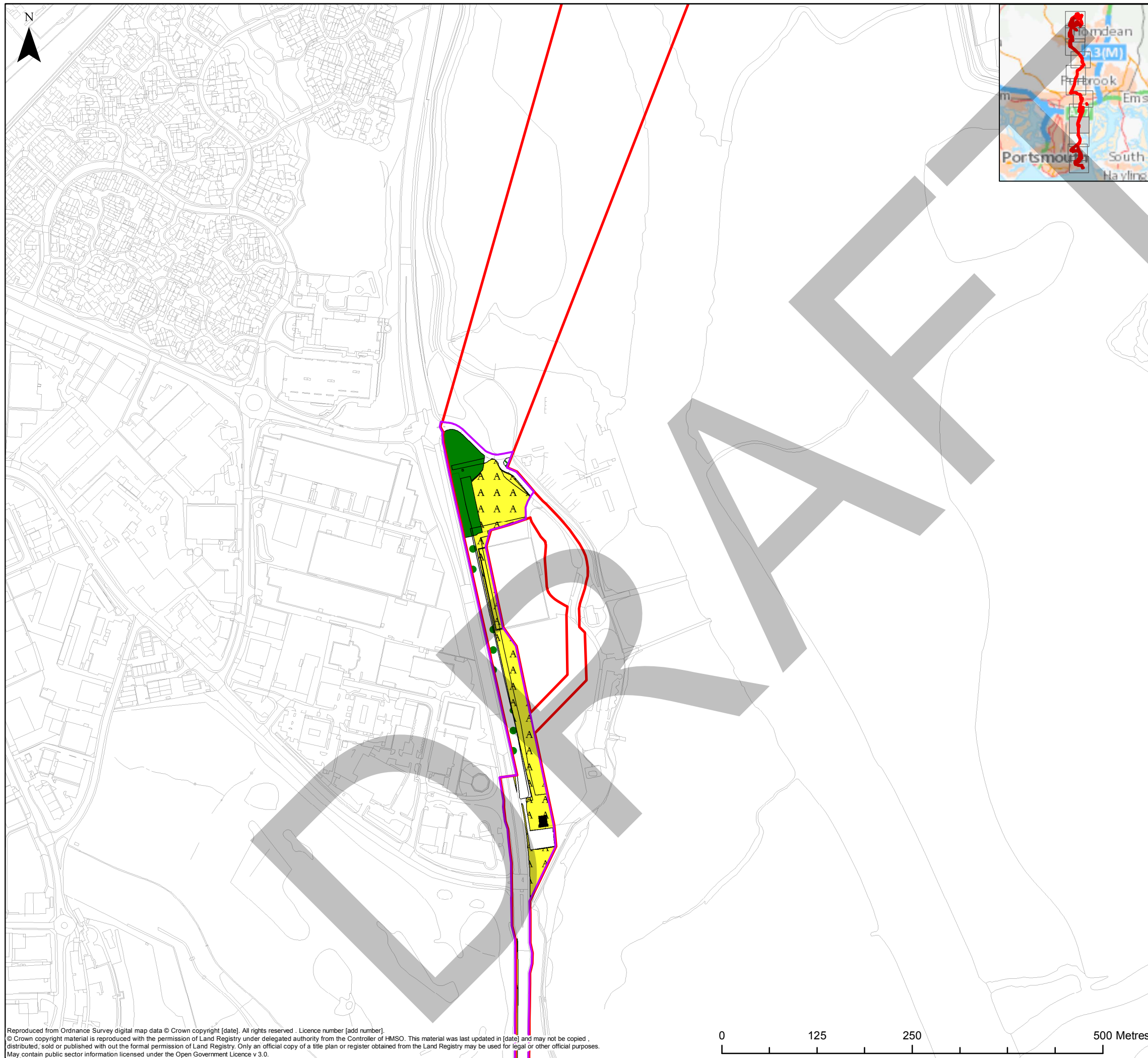
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PROJECT NO: EN020022	DESIGNED: KB	DRAWN: KB	DATE: 22/07/2020
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DRAWING NO: <b>EN020022-6.11-BNG-1-Sheet8</b>	REV.NO: <b>01</b>
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- Key**
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Mixed woodland - semi-natural
  - Scrub - dense/continuous
  - Broadleaved Parkland/scattered trees
  - Cultivated/disturbed land - amenity grassland
  - Buildings

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 – Regulation 5(2)(q)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	16/10/2018	JSdS	FIRST DRAFT	SS	TB

DRAWING STATUS: **DRAFT**

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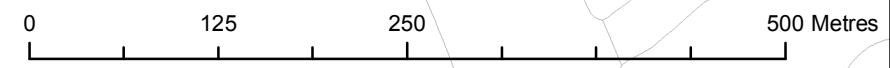
PROJECT:  
**AQUIND Interconnector**

TITLE:  
**Study Area Plan  
Lovedean Converter Station,  
Onshore Cable Route and Eastney Landfall Buildings**

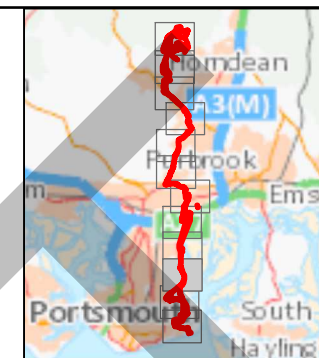
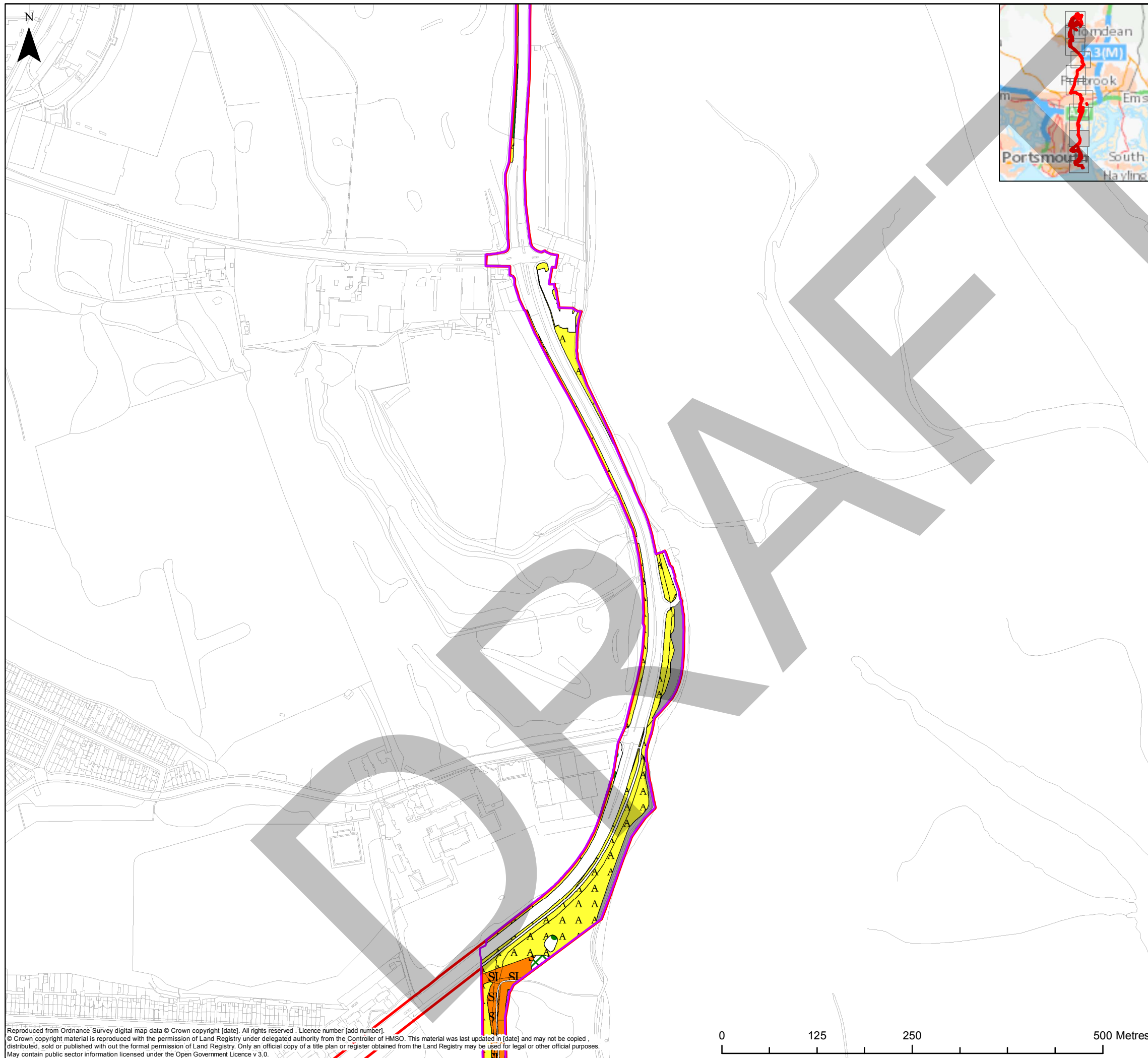
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		DATE: 22/07/2020

DRAWING NO: **EN020022-6.11-BNG-1-Sheet9**      REV.NO: **01**

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- Key**
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Scrub - dense/continuous
  - Broadleaved Parkland/scattered trees
  - Neutral grassland - semi-improved
  - Intertidal - mud/sand
  - Hard standing
  - Cultivated/disturbed land - amenity grassland

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 – Regulation 5(2)(q)

REV	DATE	BY	DESCRIPTION	CHK	APP
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PROJECT:  
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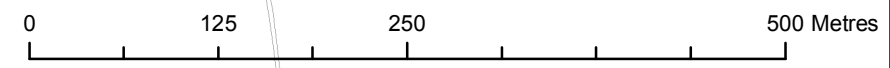
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**Study Area Plan  
Lovedean Converter Station,  
Onshore Cable Route and Eastney Landfall Buildings**

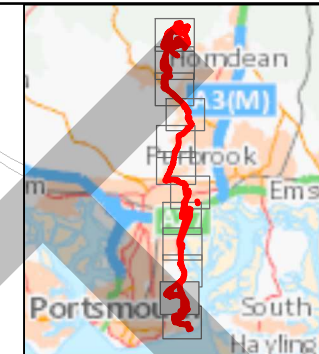
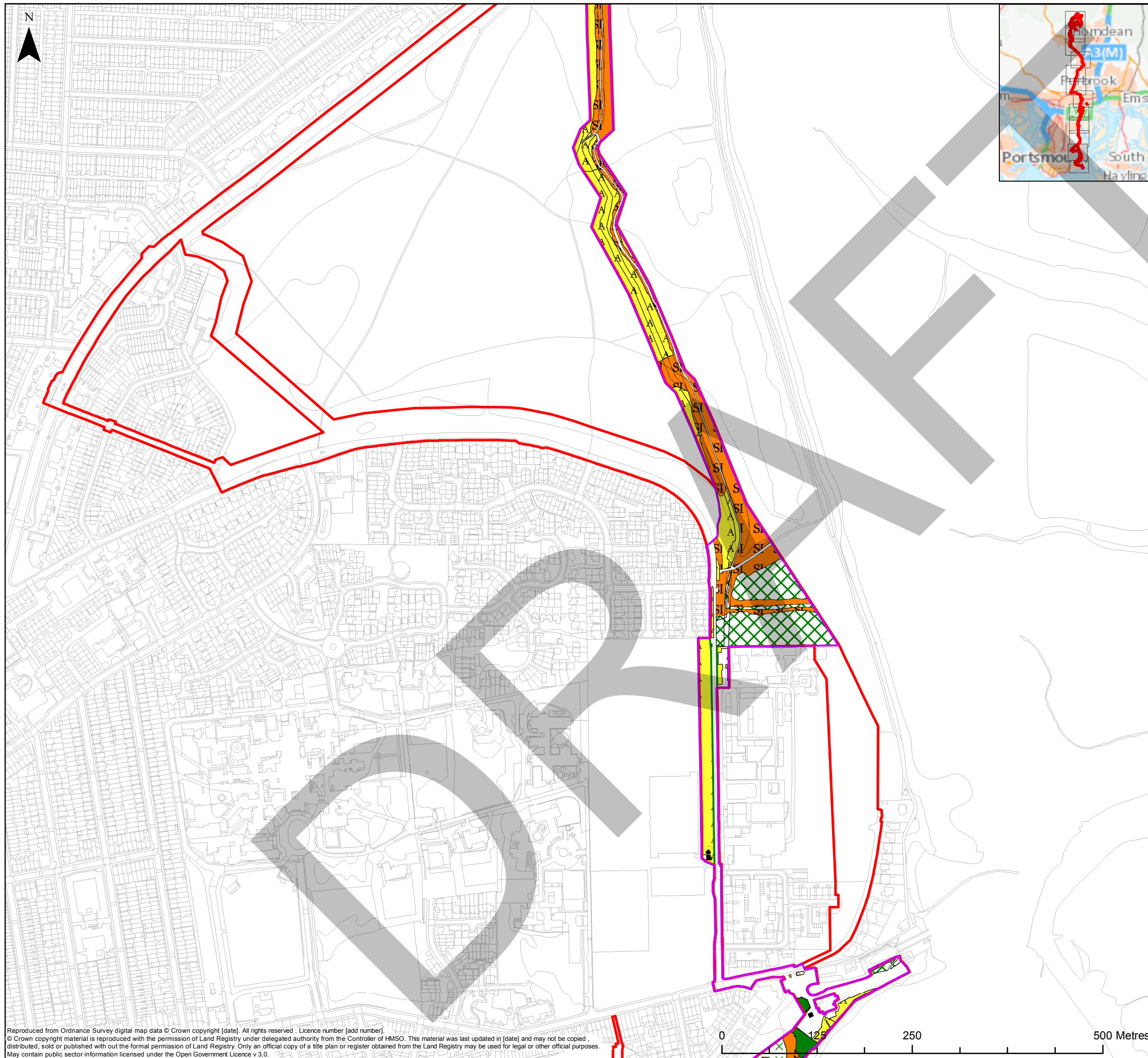
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PROJECT NO: EN020022	DESIGNED: KB	DRAWN: KB	DATE: 22/07/2020
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DRAWING NO: <b>EN020022-6.11-BNG-1-Sheet10</b>	REV.NO: <b>01</b>
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- Key**
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Scrub - dense/continuous
  - Scrub - scattered
  - Neutral grassland - semi-improved
  - Cultivated/disturbed land - amenity grassland
  - Introduced shrub
  - Artificial sea wall
  - Buildings

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 – Regulation 5(2)(q)

REV	DATE	BY	DESCRIPTION	CHK	APP
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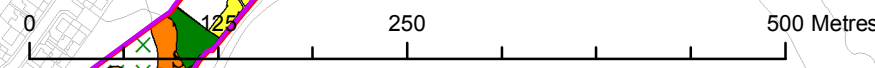
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**Study Area Plan  
Lovedean Converter Station,  
Onshore Cable Route and Eastney Landfall Buildings**

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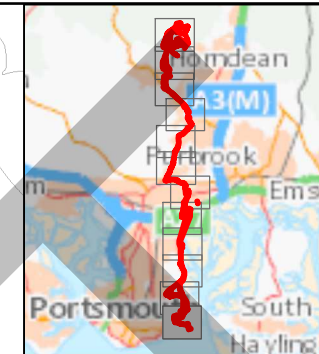
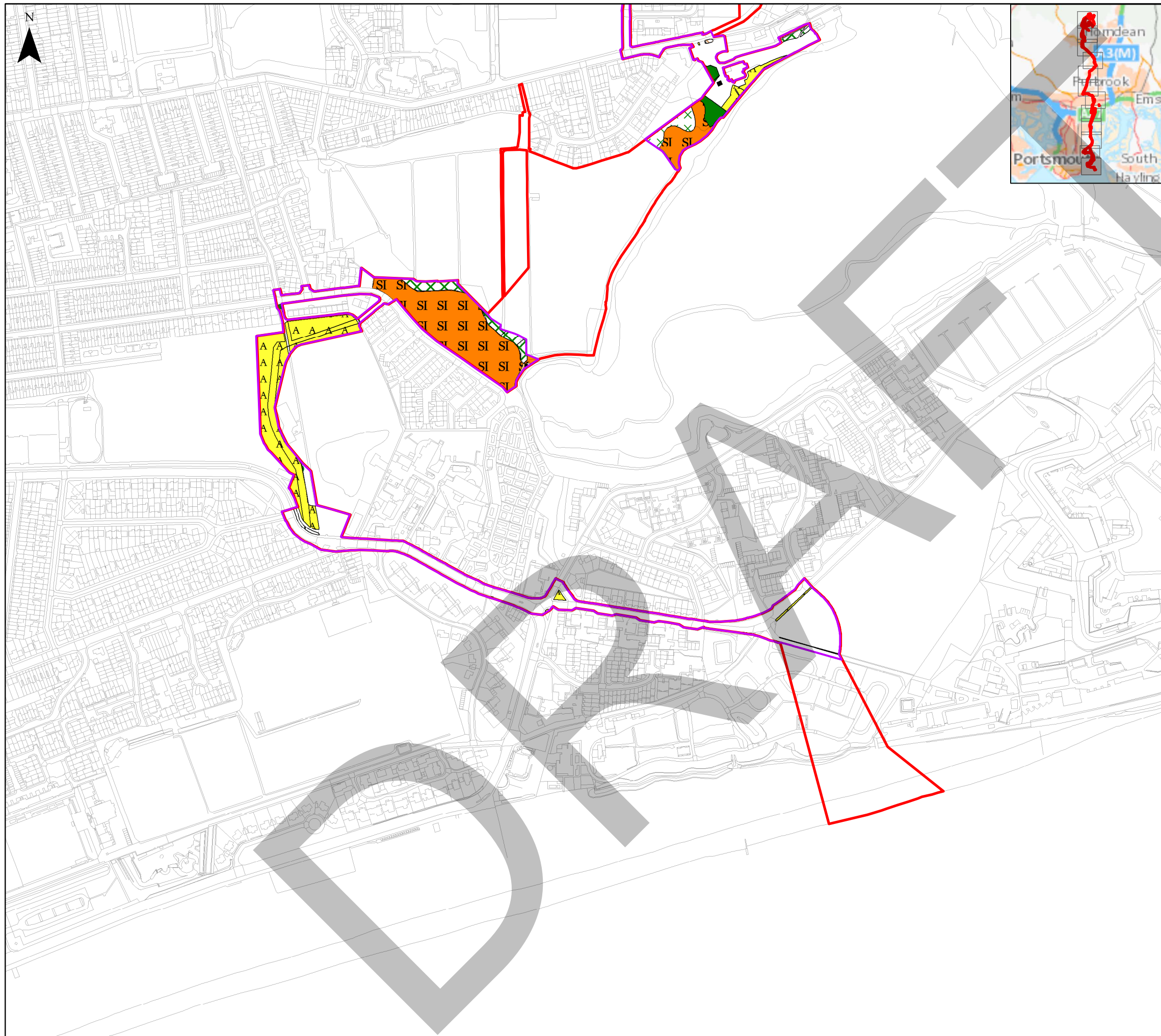
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- Key**
- Study Area
  - Order Limits
  - Broadleaved woodland - semi-natural
  - Scrub - dense/continuous
  - Scrub - scattered
  - Broadleaved Parkland/scattered trees
  - Neutral grassland - semi-improved
  - Intertidal - boulders/rocks
  - Cultivated/disturbed land - amenity grassland
  - Introduced shrub
  - Artificial sea wall
  - Buildings
  - Allotment

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 – Regulation 5(2)(q)

REV	DATE	BY	DESCRIPTION	CHK	APP
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PROJECT:  
**AQUIND Interconnector**

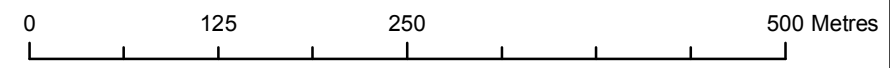
TITLE:  
**Study Area Plan  
Lovedean Converter Station,  
Onshore Cable Route and Eastney Landfall Buildings**

SCALE AT A3 1:5,000	CHECKED: DW	APPROVED: LM
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PROJECT NO: EN020022	DESIGNED: KB	DRAWN: KB	DATE: 22/07/2020
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DRAWING NO: <b>EN020022-6.11-BNG-1-Sheet12</b>	REV.NO: <b>01</b>
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# Appendix 2 – Biodiversity Metric Calculator Toolkit

## Headline Results

Return to  
results menu

On-site baseline	Habitat units	410.80
	Hedgerow units	83.35
	River units	0.00

On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	333.06
	Hedgerow units	87.60
	River units	0.00

Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00

Off-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00

Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-77.74
	Hedgerow units	4.25
	River units	0.00

Total net % change (including all on-site & off-site habitat creation + retained habitats)	Habitat units	-18.92%
	Hedgerow units	5.10%
	River units	0.00%



[Return to results menu](#)

### Summary Figures

<b>Net project biodiversity units</b> <small>(including all on-site &amp; off-site habitat retention/creation)</small>	Habitat units	-77.74
	Hedgerow units	4.25
	River units	0.00

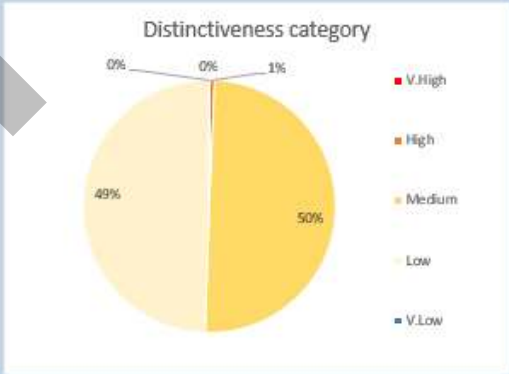
<b>Total project biodiversity % change</b> <small>(including all On-site &amp; Off-site Habitat Creation + Retained Habitats)</small>	Habitat units	-18.92%
	Hedgerow units	5.10%
	River units	0.00%

#### On-site habitat retention and enhancement

	Habitats	Hedgerows	Rivers
Total site area / length	100.16	8.11	0.00
Total site units	410.80	83.35	0.00
Area / length retained	49.74	5.88	0.00
Units Retained	223.56	62.06	0.00
Area / length enhanced	0.00	0.36	0.00
Baseline units enhanced	0.00	4.27	0.00
Area / length succession	0.00		
Units succession	0.00		
Area / length lost	50.69	1.87	0.00
Units lost	190.49	17.02	0.00

#### lost by distinctiveness

Category	Area lost (hectares)	Area lost (%)
V.High	0	
High	0.27	1
Medium	19.94	50
Low	19.77	49
V.Low	0	

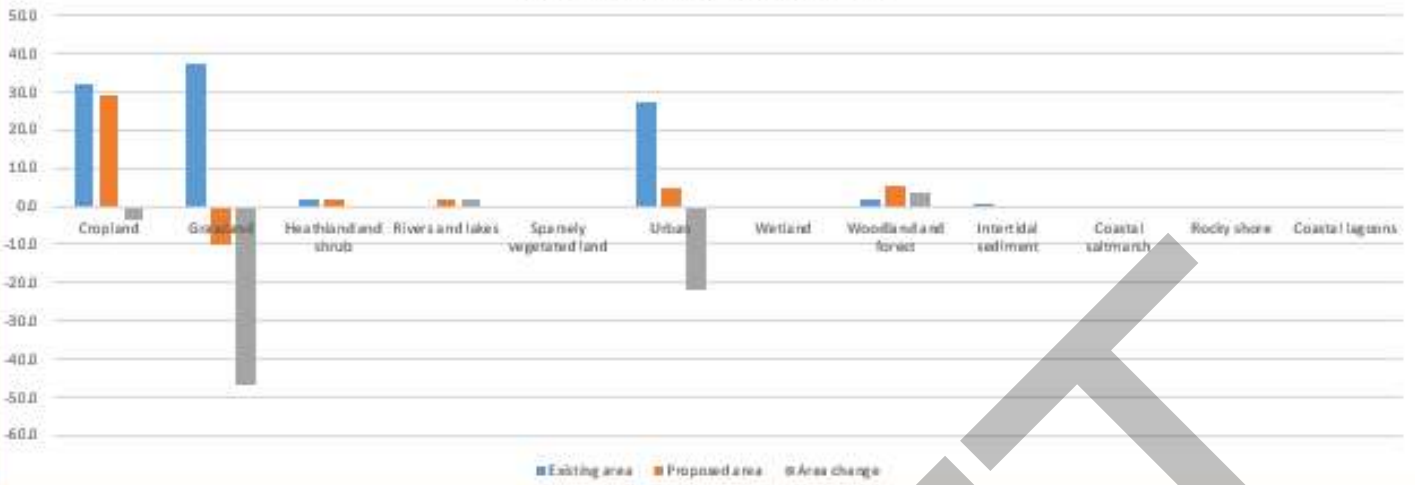


#### Combined Biodiversity Unit change

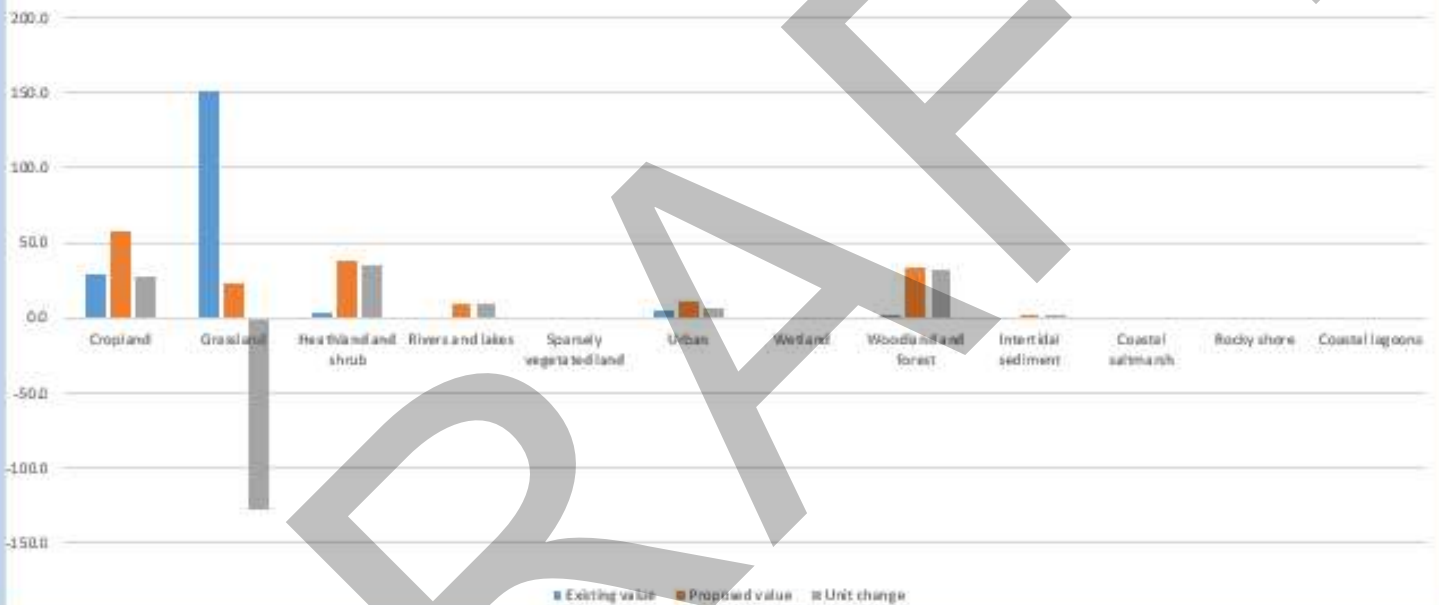




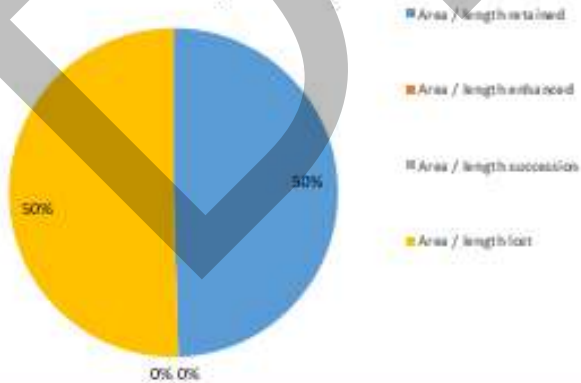
On site area change by habitat group



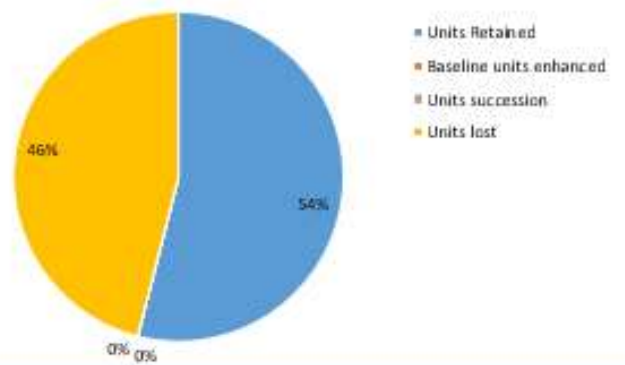
Unit change by habitat group



On-site habitat retention by category area (hectares)



On-site habitat retention category biodiversity units



On-site	Baseline		Post development on site		Onsite Change	
Habitat group	Existing area	Existing value	Proposed area	Proposed value	Area change	Onsite Unit change
Cropland	32.3	29.4	28.9	56.9	-3.4	27.5
Grassland	37.1	151.4	-9.8	23.2	-46.9	-128.2
Heathland and shrub	2.0	2.9	1.8	37.7	-0.2	34.8
Rivers and lakes	0.0	0.0	1.9	9.2	1.9	9.2
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0
Urban	27.0	4.9	4.8	10.8	-22.2	5.9
Wetland	0.0	0.0	0.0	0.0	0.0	0.0
Woodland and forest	1.8	1.9	5.4	34.1	3.7	32.1
Intertidal sediment	0.0	0.0	0.0	0.2	0.0	0.2
Coastal saltmarsh	0.0	0.0	0.0	0.0	0.0	0.0
Rocky shore	0.0	0.0	0.0	0.0	0.0	0.0
Coastal lagoons	0.0	0.0	0.0	0.0	0.0	0.0

Overall Change	
Area change	Unit change
-3.4	27.5
-46.9	-128.2
-0.2	34.8
1.9	9.2
0.0	0.0
-22.2	5.9
0.0	0.0
3.7	32.1
0.0	0.2
0.0	0.0
0.0	0.0
0.0	0.0

Off-site	Baseline		Post development Off-site		Off-site Change	
Habitat group	Existing area	Ult-site Existing value	Proposed area	Ult site Proposed value	Area change	Ultsite Unit change
Cropland	0.0	0.0	0.0	0.0	0.0	0.0
Grassland	0.0	0.0	0.0	0.0	0.0	0.0
Heathland and shrub	0.0	0.0	0.0	0.0	0.0	0.0
Rivers and lakes	0.0	0.0	0.0	0.0	0.0	0.0
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0
Urban	0.0	0.0	0.0	0.0	0.0	0.0
Wetland	0.0	0.0	0.0	0.0	0.0	0.0
Woodland and forest	0.0	0.0	0.0	0.0	0.0	0.0
Intertidal sediment	0.0	0.0	0.0	0.0	0.0	0.0
Coastal saltmarsh	0.0	0.0	0.0	0.0	0.0	0.0
Rocky shore	0.0	0.0	0.0	0.0	0.0	0.0
Coastal lagoons	0.0	0.0	0.0	0.0	0.0	0.0

Combined	Baseline		Combined Post development		Combined change	
Habitat group	Existing area	Existing value	Proposed area	Proposed value	Proposed area	Proposed value
Cropland	32.3	29.4	28.9	56.9	-3.4	27.5
Grassland	37.1	151.4	-9.8	23.2	-46.9	-128.2
Heathland and shrub	2.0	2.9	1.8	37.7	-0.2	34.8
Rivers and lakes	0.0	0.0	1.9	9.2	1.9	9.2
Sparsely vegetated land	0.0	0.0	0.0	0.0	0.0	0.0
Urban	27.0	4.9	4.8	10.8	-22.2	5.9
Wetland	0.0	0.0	0.0	0.0	0.0	0.0
Woodland and forest	1.8	1.9	5.4	34.1	3.7	32.1
Intertidal sediment	0.0	0.0	0.0	0.2	0.0	0.2
Coastal saltmarsh	0.0	0.0	0.0	0.0	0.0	0.0
Rocky shore	0.0	0.0	0.0	0.0	0.0	0.0
Coastal lagoons	0.0	0.0	0.0	0.0	0.0	0.0







142	Urban	Urban - Vacant/derelict land/ bareground	0.03	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.06					0.00	0.00	0.00	0.03	0.06				
143	Urban	Urban - Vacant/derelict land/ bareground	0.2	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.40					0.00	0.00	0.00	0.20	0.40				
144	Urban	Urban - Vacant/derelict land/ bareground	0.1	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.20					0.00	0.00	0.00	0.10	0.20				
145	Urban	Urban - Vacant/derelict land/ bareground	0.61	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	1.22					0.00	0.00	0.00	0.61	1.22				
146	Urban	Urban - Vacant/derelict land/ bareground	0.01	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02					0.00	0.00	0.00	0.01	0.02				
147	Urban	Urban - Vacant/derelict land/ bareground	0.01	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02					0.00	0.00	0.00	0.01	0.02				
148	Urban	Urban - Vacant/derelict land/ bareground	0.02	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.04	0.02				0.04	0.00	0.00	0.00	0.00	0.00			
149	Urban	Urban - Vacant/derelict land/ bareground	0.01	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02	0.01				0.02	0.00	0.00	0.00	0.00	0.00			
150	Urban	Urban - Vacant/derelict land/ bareground	0.01	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02	0.01				0.02	0.00	0.00	0.00	0.00	0.00			
151	Urban	Urban - Vacant/derelict land/ bareground	0.03	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.06	0.03				0.06	0.00	0.00	0.00	0.00	0.00			
152	Urban	Urban - Vacant/derelict land/ bareground	0.09	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.18	0.09				0.18	0.00	0.00	0.00	0.00	0.00			
153	Urban	Urban - Vacant/derelict land/ bareground	0.18	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.36	0.18				0.36	0.00	0.00	0.00	0.00	0.00			
154	Urban	Urban - Vacant/derelict land/ bareground	0.02	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.04	0.02				0.04	0.00	0.00	0.00	0.00	0.00			
155	Urban	Urban - Vacant/derelict land/ bareground	0.01	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.02	0.01				0.02	0.00	0.00	0.00	0.00	0.00			
156											Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1															
157											Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1															
158											Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1															
159											Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1															
160											Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1															
Total site area ha			100.16												Total Site baseline	410.80	49.74	0.00	0.00	223.56	0.00	0.00	50.69	190.49				

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Urban - Vacant/derelict land/ bareground	0.00	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1	0.965	Low	1	0.00	
Urban - Vacant/derelict land/ bareground	0.00	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	1	0.965	Low	1	0.00	
Lakes - Reservoirs	1.80	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	5	0.837	Medium	0.67	8.07	
Urban - Developed land; sealed surface	0.07	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
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Urban - Developed land; sealed surface	0.06	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.01	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.04	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	Removed under Aquind Approach
Urban - Developed land; sealed surface	0.02	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.01	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
Urban - Developed land; sealed surface	0.00	V.Low	0	N/A - Other	0	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	
<b>Totals</b>			<b>51.21</b>														
														<b>Total Units</b>	<b>109.50</b>		

**Check Areas- Area of development and habitat creation must match the area of habitats lost**



**B-1 Site Hedge Baseline**

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Baseline ref	UK Habitats - existing habitats			Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance				Ecological baseline Total hedgerow units	Retention category biodiversity value						Comments	
	Hedge number	Hedgerow type	length KM	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Suggested action to address habitat losses		Length retained	Length enhanced	Units retained	Units enhanced	Length lost	Units lost	Assessor comments	Reviewer comments
1		Native Species Rich Hedgerow	2.755	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	2.389	0.356	28.668	4.272	0.01	0.12	J2.1.1 - Hedgerow (intact) - species rich in "assumed good" condition due to intact status		
2		Native Hedgerow	0.594	Low	2	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.153		0.918	0	0.441	2.646	J2.1.2 - Hedgerow (intact) - species poor in "assumed good" condition due to intact status		
3		Native Species Rich Hedgerow	1.819	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	1.443		11.544	0	0.376	3.008	J2.2.1 - Hedgerow (defunct) - species rich in "assumed moderate" condition due to defunct status		
4		Native Hedgerow	0.138	Low	2	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.013		0.052	0	0.125	0.5	J2.2.2 - Hedgerow (defunct) - species poor in "assumed moderate" condition due to defunct status		
5		Native Species Rich Hedgerow with trees	2.466	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Like for like or better	1.597		19.164	0	0.869	10.428	J2.3.1 - Hedgerow with trees - species rich in "assumed good" condition		
6		Native Hedgerow with trees	0.339	Low	2	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.286		1.716	0	0.053	0.318	J2.3.2 - Hedgerow with trees - species poor in "assumed good" condition		
7																							
8																							
9																							
10																							
11																							
		<b>Total Site length/KM</b>	<b>8.11</b>											<b>Total Site baseline</b>	<b>5.88</b>	<b>0.36</b>	<b>62.06</b>	<b>4.27</b>	<b>1.87</b>	<b>17.02</b>			

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## B-2 Site Hedge Creation

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Baseline ref	New hedge number	Multipliers															Hedge units delivered	Comments			
		Proposed habitats		Habitat distinctiveness		Habitat condition		Ecological connectivity			Spatial quality			Temporal multiplier		Difficulty of creation multiplier		Assessor comments	Reviewer comments		
		Habitat type	Length km	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance		Strategic position multiplier	Time to target condition/years	Time to target multiplier						
1		Native Species Rich Hedgerow	2.898	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	10	0.700	0.67	16.32	Recreation of J2.1.1 - Hedgerow (intact) - species rich in "assumed good" condition which are temporarily lost to construction of cable route.		
2		Native Species Rich Hedgerow	0.212	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	10	0.700	0.67	1.19	Recreation of J2.1.2 - Hedgerow (intact) - species poor in "assumed good" condition which are temporarily lost to construction of cable route. Replant as J2.1.1 - Hedgerow (intact) - species rich in good condition and confirm with landscape this is assumed.		
3		Native Species Rich Hedgerow	0.441	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	10	0.700	0.67	2.48	Recreation of J2.2.1 - Hedgerow (defunct) - species rich in "assumed moderate" condition which are temporarily lost to construction of cable route. Replant as J2.1.1 - Hedgerow (intact) - species rich in good condition and confirm with landscape this is assumed.		
4		Native Species Rich Hedgerow	0.026	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	10	0.700	0.67	0.15	Recreation of J2.3.1 - Hedgerow with trees - species rich in "assumed good" condition which are temporarily lost to construction of cable route.		
5		Native Species Rich Hedgerow with trees	0.232	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	20	0.490	0.67	0.91	Recreation of J2.3.2 - Hedgerow with trees - species poor in "assumed good" condition which are temporarily lost to construction of cable route. Replant as J2.3.1 - Hedgerow with trees - species rich in good condition and confirm with landscape this is assumed.		
6		Native Species Rich Hedgerow with trees	0.054	Medium	4	Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy		Low Strategic Significance	1	20	0.490	0.67	0.21			
7																					
8																					
9																					
10																					
11																					
Creation Length/KM			3.86																21.27		

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**B-3 Site Hedge Enhancement**

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Baseline Habitats		Post development/ post intervention habitats											Comments	
Baseline ref	Baseline habitat	Proposed	Change in distinctiveness and condition		Length KM	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Temporal multiplier	Difficulty Multipliers	Hedge units delivered	Comments	
			Strategic significance	Time to target condition/years					Difficulty of enhancement Category				Assessor comments	Reviewer comments
1	Native Species Rich Hedgerow	Native Species Rich Hedgerow with trees	Medium - Medium	Error - No enhancement	0.356	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	20	Medium	4.27	Addition of trees to an existing species rich hedgerow with trees	enhancement of hedge without change in condition doesn't seem to generate a change in units – baseline units enhanced = 4.272; hedge units delivered (enhancement) = 4.27. This is because the addition of trees within the new UKHab framework doesn't change the D value if spp rich – medium whether with/without trees.
					<b>Total site length</b>	<b>0.36</b>						<b>4.27</b>		

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