Draft Portsmouth Local Plan 2040

Proposed Strategic Allocation at Tipner West and Horsea Island East

The Conservation of Habitats and Species Regulations 2017 (as amended)

Regulation 107(3) Request of the Secretary of State for Levelling Up, Housing and Communities (the 'Appropriate Authority') for an Opinion as to Imperative Reasons of Overriding Public Interest (IROPI)

Portsmouth City Council Statement of Case

April 2023

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A1: Tipner West and Horsea Island East: Draft Tipner Policy and Strategic Site Allocation Proposals for Draft Portsmouth Local Plan 2040

A2: Southampton and Portsmouth City Deal (12th November 2013)

A3: Email advice to PCC from Andrew Tully (Policy Lead) DEFRA Protected Areas Team, 25 October 2021

A4: Natural England Regulation 18 Consultation response (8th November 2021)

A5: PCC HRA Screening Decision for Tipner West/Horsea Island East site allocation (dated April 2023)

A6: Environment Bank SPA Metric Process to Determine Required Compensation (for Lennox Point project, Aug 2021);

A7: TRP Preliminary Ecological Appraisal (WSP, April 2023)

A8: North Solent SMP IROPI Decision letter (DEFRA, 4th April 2011)

A9: Portsea Island Coastal Strategy IROPI Decision letter (DEFRA, 5th April 2011)

A10: Tipner, Port Solent and Horsea Island Bridge Feasibility Study, Peter Brett Associates (June 2010)

A11: European Commission IROPI Opinion (Art.6.4.2) Decisions:

(a) Deepening the Danube waterway between Straubing and Vilshofen; section Straubing-Deggendorf (Germany/Bavaria);

(b) concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port of Granadilla (Tenerife)

A12: 2040 Portsmouth City Council Local Plan - Indicative Timeframe to Adoption

A13: Portsea Island Coastal Strategy Study Statement of Case (Appendix 20) in respect of the effects on European Sites (June 2009) (*Halcrow*, for Environment Agency)

A14: Alternative Solutions (Derogation Step 1 - Provisional)

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A16: Habitats Directive: guidance on the application of Article 6(4) - Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures (DEFRA, Aug 2012)

1. Introduction

1.1 Regulation 107(3) of the Conservation of Habitats and Species Regulations 2017 (as amended)(*'the Habitats Regulations'*) provides for a plan-making authority to obtain the opinion of the 'appropriate authority' as to whether particular reasons are to be considered 'imperative reasons of overriding public interest' (IROPI) for a land use plan by submitting a written request, identifying:

(a) the matters on which an opinion is sought; and to be

(b) accompanied by any documents or information which may be required.

1.2 The 'plan-making authority' for the purpose of this request is Portsmouth City Council exercising its statutory functions as local planning authority (*PCC-LPA*). Further to the withdrawal of the UK from the European Union, and pursuant to the Conservation of Habitats and Species (Amendment)(EU Exit) Regulations 2019, the 'appropriate authority' from which this opinion is sought is now the Department for Levelling Up, Housing and Communities (*DLUHC*).

1.3 **This request is made in relation to the draft *Portsmouth Local Plan 2040* (the 'land use plan') for the purposes of Regs.105-107 of the Habitat Regulations and specifically in respect of the proposed Draft Strategic Site Allocation Policy PLP5: Tipner West & Horsea Island**. This particular draft land use policy proposes the development of the Tipner West and Horsea Island East site, as indicated on the plan at Appendix A1, to provide approximately 1,250 homes and 58,000sqm of marine employment together with urgently required sea defences and site de-contamination and many other cumulative benefits for the City as detailed in this Statement.

1.4 The existing site is partly derelict and contains a plethora of unrelated land uses (a former MOD Firing Range, boatyards, recycling, storage and a Special Educational Needs (SEN) school). The site is in need of significant remediation to address historic polluting uses. Its redevelopment, as recognised in the City Deal (2014)[1](Appendix A2), presents an opportunity to vastly improve the quality of the environment in this part of the City but critically to facilitate the delivery of necessary sea defences which would, together with site decontamination works, protect the integrity of the designated sites and associated habitats from harmful leachate contamination.

1.5 The Local Plan Habitats Regulations Assessment process is ongoing. An iteration of the HRA including an appropriate assessment was completed for the Regulation 18 version of the Local Plan published in 2021[2]. It is apparent that the development of the allocated site would be likely to give rise to direct and indirect effects upon the integrity of sites forming part of the National Site Network and international Ramsar site network. The designated sites of relevance to this request are:

- Portsmouth Harbour Special Protection Area (SPA);
- Portsmouth Harbour Ramsar site; and

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/256460/2013111_Southampton_and_Portsmouth_City_Deal_Document_and_Implementation_Plans.pdf

[2] https://www.portsmouth.gov.uk/wp-content/uploads/2021/09/PLP-HRA_150921_Final_compressed.pdf

- Solent and Dorset Coast SPA. [3]

1.6 The PCC-LPA, by requesting this Opinion, are adopting a precautionary approach in line with best practice having regard to the Reg. 105 of the Habitat Regulations and the need to demonstrate legal compliance for the emerging Local Plan pursuant to s.20(5)(a) of the Planning and Compulsory Purchase Act 2004 (as amended). It is also sought as a priority, recognising a **Planning Inspectorate Advisory meeting scheduled for 16th August 2023** and in anticipation of potential Regulation 19 Submission consultation later this year. It would be greatly beneficial if your initial thoughts on IROPI could be shared with us ahead of that meeting and / or an appropriate DLUHC officer could attend the meeting in an advisory capacity.

1.7 This Statement of Case provides the context, background information, and evidence base to support the social and economic reasons upon which the IROPI opinion of the appropriate authority is sought. It has been notified in advance to the Protected Area Team within DEFRA (received 18th April 2023, see Appendix A3) who have asked to be copied in to the submission, and recognising that there are limited, if any, submissions made to the UK Government under Regulation 107(3) (or equivalent Reg.64(3) for 'projects') to date and no specific regulatory process in force for such a submission and determination to be made.[4] However, PCC-LPA wish to secure the Secretary of State's Opinion prior to Pre-Submission consultation of the Portsmouth Local Plan under Regulation 19, which is currently scheduled for the third quarter of 2023. This will help to ensure that the City Council have prepared a legally compliant and sound Local Plan for Submission to the Secretary of State for examination.

1.8 For the avoidance of doubt, PCC is making a request to the Secretary of State to give his opinion as to whether IROPI are present for the proposed site allocation at Tipner as expressed in draft Strategic Site Allocation Policy PLP5: Tipner West & Horsea Island of the emerging Local Plan. PCC considers it prudent and proactive to seek this as early as possible so that it can progress with more certainty with the preparation of a sound and legally compliant local plan.

1.9 We understand that any advice provided with regard to IROPI in response to this document would be without prejudice to consideration of the other two derogation tests that would need to be passed for the plan to be adopted namely the demonstration of no feasible alternatives to delivering the objectives of the plan and agreement of suitable compensatory provision for harm caused to the internationally important wildlife sites involved. Advice in respect of these other derogation test has been sought and is continuing to be discussed with Natural England.

2. The Legal Framework

2.1 The requirements of the Habitats Directive (EC Directive 92/43/EEC)[5] were embedded in UK law through the Habitats Regulations. The Habitats Regulations are the means by which the UK meets its obligations with regard to natural habitats, flora and fauna as agreed under the Bern Convention.

[3] https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9011051.pdf; https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020330.pdf; https://jncc.gov.uk/jncc-assets/RIS/UK11055.pdf.

[4] The template HRA Derogation Notice provided at https://www.gov.uk/government/publications/habitats-regulations-assessment-derogation-notice relates to plans or projects that have concluded the Appropriate Assessment process and associated derogation steps and is not considered to apply for the purposes of a Reg 107(3) Opinion request which is the focus of this Statement of Case.

[5] https://www.legislation.gov.uk/eudr/1992/43/contents

The Habitats Regulations were put in place to protect sites identified under the Habitats Directive and also the EC Directive 2009/147/EC[6] on the conservation of wild birds (the 'Birds Directive'). The Habitats Regulations as now incorporated into UK law, provide protection for animal and plant species of European and international importance, including the habitats that support them.

2.2 The aim of the Habitats Regulations is to protect specified natural habitats and wild species. This includes measures to establish a network of sites, as part of the 'National Site Network', alongside international Ramsar[7] designation. The aim of the network is to ensure the long-term survival of the most valuable and 'at risk' species and habitats, and to promote biodiversity. The network of sites comprises Special Protection Areas ('SPA') and Special Areas of Conservation ('SAC'). In the National Planning Policy Framework these are called 'Habitats Sites'. Designated Wetlands of International Importance (known as 'Ramsar sites') do not form part of the national site network but are an international designation and the National Planning Policy Framework (paragraph 181) is clear that they should be treated identically to Habitats Sites. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats. All Ramsar sites remain protected in the same way as SACs and SPAs. The sites are required to be managed, conserved and protected in accordance with the provisions of Part 2 of the Habitats Regulations.

2.3 Where a land use plan is likely to have a significant effect on these designated sites (either alone or in combination with other plans or projects) and where the proposals would not be directly connected with or necessary to the management of the site, Regulation 105 places a duty upon the 'plan-making authority' to make an appropriate assessment ('AA'), informed by way of Habitat Regulations Assessment ('HRA'), of the implications for the designated site(s) in view of that site's conservation objectives. The plan-making authority must consult with the appropriate nature conservation body (Natural England) and have regard to any representations made by that body. In addition, it must consult with the general public if it considers it to be appropriate. A copy of the Natural England response to the recent Regulation 18 Consultation is attached at Appendix A4. It should be noted that this response related to three options set out in the Regulation 18 Local Plan. Option 1 was for a new community and involved direct reclamation of circa 27.0ha from Portsmouth Harbour and designated sites thereof. This proposal has since been abandoned by the City Council.

2.4 Where an AA has been carried out and a 'negative' assessment has been concluded (that is, where adverse effects to the integrity of designated site(s) have been identified despite any proposed avoidance or mitigation measures), the land-use plan can only be given effect if there are no feasible alternative solutions which would still deliver the objectives of the plan, and there are Imperative Reasons of Overriding Public Interest (IROPI). In addition, the appropriate authority must ensure that any necessary compensatory measures have been secured (Reg.107). Accordingly, the HRA process follows a 3-stage approach:

1) Screening for Likely Significant Effects (LSE)
2) Appropriate Assessment
3) Derogations, having three component tests:
    i. Assessment of Alternative Solutions;
    ii. Demonstration of IROPI; and
    iii. The securing of necessary compensatory measures.

[6] https://www.legislation.gov.uk/eudr/2009/147/contents
[7] https://www.ramsar.org/sites/default/files/documents/library/current_convention_text_e.pdf

2.5 For the purpose of HRA, the draft Portsmouth Local Plan 2040 is a 'land use plan'(Reg.105). HRA Reports will be prepared and submitted as necessary as part of both the Local Plan preparation process at plan level and also in due course at the 'project level' as part of the required planning application, Transport and Works Act Order (TWAO) application (if needed by reason of potential impacts upon navigation) and Marine Licence(s) (unless incorporated within the TWAO). A copy of the HRA supporting the most recent Regulation 18 consultation is attached, although (as above) note that the nature of the Tipner development discussed in that report is a previous proposal that has now been abandoned. The HRA for the emerging Local Plan is being progressed and the response of the appropriate authority to this Reg.107 Opinion request will inform the HRA's preparation including a full Derogation case, utilising the DEFRA Derogation Notice Form[8]. The draft of the HRA supporting the Local Plan will be in an advanced stage of preparation for the meeting with the Planning Inspectorate on 16 August 2023.

2.6 The 2nd Derogation step (IROPI) applies where a negative effect of the land use plan upon designated sites (after mitigation) is identified and no other feasible alternative solutions under the 1st derogation test have been identified. The type of IROPI that a plan-making authority can consider will depend on the nature of the site that will be affected:

- If the site hosts a priority habitat or species, the plan making authority can only consider reasons relating to human health, public safety, or beneficial consequences of primary importance to the environment; or other imperative reasons of overriding public interest only after having regard to the opinion of the Secretary of State. Annexes 1 and 2 of the Habitats Directive (EC Directive 92/43/EEC)[9](as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[10]) lists the European Sites which host priority habitats and species in England (including cross-border sites). No such species or habitats are present on the relevant designated sites at Tipner.

- For other sites, the plan making authority can consider other imperative reasons of overriding public interest including those relating to social or economic benefit in addition to those of human health, public safety, or beneficial consequences of primary importance to the environment.

2.7 When identifying IROPI, a plan-making authority must consider whether all three elements of IROPI are met (see para.16 of DEFRA guidance at Appendix A16):

- **Imperative:** the land-use plan is necessary (whether urgent or otherwise) for one or more of the reasons outlined in 2.6 above;
- **Public Interest**: a public good is delivered rather than a solely private interest, over the long term; and
- **Overriding**: the public interest balance must consider whether the interest served by the land-use plan (specifically through the relevant draft Policy) outweighs the harm to the integrity of the site(s) as assessed.

[8] Habitats regulations assessment: derogation notice - GOV.UK (www.gov.uk)
[9] https://www.legislation.gov.uk/eudr/1992/43/contents

[10] https://www.legislation.gov.uk/ukdsi/2019/9780111176573

2.8 Consideration of IROPI necessarily involves a balancing exercise and an exercise of planning judgement, as confirmed in the EU Commission case C-239/0436 where Advocate General Kokott said:

> *"The necessity of striking a balance results in particular from the concept of 'override', but also from the word 'imperative'. Reasons of public interest can imperatively override the protection of a site only when greater importance attaches to them. This too has its equivalent in the test of proportionality, since under that principle the disadvantages caused must not be disproportionate to the aims pursued."*

2.9 Or, as put by the EC in C-239/04 82:

> *"…the choice requires a balance to be struck between the adverse effect on the integrity of the SPA and the relevant reasons of overriding public interest."*

2.10 Regulation 107(3) provides for the plan-making authority, in this case PCC-LPA, to seek an early 'Opinion' from the Secretary of State (the 'appropriate authority') as to whether, having regard to such a balancing exercise, such reasons of IROPI are present and hence facilitate the progression of the Plan through the formal pre-submission, submission and examination stages - and thereby the associated formal HRA and Derogation steps as are likely to be required. This is considered to align with DEFRA guidance *Habitats Directive: guidance on the application of Article 6(4) - Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures* (Aug 2012)(Appendix A16) where it states as follows:

> *"Although they are separate tests, in practice it may be helpful initially to consider alternative solutions and IROPI together. This is because the consideration of alternative solutions includes identifying the overall objective that a plan or project would deliver, and judging alternative solutions against whether they would achieve the same objective. It is wasted effort to assess alternative solutions if they will not deliver the same objective or if it is very clear that a plan or project will not meet the IROPI test due to the nature of its objective. This does not change the requirement that the competent authority's decision demonstrates that alternative solutions have been ruled out before considering justifying a plan or project on IROPI grounds."[PCC-LPA added emphasis]*

3. The draft Portsmouth Local Plan 2040 ("The Plan") and policy for Tipner West and Horsea Island East

3.1 Portsmouth City Council (PCC-LPA) is preparing a new statutory development plan ('Local Plan') to deliver the planning policy framework to deliver the aspirations and needs of the City over a 15-year period. The Local Plan seeks to guide the sustainable development of Portsmouth and address social, economic and environmental issues. It will also provide a framework for investment in the City by both the council and other public and private sector investors.

3.2 The **draft Portsmouth Local Plan 2040** (previously version referenced '2038') has already completed three consultations pursuant to Regulation 18 of The Town and Country Planning (Local Planning) (England) Regulations 2012. The last consultation closed on 31st October 2021.

3.3 The vision for the future of the City was developed through the Imagine Portsmouth 2040 project as follows:

> *In 2040 Portsmouth will be an island City with an incredible waterfront, a rich cultural heritage and a strong maritime history. With a naval base, international port and strong local links across the south, we are the centre of culture and enterprise for our area. In 2040 we are very proud of Portsmouth, how we behave towards each other and how it feels to live here.*

Tipner West & Horsea Island East will be allocated as a strategic site in the new Portsmouth Local Plan and its development is mission critical for achieving the Portsmouth 2040 vision.

3.4 PCC-LPA, in drafting the 2040 Local Plan and policies for the Tipner peninsula, will also be aiming to respond positively to the twelve **Levelling-Up Missions** set out by DLUHC in the Levelling Up White Paper[11] and in particular those related to the boosting of employment, skills and productivity, health and well-being, pride-in-place and local public transport.

Emerging Policies for Tipner

3.5 The draft strategic site allocation under consideration for Regulation 19 pre-submission (see Appendix A1) relates specifically to Tipner West & Horsea Island East, west of the M275 motorway and Junction 1 thereof. Significant development is also planned at Tipner East, covered by a separate draft strategic site allocation policy PLP6, which comprises land formerly used as a dog racing track and has an extant planning permission for 626 homes. It is currently the subject of two planning applications for residential development, which if approved could deliver at least 1,056 new homes and some incidental commercial and community uses. PCC-LPA resolved in March 2023 to approve the first of these applications, being for the development of 835 new homes on the northern part of Tipner East. Tipner East is also the location for Portsmouth's Park and Ride which is to be re-developed pursuant to recently granted permission for a new Park and Ride facility for up to 2,650 cars, public transport interchange and ancillary commercial and community units.

3.5 The Tipner East site permissions were subject to Appropriate Assessment by the PCC-LPA and due to mitigation measures being agreed with Natural England, were considered to be capable of approval without the need for consideration of alternatives and IROPI case under stage 3 HRA. It is anticipated the pending Regulation 19 HRA for Tipner East will confirm this to be the case in due course. PCC-LPA can provide the Secretary of State with further information in this regard upon request.

3.6 The Tipner West site comprises a former Ministry of Defence (MoD) firing range, scrapyard, sailing club, a Special Educational Needs (SEN) school and an area currently used as a temporary lorry and freight park for the port. The potential development area also includes the land at the south and east of Horsea Island to the north of Tipner Lake and west of the M275 motorway, which is currently used by the MOD and is proposed for future use as public open space in the Local Plan.

3.7 The existing site is partly derelict, under-utilised and in need of significant remediation to address historic polluting uses. Its redevelopment, as recognised in the City Deal, presents an opportunity to vastly improve the quality of the environment in this part of the City but critically to facilitate the delivery of necessary sea defences which would, together with site decontamination

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11 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1095544/Executive_Summary.pdf

works, protect the integrity of the designated sites and associated habitats from harmful leachate contamination.

3.8 The site lies immediately adjacent to Portsmouth Harbour, which is designated as a Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI) for its habitat importance. Such habitat includes features that support overwintering birds in particular. Tipner East and West were allocated as a single site in the Portsmouth Core Strategy (2012) for approximately 1,730 homes and a range of enabling infrastructure, before the City Deal in 2014 unlocked the transfer of the Tipner Firing range land from the MoD to the City Council.

3.9 The Regulation 18 consultations undertaken in 2019-2021 promoted the site as a 'once in a generation' opportunity to deliver a more ambitious, highly sustainable new development that would make a substantial contribution towards the growth needs of the City. This ambitious approach focused upon the development of a new nationally significant marine employment 'hub of excellence' at Tipner West, utilising the site's deep-water access to the harbour. However, the Regulation 18 site allocations for Tipner would have also involved the reclamation of approximately 27ha of land from the harbour, to facilitate a larger development area (a 'super peninsula') capable of supporting a new community of around 3,500 new homes. These proposals were the subject of objection from Natural England (Appendix A4) and other non-statutory bodies and have since been abandoned by the City Council.

3.10 The proposed new marine employment hub of some 58,000sqm will be allocated in the Pre-Submission Local Plan. It is in line with the Government's stated twelve "Levelling-up Missions", the City Deal and the Portsmouth Economic Development and Regeneration Strategy[12]. The hub would make the most of its deep-water access, would support a specialist marine and maritime innovation quarter and/or enterprise zone for the Solent sub-region and support the recent Freeport designation for Portsmouth and the Solent.[13]

3.11 As envisaged through the City Deal, the redevelopment of Tipner would ensure that the area becomes resilient to the modelled impacts of climate change, principally through the delivery of urgently required flood defence infrastructure to protect the low-lying Tipner peninsula and nearby existing residential communities from sea level rise. The proposed site allocation is anticipated to include the following key elements:

i. Construction of sea defences to the Tipner West peninsula edge;
ii. Construction of a bridge between Tipner West and Horsea Island East, for sustainable transport modes only;
iii. Construction of a new working quayside to support a Marine Employment Hub of circa 58,000sqm and associated land thereto (including land at Horsea Island East);
iv. Minimum land reclamation where required to facilitate the above;
v. Enabling development, including site decontamination and land raising as required;
vi. Land for construction of a minimum of 1,250 homes, as necessary development subsidy, including public open space, incidental uses and site infrastructure to support a new community;

[12] https://www.portsmouth.gov.uk/services/council-and-democracy/policies-and-strategies/economic-development-and-regeneration-strategy/

[13] https://portsmouth-port.co.uk/commercial/solent-freeport/

vii. Educational provisions in connection with potential retention of the SEN Harbour School or otherwise educational/skills uses associated with the proposed Marine Employment Hub; and

viii. Retained, repaired (wherever possible) and re-purposed on-site Listed Buildings.

Other policies supporting development at Tipner

3.12 There are a number of City-wide draft policies in the emerging Local Plan that are particularly relevant to Tipner. While the emerging plan has not yet reached Regulation 19 stage and as such policies are still subject to review and finalisation, specific policies from the Regulation 18 Plan of relevance are as follows:

3.13 Draft Policy G1: Biodiversity states that planning permission will be refused where there is likely to be a significant adverse effect on an existing or proposed SPA, SAC or Ramsar designation, or land identified as compensatory measures for adverse effects on these designations. The draft policy also states that planning permission will be refused when a development proposal is not in compliance with the relevant regulations and national policy regarding the assessment of implications for SPAs, SACs or Ramsar sites.

3.14 Draft Policy H5: Residential Density - this policy proposes three broad density zones in the City. Along with the City centre and surrounds, Tipner is proposed to be within a designated 'High Density: Highly Accessible Area'. This designation proposes to form high-density zones with minimum density for new development of 120dph. The purpose of the policy is to make efficient use of land, promote less car dependence and provide access to local employment.

3.15 Draft Policy E1: Economic Development and Regeneration - this policy seeks to achieve the broader PCC-LPA objective of supporting the sustainable economic development and regeneration of Portsmouth, with a particular focus on improving local skills and increasing skilled employment opportunities in the City. Draft Policy E1 states that the council will take a positive and proactive approach to, inter alia, 'working with key partners to deliver major regeneration projects for….. Tipner'.

3.16 Draft Policy E2: Employment Land - this policy identifies 'Tipner West and Horsea Island' as a 'Key Employment Site and Marine Employment Land' required to deliver the council's requirement to create an additional 7,000 jobs in the City. To achieve this total figure, a minimum of 90,600sqm of office floorspace (Class E(g) (i-111) and 87,100sqm of mixed office, industrial and warehouse employment floorspace (Class B2/B8) is proposed to be delivered, along with 60,000sqm of marine employment space. The Tipner West and Horsea Island site is identified as being required to deliver at least 60,000sqm of mixed employment uses (a mix of B2/B8 or commercial office space where such uses would not conflict with the wider aspirations for a new community on the site). The potential deep-water access that the site provides presents a unique opportunity for a marine employment hub of regional and national significance.

3.17 Draft Policy C3: Transport - this policy aims to reduce the need to travel and deliver a 'people centred' travel network that prioritises walking, cycling and public transport (in accordance with the PCC Local Transport Plan 4). The policy identifies 'links between Tipner and Horsea Island allowing buses, cyclists and pedestrians to access between Tipner and Horsea Island, the Horsea Island country park, Port Solent and beyond' as being a central part of that strategy. This link is dependent upon the delivery of a new bridge across Tipner Lake.

3.18 It is also important to reference policies contained in the DfT South Inshore and South Offshore Marine Plan (July 2018) in particular noting the following objectives:

> *S-INF-1: Appropriate land-based infrastructure which facilities marine activity (and vice versa) should be supported.*
>
> *S-EMP-1 - Proposals that development skills related to marine activities particularly in line with local skills strategies, will be supported.*
>
> *S-EMP-2 - Proposals resulting in a net increase to marine related employment will be supported.*
>
> *S-ACC-2 - Proposals demonstrating enhanced public access to and within the marine area will be supported.*
>
> *S-CC-4 - Proposals that may have a significant adverse impact on habitats that provide a flood defence or carbon sequestration ecosystem service must demonstrate that they will, in order of preference (a) avoid, (b) minimise; (c) mitigate significant adverse impacts.*

The Tipner West 'Project' and the City Deal

3.19 In tandem with the preparation of the new draft Local Plan, a 'project' for the redevelopment of Tipner West and Horsea Island East is being progressed by Portsmouth City Council's Strategic Developments team (SDT) under the name of the Tipner Regeneration Project (TRP). The SDT represents a promotional arm of the City Council and sits separately from the regulatory arm of PCC as local planning authority (PCC-LPA). Applications for planning permission, a Transport and Works Act Order (TWAO) and Marine Licence(s) are in preparation with a view to potential submission in early 2024. These submissions would be subject to full project-level HRA. However, it is anticipated that before a TCPA planning application could be granted, it would be necessary for the draft Local Plan (the 'development plan' for the purposes of s.38(6) of the Planning and Compulsory Purchase Act 2004 (as amended)) to have been approved for Pre-Submission consultation by the City Council and for there to be no significant unresolved objections to the Plan in line with paragraph 48 of the NPPF, or preferably to have passed examination and been adopted by the City Council.

3.20 The project as now proposed is being taken forward by PCC pursuant to the 'City Deal' (Appendix A2), a joint agreement between Portsmouth and Southampton City Councils, Hampshire City Council and the Solent LEP with the UK Government in November 2013. The City Deal recognised that the development of Tipner West and Horsea Island East (together with Port Solent), with an emphasis on marine and maritime employment, would create an opportunity to meet the sector demand, whilst at the same time help to unlock funding for sea defences, site decontamination plus much needed employment and housing opportunities across the Solent. The City Deal noted that "*With a population of 1.3m and over 50,000 businesses operating in the area, the Solent Local Enterprise Partnership is one of the UK's key engines of growth. As a functional economic area its economic output equates to £48.5bn (gross value added per annum of £23.7bn) and it supports 485,000 full-time equivalent jobs. At the heart of its economy are the two cities of Southampton and Portsmouth and their associated ports. Together these two cities provide nearly 39% of high-skilled jobs in the Solent and contribute 37% of its total economic output*". All parties to the City Deal have continued to work, since its agreement to deliver on its aspirations and Portsmouth City Council feel that the project would also be a natural complement to the Solent Freeport area that is being established.

3.21 In Portsmouth, the key sites identified by the City Deal as being suitable for marine, maritime and advanced manufacturing were located at Tipner West and Horsea Island. Critically, the City Deal also recognised that, despite the opportunities the site offered for regeneration, the challenges were so great and costly that the private market would not resolve them. To unlock these sites and facilitate the land assembly, funds were provided by the City Deal to support the delivery of enabling infrastructure and by levering significant local and/or private investment. The City Deal was underpinned by a grant of £48.75m to PCC to help deliver the following:

- Maximising the economic impact of marine and maritime assets in the area;
- Unlocking critical employment sites to enable the marine, maritime and advanced manufacturing sectors of the region's economy to expand;
- Providing new housing to support the growing workforce;
- Ensuring people have the right skills to access employment in those growing sectors;
- Providing effective support to their small and medium enterprises to enable them to grow, including marine and maritime small and medium enterprises.

3.22 The City Deal included funding to facilitate a land transfer at Horsea Island East and the Firing Range at Tipner West from the Ministry of Defence to PCC. This land transfer would enable additional further public and private investment to support the delivery of these objectives and has now been completed. The City Deal would enable the provision of approximately 2,370 new homes (including land at Port Solent) and 58,000sqm of employment floorspace for the growth of marine and advanced manufacturing sectors in the Solent sub-region and thereby helping to create over 3,700 permanent jobs.

3.23 Both the draft Local Plan and subsequent Project applications will each be supported by 'Shadow' Habitats Regulations Assessment (HRA) reports to assist the competent authority (PCC-LPA) and the Examination Inspector (on behalf of the DLUHC Secretary of State) respectively, in carrying out Appropriate Assessment at the decision-making stage in accordance with the Habitats Regulations. These 'Shadow' HRA reports will provide the necessary evidence and assessment through each of the four HRA stages, including an assessment of alternative solutions and following the full derogation process. It should be noted that any works to be sought under a TWAO would be subject to Appropriate Assessment by the Secretary of State for Transport as the competent authority. In addition, the securing of consent through a TWAO would enable PCC-TRP to secure compensation land, if required, through compulsory acquisition.

3.24 Having regard to s.38(6) of the Planning and Compulsory Purchase Act 2004 (as amended) ("PCPA 2004") and the likely significant effects of the development, any grant of planning permission for the above project would be heavily dependent upon the adoption of the relevant land-use plan, this being the emerging Portsmouth Plan 2040. In order for it to be adopted the Local Plan must be found legally compliant under s.20(5)(a) of the PCPA(2004), including in regard to the Habitat Regulations - and meet the tests of soundness, which are as follows:

> **(a) Positively prepared** – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs; and is informed by agreements with other authorities, so that unmet need from neighbouring areas is accommodated where it is practical to do so and is consistent with achieving sustainable development;
>
> **(b) Justified** – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence;

(c) Effective – deliverable over the plan period, and based on effective joint working on cross-boundary strategic matters that have been dealt with rather than deferred, as evidenced by the statement of common ground; and

(d) Consistent with national policy – enabling the delivery of sustainable development in accordance with the policies in this Framework and other statements of national planning policy, where relevant.

3.25 This IROPI Opinion request under Reg.107(3) of the Habitats Regulations is therefore being sought in context of the above requirements. The draft Tipner West policy has been screened by PCC-LPA (see Appendix A5) as giving rise to adverse effects on the integrity (direct and indirect) of the National Site Network and Ramsar sites in and around Portsmouth Harbour and these effects are summarised in section 4.0 below. However, the inclusion of draft Policy PLP5: Tipner West & Horsea Island East is considered by PCC-LPA to be essential if the critically needed enabling infrastructure (being specifically the sea defences, bridge and site decontamination) is to be deliverable at Tipner at the earliest opportunity.

3.26 A full HRA, including consideration of alternative solutions and a case for IROPI (alongside information in relation to the securing of any compensatory measures) will need to accompany the Regulation 19 Pre-Submission Local Plan due to be published towards the end Autumn of this year. The Secretary of State is asked for an opinion at this stage in the plan-making process as to whether such IROPI exist as, if this is not the case, the draft Local Plan's prospects for being found legally compliant and sound would be at risk. A supportive IROPI Opinion under Reg.107(3) will enable PCC-LPA to progress its draft Local Plan to the next Regulation 19 stage with confidence and with a view to potential adoption by the end of 2024. A new Local Plan for the City will enable the City Council to plan positively and deliver on its 2040 vision and contribute to the Government's proposed Levelling-Up Missions. This, in turn, will enable the development sector, whether PCC-TRP or others, to proceed with greater confidence to seek to identify appropriate and viable proposals for this brownfield site including, inter alia, essential sea defences for this part of the City, a strategy for remediation of contaminated land, and the provision of a bridge to enhance connectivity for sustainable and active transport.

4. Potential for adverse effects on the integrity of the National Site Network and Portsmouth Harbour Ramsar Site

4.1 In total, the Tipner West and Horsea Island East draft allocation area amounts to approximately 33.5ha (excluding areas for potential minimal reclamation and the bridge corridor shown on the plan at Appendix A1). The existing landform is circa 26ha at Tipner West including land south of the former firing range, which is within designated SPA and Ramsar sites[14]. Horsea Island East provides a further 7.5ha. Part of the Tipner West landmass comprising the former MoD Firing range (6.64ha) is identified by Natural England as a "Core Area" of functionally-linked land, which supports the SPA designated species of Brent Geese, and other wading bird populations. This area would be permanently lost to development, which would constitute an adverse effect on the integrity of the

[14] https://rsis.ramsar.org/RISapp/files/1234/pictures/GB720_map1602.pdf

SPA.[15] However, in the absence of the sea defence infrastructure to be delivered through the proposed Local Plan site allocation and City Deal, this functionally-linked habitat would ultimately be lost to flooding and leachate contamination (the 'Do-Nothing' scenario).

4.2 The draft site allocation assumes that direct and indirect adverse effects on the integrity of the designated sites may occur by reason of construction of quay walls, flood defences, minimal necessary reclamation (if required in order to support place making and provide a robust financially viable scheme) and bridge supports (through direct land-take), together with potential adverse effects that might follow thereafter, such as through altered coastal processes, sediment movements and consequent impacts upon habitat functionality. There would also need to be dredging works between Tipner West and Horsea Island East to enhance water access to the proposed marine employment hub and the safe access and egress of marine vessels. Dredging would increase the existing depth to around 3m below Chart Datum to maximise the tidal access window.

4.3 Adverse effects on integrity are still being investigated but could be direct and indirect and for the Tipner West and Horsea Island East development may include (subject to full HRA):

- Direct effects through:
    - Development on the existing land mass;
    - Limited reclamation of harbour habitat, for enabling works;
    - Loss of intertidal habitat through dredging, to provide improved subtidal channel;
    - Loss of intertidal and subtidal habitat for bridge/causeway construction and associated culverting, if required;
    - Disturbance of roost sites adjacent to areas of direct impact (to be regarded as direct loss); and
    - Loss of functional supporting habitat on the former firing range.
- Indirect effects through:
    - Existing subtidal habitat to be dredged for the access channel to the marine hub;
    - Re-profiling of the channel edges as required, with associated temporary disturbance;
    - Habitat Impacts related to sediment transport by reason of bridge structures;
    - Reduction in function condition from construction and operational disturbance;
    - Post-development impacts associated with the increased proximity and intensification of new development adjacent to the designated sites; and
    - Hard defences affecting coastal processes, restricting natural evolution of the estuary function and ability of habitats to adapt naturally to sea level rise[16].

[15] https://hiwwt.maps.arcgis.com/apps/instant/minimalist/index.html?appid=f4bbd6fe517647cba8bf0f3b8cfb7c1b

[16] https://www.northsolentsmp.co.uk/media/1591/Appendix-J-Appropriate-Assessment/pdf/Appendix_J_-_Appropriate_Assessment.pdf?m=637515087786500000 – section 6.1

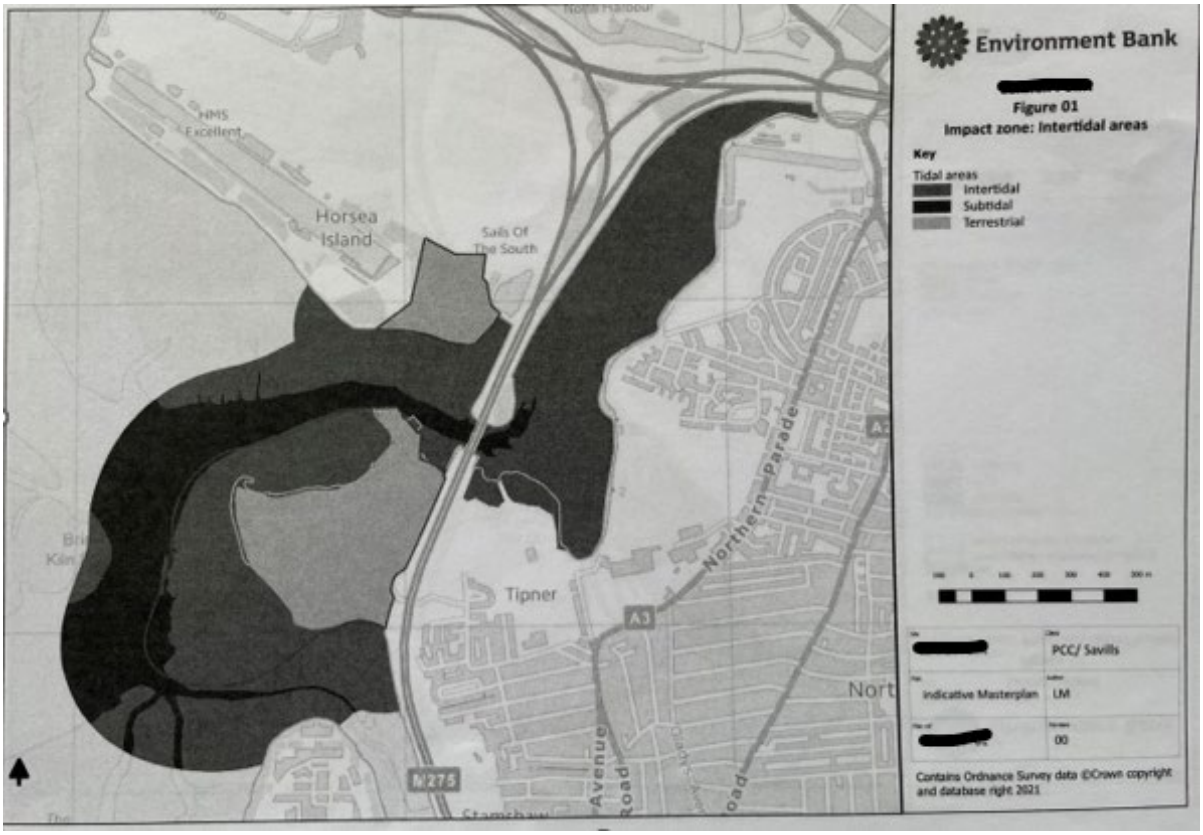


Fig.1 - Intertidal, Subtidal and Terrestrial Zones around Tipner (*nb. Plan produced for previous proposals for site***)**

4.4 An updated Impact Assessment Metric is in preparation by the TRP consultant teams and is subject to on-going discussion with Natural England. This will quantify the specific nature and extent of these impacts and the adverse effects upon site integrity and, consequently, the required options and quanta for compensatory habitat. This information will be used by the competent authority to complete the other two steps of derogation prior to finalising the HRA in the Summer/Autumn of 2023. Initial work was undertaken by Environment Bank in connection with the previous 'Super Peninsula' proposals, outlining the methodology for the Metric and early results (see Appendix A6). The emerging Assessment Metric essentially modifies the Defra biodiversity metric to provide a framework for assessment of impacts to this SPA. Subject to agreement with Natural England in due course with reference to the amended development proposals, a similar approach could also be applied to the Ramsar designated site.

4.5 Portsmouth Harbour SPA is 1,247ha in area. The proposed Impact Assessment Metric would identify an anticipated zone of impact. From this, direct and indirect losses to the SPA would be calculated as a factor of area of loss (ha) x SPA function (Very High, High, Medium or Low) x SPA Condition. This would be informed and updated by way of new survey and established data such as from the Solent Wader and Brent Goose Strategy 2020[17].

[17] https://solentwbgs.wordpress.com/

4.6 The flora and fauna specifically citated to the designated sites are as follows and links to the detailed designations are provided as footnotes:

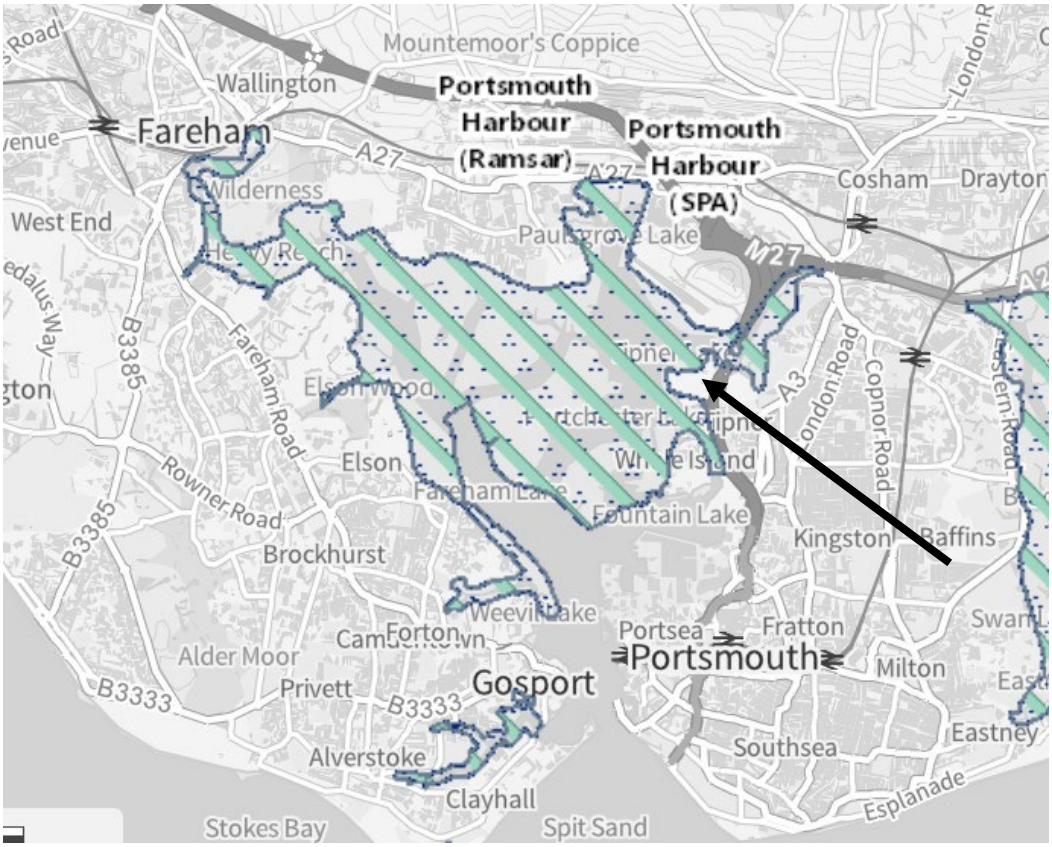
Table 1: Tipner West and Horsea Island East - Designated Sites

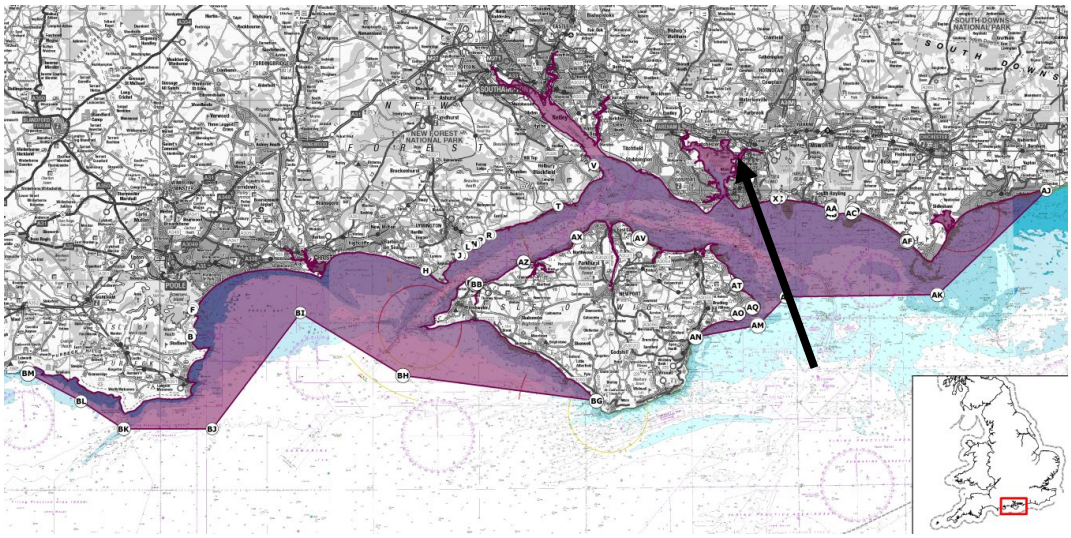
Habitat Designation	Citation Habitats and Species
Portsmouth Harbour SPA[18]	Dark bellied brent goose, *Branta bernicla bernicla* Black-tailed godwit, *Limosa limosa islandica* Dunlin, *Calidris alpina alpina* Red-breasted merganser, *Mergus serrtor*
Portsmouth Harbour Ramsar[19]	Ramsar criterion 3 - The intertidal mudflat areas possess extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei* which support the grazing dark-bellied brent geese populations. The mud-snail *Hydrobia ulvae* is found at extremely high densities, which helps to support the wading bird interest of the site. Common cord-grass *Spartina anglica* dominates large areas of the saltmarsh and there are also extensive areas of green algae *Enteromorpha* spp. and sea lettuce *Ulva lactuca*. More locally the saltmarsh is dominated by sea purslane *Halimione portulacoides* which gradates to more varied communities at the higher shore levels. The site also includes a number of saline lagoons hosting nationally important species. Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation); Species with peak counts in winter: □ Dark-bellied brent goose, 2105 individuals, representing an average of 2.1% of the GB population (5-year peak mean 1998/9-2002/3).
Solent and Dorset Coast SPA[20]	Sandwich tern (Breeding) Common tern (Breeding) Little tern (Breeding)

[18] https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9011051&SiteName=portsmouth&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=4&SiteNameDisplay=Portsmouth%20Harbour%20SPA#SiteInfo

[19] https://rsis.ramsar.org/ris/720

[20] http://publications.naturalengland.org.uk/publication/5294923917033472





Figs 2 and 3: Designated Sites (Portsmouth Harbour SPA and Ramsar)(top) and Solent and Dorset Coast SPA (Tipner site shown by arrow)(Source: NE Magic Maps)

4.6 Available survey information in respect of the Solent and Dorset Coast SPA has to date shown negligible usage of the affected area around Tipner by the citation species. A comprehensive summary of the ecological surveys, and results, as of April 2023, is attached at A7. Site surveys remain on-going.

5. Imperative Reasons Of Overriding Public Interest (IROPI)(Derogation Step 2 - Provisional)

5.1 In view of the anticipated residual direct and indirect adverse effects upon the National Site Network and Ramsar site as outlined in the preceding sections, an appropriate assessment for the land use plan draft policy PLP5: Tipner West and Horsea, is expected to result in a negative assessment; therefore, it is necessary to consider the derogations. PCC-LPA is seeking an IROPI opinion from the Secretary of State under derogation step (2). The Secretary of State's opinion would necessarily be conditional upon derogation steps (1) and (3) being satisfied in the full Local Plan HRA in due course. However, Derogations (1) and (3) are outside the ambit of the opinion now being requested but interim information is provided on these matters in appendices A14 and A15 of this Statement. PCC-LPA, as the 'plan making authority', considers that no feasible alternative solutions exist for delivering the land use plan objectives for Tipner West & Horsea Island East under derogation step (1) (see Appendix 14). Furthermore, it is considered that a compensation strategy will feasibly be available to ensure the overall coherence and integrity of the designated site under derogation step (3)(see Appendix 15).

5.2 The Habitats Regulations 2017 (as amended) state that where the site(s) in question hosts a priority natural habitat or priority species, IROPI must be reasons relating to human health, public safety or beneficial consequences of primary importance to the environment. Where no such priority habitat or species are affected, as is the case in this instance, IROPI can be for reasons of a social or economic nature (Reg 107(1)).

5.3 In having regard to the above reasons, the conclusion must be that the proposed development, as described in the draft Plan would be:

a) **Imperative**: it must be essential that the plan or project proceeds, balanced with the other components of this test;
b) **In the Public Interest**: a public benefit must be delivered rather than a solely private interest and
c) **Overriding**: the interest served by the plan or project outweighs the harm (or risk of harm) to the integrity of the site as identified in the appropriate assessment;

5.4 PCC-LPA considers there to be IROPI in support of the proposed site allocation at Tipner West & Horsea Island East and forming the basis of this Reg.107(3) Opinion request. There are three core reasons to IROPI in this case which are considered to give rise to a cumulative IROPI case and these are outlined in more detail below.

(i) **Flooding Risk to Human Health and Safety and Site Integrity**

Imperative reasons: Human health, public safety, beneficial consequences of primary importance to the environment, social and economic

5.5 Portsmouth's sea-levels are due to rise by around 70cm over the next 70 years. This is noted in the Solent Shoreline Management Plan referenced in section 5.0 above. The existing coastal defences at Tipner West are in poor condition. The 2011 Portsea Island Coastal Strategy Study[21] estimated that defences on Horsea Island East may fail within 5-10 years, and within 10-15 years on

[21] https://coastalpartners.org.uk/project/portsea-island-coastal-strategy

Tipner West. Due to a lack of maintenance over recent years, there is an increasingly high risk that these defences could fail sooner.

5.6 As there are currently no homes on the Tipner West site it is extremely unlikely that flood defences would be funded by the Environment Agency and must therefore be funded by PCC as the principal landowner and Lead Local Flood Authority. The do-nothing option will mean the loss of the existing land mass to flooding. This will result in the loss of the existing land uses on the site, including the Harbour School[22], five Grade 2 Listed heritage assets, as well as the loss of the inter-tidal and terrestrial habitats that form part of the designated nature conservation sites. It is anticipated that intertidal habitats are likely to see a 40% reduction by 2120 through sea level changes. In addition, flood modelling undertaken by the TRP consultants, WSP, shows that flood waters would pass through to Tipner East and Stamshaw, as shown in the image below, impacting at least 208 dwellings (see Appendix A14-11). The image shows the estimated extent of flooding by 2123 – accounting for 100 years climate change and assuming that nothing is done to protect Tipner West. Indeed, the 2011 Portsea Island Coastal Strategy Study estimated that the defences on Tipner West may fail imminently (2021-2026). With this in mind, the City Council secured City Deal funding in 2014 to support the delivery of this critical enabling infrastructure at Tipner.

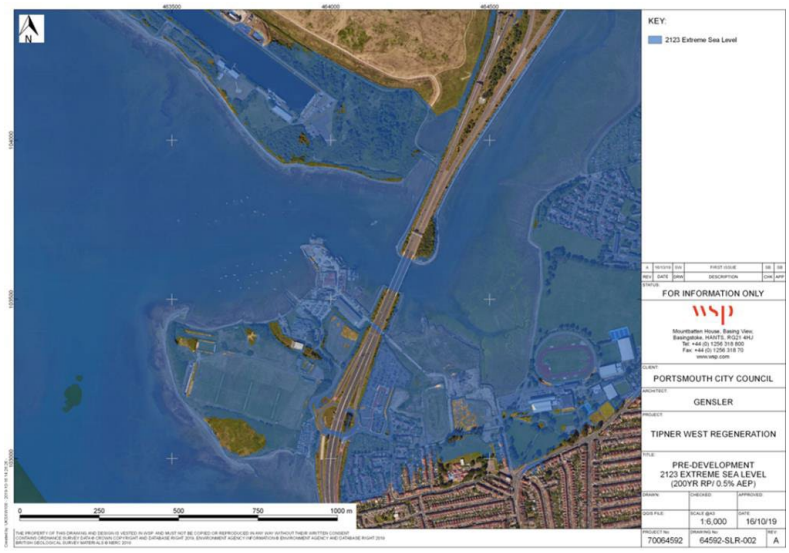


Figure 4: Flood Modelling - 2123 Extreme Sea Level (0.5% Annual Exceedance Probability) – Pre-Development Scenario: (Source WSP [2019]).[23]

5.7 As noted in A14, The *North Solent Shoreline Management Plan* [24] and associated policy map for Portsmouth Harbour sets out an adopted policy of Hold the Line over the long term (to 2105). An

[22] The Harbour School is a maintained Special School and Alternative Provision providing education for Portsmouth pupils who are unable to attend mainstream school for either Social, Emotional and Mental Health (SEMH) Needs or medical reasons

[23] https://democracy.portsmouth.gov.uk/documents/s41718/APP%20C%20-%20211126-%20TRP%20-%20Full%20Council-%20Report%20Dec%202021.pdf

[24] https://www.northsolentsmp.co.uk/
https://www.northsolentsmp.co.uk/media/1700/Policy-statement-and-map-5API01/pdf/Policy_statement_and_map_5API01.pdf?m=637518491614430000

extract from the policy plan is provided below. This corresponds with the full extent of the Ramsar/SPA designation.

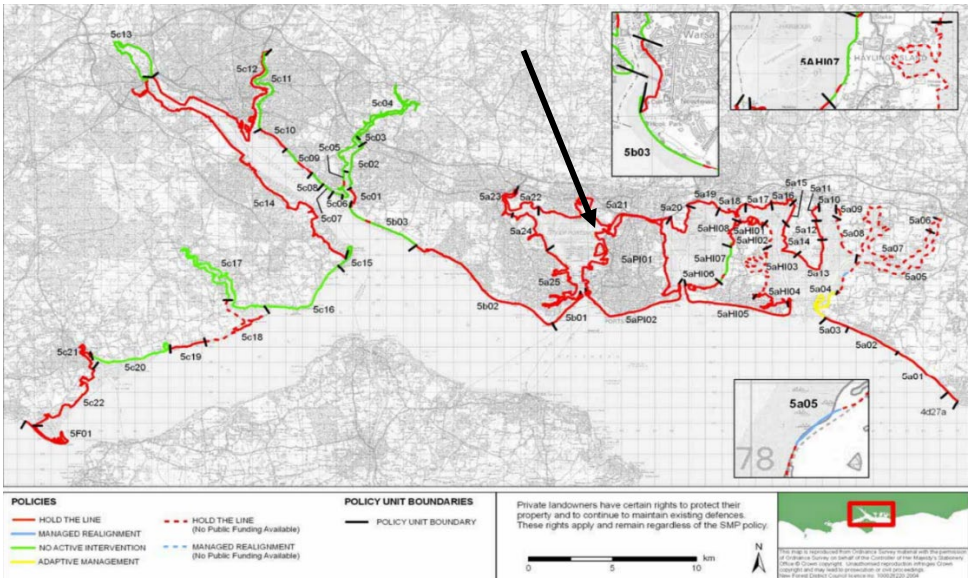


Figure 5: SMP Hold the Line policy, Tipner site identified (Source: North Solent SMP)

5.8 The policy of 'Hold the Line' requires that defences and beach management activities are maintained or improved to provide protection from coastal flood and erosion to important assets or features at the coast. Such assets might include centres of development and redevelopment, industry and commerce, agriculture and nature conservation designated sites. The method of maintaining or improving the line of defence may consider local adjustments to the alignment of defences or that existing structures are replaced, or new defences constructed, depending on the local conditions and requirements identified. The SMP notes that:

> *"Due to the high proportion of the North Solent shoreline that is privately owned and the maintenance of defences that are privately funded, there are frontages where a HTL has been proposed but the works identified to manage the coastal flood risk are considered economically marginal or not economically viable."*

5.9 Whilst recognising that the SMP is non-statutory, it has been adopted through a partnership of 16 organisations, including input from Portsmouth City Council through the Havant, Portsmouth and Gosport Coastal Defence Partnership ("Coastal Partners"). However, the cost of defending the existing land mass is currently estimated to be in the order of £35m. The provision of City Deal Funding in 2014 was therefore in recognition of the necessity for environmental benefit and public safety of these flood defence works and the multiplicity of environmental, economic, social and human health risks should flood defences remain absent whilst in addition de-risking the site for private investment to secure the City and the Solent's wider employment, housing and infrastructure needs (detailed further below).

5.10 For the reasons outlined above - and to be discussed in greater depth in full HRA in support of the Regulation 19 Submission draft Local Plan - the PCC-LPA as competent authority is minded to conclude that these amount to **Imperative** reasons that are **In the Public Interest**, meeting the first two tests for IROPI.

ii) Contaminant Leachate Risks to the integrity of SPA/Ramsar habitats

Imperative reasons: Human health, public safety, beneficial consequences of primary importance to the environment, social and economic

5.11 Should the defences fail and in the absence of the proposed sea defence under draft policy PLP5, there is a significant risk of releasing contaminants present in the ground into Portsmouth Harbour and polluting designated nature conservation sites. The site currently represents a weak-spot in island-wide defences, particularly in comparison to the North Portsea and Southsea coastal defence schemes. Contaminants on the Tipner West site stem from a long history of military use, including extensive areas of made ground, the processing of gunpowder, mustard gas degradation trials, grenade testing, stripping of military vessels (including asbestos, metal, cellulose and fluorescent paints) and discarded bullet casings. Site investigations have identified risks to controlled waters and current site occupiers, including Principal and Secondary Aquifers, notably from inorganic contaminants (metals, asbestos) and organic Polycyclic Aromatic Hydrocarbons (PAH's).

5.12 The proposed works would be within the Portsmouth Harbour Water Framework Directive (WFD) waterbody and Shellfish Water protected area. The waterbody is currently of only 'moderate' ecological status and 'fails' on chemical status due to mercury and Polybrominated diphenyl ethers (PBDE)[25]. All such waterbodies are required to be 'good status' and the unmitigated flooding of the Tipner landmass and associated risks of contaminant leachate would have a further negative impact upon the Harbour waterbody status and have direct and indirect impacts upon citated flora and fauna species within the designated sites along with obvious risk to human health.

5.13 The North Solent SMP adopted the 'Hold the Line' policy for the Tipner flood cell, as shown in Figure 8 above, with regard to contamination risks in addition to harm posed from flooding. All flood cells where holding the existing defence line is sought include areas of contaminated land and/or landfill. Due to the heavy contamination at Tipner the former firing range was even expressly omitted from the SPA/Ramsar designation for this reason (although has since been identified as functionally-linked land). It has therefore been agreed through Coastal Partners and endorsement of the SMP by DEFRA (see copy DEFRA letter at Appendix A8), that the area should be sealed to prevent contamination of the Harbour.

5.14 As outlined in the Portsea Island Coastal Strategy Study, PCC has undertaken detailed desk studies and site investigations at several sites around the coastline with reports detailing the nature and depth of the fill, soil and groundwater contamination levels. The site investigation reports have been reviewed to determine their potential for contamination and the implication of contamination migration into the SPA and SAC. There may of course be conflicts between the damage to the international site caused through pollution and the encroachment on the SPA/Ramsar if defences have to be constructed to protect the area. The study showed that defence failure would lead to release of contamination that would be likely to adversely affect water quality and the ecological integrity of the harbours. Contaminants in sediment would be ingested by invertebrates and in turn by birds, in concentrations that may be sufficient to cause mortality or morbidity. This would be damaging to the integrity of the designated sites.

[25] https://environment.data.gov.uk/catchment-planning/WaterBody/GB580705140000

5.15 For the reasons outlined above - and to be discussed in greater depth in full HRA in support of the Regulation 19 Submission draft Local Plan - the PCC-LPA as competent authority is minded to conclude that these amount to **Imperative** reasons (recognising the direct relationship between the critical risks of flooding outlined in reason (i)) that are **In the Public Interest**, meeting the first two tests for IROPI.

iii) Marine Employment Hub for the Solent Region

Imperative reasons: Social and economic

5.16 The necessity to provide employment land and jobs in Portsmouth and the need and importance of growth of the marine, maritime and advance manufacturing in the UK and Solent Region are key drivers underpinning the reasons for the proposed site allocation for Tipner.

5.17 The *Portsmouth Economic Development and Regeneration Strategy*, adopted in 2019[26] defines the need for additional jobs in Portsmouth and highlights the opportunity for a marine and maritime engineering quarter (or 'marine hub') to build on the current buoyant cluster in the City and contribute to the key objectives of addressing local low educational attainment and local talent-progression. The emerging Local Plan and its associated evidence base brings forward this objective of providing an additional 7,000 jobs and the associated need for 177,700 sqm of employment floorspace in the land-constrained City of Portsmouth; this is currently being reviewed as an update to our employment and housing needs to support the Pre-Submission Local Plan. The need to provide for this growth is a golden opportunity for Tipner to support marine employment in the City and the wider sub-region.

5.18 The discussion below sets out the value of the marine sector to the UK economy, the current and future needs of the sector and why there is an urgent need for the UK to service its demand. The evidence below explains why the Solent is the optimal location within the UK to achieve this urgent need, and that Tipner is the sole site within the Solent with the characteristics to deliver the marine sector requirements. The development of a marine hub at Tipner would also be in line with the first of the Government's levelling up missions, namely *pay, employability and productivity* whilst providing high-quality skills training in the marine sector in line with the sixth levelling up mission.

5.19 The delivery of development to meet the national UK marine sector is considered to be both **imperative** and critical and **in the public interest**. Should the market demand of the UK marine sector not be met:

- The growth potential of the maritime sector would not be realised;
- Activity would either not occur or be displaced to less suitable locations, further minimising the economic potential of the sector and impact on Portsmouth, the Solent region and the UK economy;
- Part of the displacement might see the potential for inward investment being diverted away from the UK.

[26] https://www.portsmouth.gov.uk/services/council-and-democracy/policies-and-strategies/economic-development-and-regeneration-strategy/

5.20 Research carried out by Savills [27]on behalf of TRP has concluded that the marine and maritime industry makes a substantial contribution to the UK's economy comprising:

- A direct contribution of £14.5 billion in GVA and 186,000 jobs (in 2015). The marine sector represented £6.4 billion of this GVA;
- A significant supply chain that indirectly contributes approximately £37.4 billion on VA and 957,000 jobs (in 2015).
- Key trends influencing the future of the marine and maritime industries include:
    - The growing middle class in emerging economies will underpin demand for marine leisure exports.
    - Climate change and the growing need for renewable energy will result in an increased demand for offshore wind and tidal energy.
    - The UK's strength in both Research and Development, and technical expertise, make it well placed to meet the demands of this market and contribute to its growth.
    - In order to successfully service global markets and leverage the UK's historic strength in these sectors, there is a need for more well-located marine land and sites to be provided to deliver the required additional capacity.

5.21 The UK offers a number of key clusters of marine and maritime industry that have the potential to service the market demands. Seven clusters have been identified by the Department for Transport in their 2019 report '*Maritime 2050 – navigating the future*'[28], each with their own specialisms and characteristics. The Maritime 2050 report identified the Solent as having specialisms of national significance, relating to its Marine and Maritime University and Research and Development Assets, as well as having key institutions such as the Maritime and Coastguard Agency (MCA) and Lloyd's Register.

5.22 The *Maritime Growth Study (2015)*[29] states that the maritime industry "*continues to be seen by the international market as a world leading maritime centre*" that remains "*highly competitive*" in providing training, skills and manufacturing. Whilst the "*contribution to the economy is already substantial, with the right conditions, [it] can be grown further*". Innovations, clustering and stability were identified as "*underpinning the health of the UK maritime sector*". Indeed, the DfT South Inshore and South Offshore Marine Plan (July 2018) sets out a series of objectives to support the marine sector, including policy S-INF-1 which states that "*Appropriate land-based infrastructure which facilitates marine activity (and vice versa) should be supported*" and policy S-EMP-2 which states, "*Proposals resulting in a net increase to marine related employment will be supported*."[30]

5.23 The *Maritime 2050* report sets out the Government's strategy for the maritime sector over the next 30 years and was produced following the *2015 Maritime Growth Study* to create a national strategy for the maritime sector "*which could send a strong signal to international customers and*

[27] Appendix D: (Public Pack)Tipner West Full Council Update - Appendices Agenda Supplement for Cabinet, 06/12/2021 13:00 (portsmouth.gov.uk)

[28] https://www.gov.uk/government/publications/maritime-2050-navigating-the-future

[29] *The Maritime Growth Study: Keeping the UK competitive in a Global Market (2015)*

[30]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/726867/South_Marine_Plan_2018.pdf

competitors." The report identifies strategic ambitions for the UK to build upon the existing international reputation and clusters, which include:

- To strengthen the UK reputation for maritime innovation, maximising benefits to the UK from new maritime technology through our world leading universities, maritime small and medium enterprises (SMEs) and global companies.
- To grow the UK's maritime workforce and transform their diversity to enhance the UKs reputation as the world leader in the provision of maritime education and training.
- To support the continued multi-billion pound commercial investments in maritime infrastructure that makes the UK a globally attractive destination for all maritime businesses.

5.24 In the context of the 2020 coronavirus pandemic, the maritime industry responded to the strategy with a recovery plan issued in 2020 (*Maritime Sector Recovery Plan, Maritime UK, June 2020*)[31]. The plan set out how the maritime sector is well-placed to drive a green, regionally balanced, export-led recovery and the actions needed for both industry and Government to achieve this. The short-term focus is on restarting and recovering the maritime business affected by the pandemic. The longer-term goal is to renew the maritime sector in line with existing strategies and plans so as to "*deliver action to revive and transform the sector to ensure its competitiveness…"* and *"The issues on which this sector can support transformational change are many and include driving economic growth in coastal communities and through green growth*".

Importance of the Solent

5.25 The Solent is a prime location within the UK to deliver development to meet the pressing needs of the marine and maritime sector. This is recognised in its recent designation as a Freeport. As explained above, a failure to meet the demands of the marine and maritime sector in the Solent could result in its growth potential not being attained with inward investment to the UK being compromised.

5.26 An assessment published by CEBR2 on behalf of the *Solent Local Enterprise Partnership (LEP)* in 2019 identified the Solent as a 'gateway for global trade', with the influence of its existing maritime sector and the Portsmouth Naval Base being key macroeconomic indicators of GVA, turnover and employment. The assessment notes that:

- The Solent cluster has the most diversified marine and maritime industry. Whilst most clusters excel in a few sub-sectors in the assessment, the Solent achieves the highest overall ranking;
- Whilst having a diversified marine and maritime industry, the Solent maintains a high ranking (top three of the seven clusters) in terms of employment opportunities for marine leisure, MBS, naval defence, shipping and ports;
- In terms of marine and maritime businesses, the Solent ranks highest for marine leisure and ports and ranks second in other sub-sectors.

[31] https://www.maritimeuk.org/priorities/maritime-sector-recovery-plan/

5.27 A report published by *MPL*[32] undertook a market study, with engagement with the marine sector, to identify the nature and extent of marine sector requirements to be delivered by an optimal development site. The study concluded that the Solent marine sector is currently not meeting existing demand and is not realising its economic potential with the consequence being investment leaving the UK.

5.28 In order to meet the urgent needs of the marine sector, locations must provide key enabling infrastructure, with transport links being crucial to the success of an area. In addition to being the home of Southampton Port (the UK's fifth largest port), both Southampton and Portsmouth Ports benefit from 'Freeport' designation, which seek to achieve the following as a key part of the government's economic plans following its departure from the European Union:

- create jobs;
- increase international trade;
- contribute to the regional levelling up agenda; and
- serve as hubs for innovation.

5.29 The Solent also benefits from essential transport infrastructure required to deliver development to meet the needs of the marine sector. The Solent is located on one of the country's major HGV corridors, linking the region to London via the M3, Oxford and the Midlands via the A34 and M40. The Solent also benefits from the core rail freight network (as defined by Network Rail) on the corridor connecting Southampton port with the West Midlands. The Solent also performs well in terms of airport infrastructure, with both Southampton and Bournemouth airports located in the sub-region, and the UK's largest airport in terms of passengers and freight tonnage/value, Heathrow, is well connected within convenient travel distance.

5.30 Supported by the conclusions reached in *Maritime 50*, the Solent is one of seven national maritime clusters. It offers specialisms relating to its Marine and Maritime University and Research and Development assets and is the home to key institutions such as the Maritime and Coastguard Agency, National Oceanography Centre UK, and Lloyd's Register. The Solent is uniquely placed to attract marine and maritime businesses through the application of new technology and research. The Solent cluster offers the second highest number of marine and maritime businesses in the UK (after London), with over 500 firms operating in the industry. It provides the most firms in marine leisure (136) and the second highest in marine engineering (274) and maritime business services (108).

Current Shortcomings of the Solent

5.31 The availability of waterfront sites with the characteristics to deliver the right development is key to meeting the marine sector needs. With regard to the supply of waterfront land in the Solent, in 2019 only 10% of the remaining such land offers permanent water access. Of these sites, only 57% are over 2ha in size and they offer insufficient capacity to accommodate the infrastructure and development to accommodate marine, maritime and advanced manufacturing to a scale that delivers the UK need. The Savills *Site Promotion report* for TRP, in support of the former 'Lennox

[32] See Appendix B at https://democracy.portsmouth.gov.uk/documents/b14699/Tipner%20West%20Full%20Council%20Update%20-%20Appendices%2006th-Dec-2021%2013.00%20Cabinet.pdf?T=9

Point' project[33], has conducted research into the Solent employment market to understand the strength of the marine property market, its future profile and the extent of demand and how that could be met. The key findings have concluded:

- There is a shortage of available marine-frontage built area and developable land is in high demand;
- Capital costs may impact the viability of meeting this demand in an undersupplied market;
- An optimally designed marine employment environment will require high upfront costs, but also a long-term view from occupiers for this unique cluster and critical mass of activity.

5.32 The evidence base demonstrates that there is a shortage of both available marine frontage developable land, coupled with a high demand. The capital costs may impact the viability of meeting this demand in an undersupplied market. Not only will an optimally designed marine hub comprising modern waterfront infrastructure require high up-front costs, but long term financial and advisory support (potentially through partnership with the Solent LEP, among other sources) is likely to be needed to attract occupiers to establish a unique cluster and critical mass of activity.

5.33 The MPL report undertook a detailed, targeted and specific market study through engagement with the marine sector to identify the nature and extent of marine sector requirements to be delivered by an optimal development site (see *Site Promotion Report*, August 2021, (paras. 2.46-2.53). The study concluded that the Solent marine sector is currently not meeting demand and is losing out where opportunities are leaving the UK. The study noted that other potential marine employment sites in the Solent all suffered from a number of constraints such as poor water depth, inefficient vessel launch and recovery systems.

The Potential of Tipner West/Horsea Island East

5.34 The identification of Tipner West and Horsea Island East through the City Deal is based upon the need to address the national, regional and local need for employment focused on marine employment and advance manufacturing, with public funding being provided to address the market factors summarised above. Such funding and public sector support will enable the early delivery of the required infrastructure supporting 9ha of marine employment development.

5.35 The City Deal sought to maximise the impact of marine and maritime assets by unlocking critical employment and housing sites. It states that:

> *"Providing suitable employment sites for Southampton and Portsmouth's growing marine, maritime and advanced manufacturing sectors that are in close proximity to key economic assets (Port of Southampton, Portsmouth Naval Base and the Solen Marine Cluster) as well as meeting growing housing demand are key economic challenged for the Solent…Unlocking this site fully will enable the provision of 2,370 new homes and 58,000 sqm of employment space [and] will help create over 3,700 jobs."*

[33] See Appendix D at https://democracy.portsmouth.gov.uk/documents/b14699/Tipner%20West%20Full%20Council%20Update%20-%20Appendices%2006th-Dec-2021%2013.00%20Cabinet.pdf?T=9

5.36 PCC-LPA therefore considers the proposed allocation at Tipner and Horsea Island East to be urgent and hence both **imperative** and **in the public interest** to meet the current and future demands of the marine employment sector.

iv) Supporting Necessary Works through Enabling Development

Imperative reasons: Economic

5.37 The City Council has considered at significant length a range of options for the Tipner West site and notably in respect of alternative solutions to those of the original 'Lennox Point' option which included significant land reclamation, having regard to the likely significant adverse effects upon the SPA and Ramsar protected sites. A detailed report was presented to Full Council in December 2021[34], produced with input from PCC-TRP team. With the exception of the "Do Nothing" option, all other options included delivery of residential development on the Tipner West site by reason of its cross-subsidy 'enabling' funding for the necessary sea defence, bridge and site decontamination works. The City Deal did not provide for full Government funding of these works, with the Government grant (£48.75m) (and associated MoD Land transfer provisions) to be accompanied by local capital investment of £42.7m and in addition a further £87.8m in developer contributions.

5.38 All development options considered in that report demonstrated a significant negative viability position for the City Council, ranging from £48.75m for 'Do Nothing' (City Deal grant to be refunded to Government), to £160m for development of all of the existing land mass, including protected SPA/Ramsar habitat south of the firing range, but excluding significant harbour reclamation. Portsmouth City Council resolved to commit to prioritising protection of the SPA/Ramsar sites and to support any viability shortfall through locally-sourced funding avenues. However, it is clear from the Full Council report that the significant site enabling costs associated with implementing the City Deal could be in excess of £200m and that additional 'enabling' development, alongside the marine hub, would continue to be necessary to lever in additional private finance, including further developer contributions as noted above. The City Deal has in any event been premised upon the need to make the Tipner West and Horsea Island sites ready for sale to 'one or more private sector developers'.

5.39 This funding gap cannot be met from the capital programme of the City Council, as promoter, and even following an assessment of likely additional grant from National Government significant additional funding is necessary. It is not considered to be in the public interest to burden the landowner (Portsmouth City Council) with the need to service a loan to cover the funding needed, even if such finance could be arranged. With no other feasible capital raising avenues available, utilising the site to provide enabling development to support the deliverability of the objectives is therefore considered essential. This additional enabling development requires additional land to accommodate it at a scale that provides a residual viability capable of supporting the site enabling and infrastructure costs, which include the costs of sea defences, the bridge and managing land contamination. This additional land, intended to be provided through land reclamation in Portsmouth Harbour, must be contained within the minimum necessary space to

[34] (Public Pack)Tipner West Full Council Update - Appendices Agenda Supplement for Cabinet, 06/12/2021 13:00 (portsmouth.gov.uk)

achieve this outcome, recognising that such works have a direct impact on the SPA and Ramsar designated sites.

5.40 The provision of enabling development, in the form of residential development - which has been identified as the land-use most likely to result in a net funding position within the site - is considered to be essential and hence both **imperative** and **in the public interest** to ensure the delivery of the site allocation and its many associated benefits.

v) Other Public Benefits

Imperative reasons: Human health, public safety, beneficial consequences of primary importance to the environment, social and economic

5.41 There are a number of other important benefits in addition to the core benefits described above that the City Council thinks should be taken into account when considering the case for IROPI.

Homes

5.42 The need for new homes in Portsmouth is great. Based on the standard methodology, as of December 2022, the need for new homes in the City is 906 dwellings per year. Housing delivery in the City in the last few years has been much less than this with 270, 300 and 291 new homes built in each of the last three years. The Housing Delivery Test Action Plan[35] explains the reasons for under delivery and sets out ways in which we will address it.

5.43 Portsmouth is the most densely populated local authority area in south-east England according to the 2021 Census and the supply of developable land is greatly constrained. The development strategy for the emerging Local Plan is to is to maximise the potential of developable sites in the city focusing on strategic sites including Tipner. There will be a capacity-based housing target in the Pre-Submission Local Plan and the City Council must leave no stone unturned to demonstrate that housing need cannot be met. The proposed development of Tipner West with 1,250 new homes plays a key role in this strategy.

5.44 The new homes at Tipner West would be enabling development for the core benefits described above. Development can only happen if it is viable and the provision of 1,250 new homes as cited in City Deal and allocated in the emerging Portsmouth Local Plan will lessen the viability gap and enable the essential provision of sea defences, de-contamination and the marine business hub.

Sustainable Transport and Connectivity

5.45 The proposed site allocation would include a bridge linking Tipner West with Horsea Island East, as set out in the City Deal. The bridge is proposed to be sited alongside the existing M275 fly-over and would be intended for sustainable modes of transport only, namely walking, cycling and new public transport connections. As things stand, residents of the City in mainland Paulsgrove and Port Solent are unable to access existing rights of way that extend south of Tipner West to the City centre, other than by taking a car on to the M27, the M275 and potentially the Park and Ride at Tipner East or otherwise continue to drive to the City centre. The bridge would bring significant

[35] https://www.portsmouth.gov.uk/wp-content/uploads/2022/11/Portsmouth-City-Council-Housing-Delivery-Test-Action-Plan-2022-2023.pdf

lifestyle and healthy living improvements for many local residents and employees including further downward pressure upon air pollution levels.

5.46 The South East Hampshire Rapid Transport (SEHRT) project aims to change the way people travel between Portsmouth and surrounding areas. [36] PCC has been working alongside SEHRT to secure the delivery of new bus routes across the new bridge, serving both existing communities and the new community at Tipner. The connection would also provide far quicker direct routes south to the International Port, the Naval Base and to the City centre and forms a critical element of the Council's healthy living, air quality and sustainable transport strategies.[37]It is also anticipated that the bridge could support new modes of travel such as connected and autonomous vehicles which would link to similar shuttle services around the new development.

5.47 Further public benefits relate to the enhanced connectivity to and from the proposed Horsea Island public open space and to the five Grade 2 Listed heritage assets on the north-western part of the Tipner West peninsula which have been inaccessible for decades, as discussed further below.

5.48 With regard to improved access to open space, by providing a bridge link, the proposed open space at Horsea Island East would be much more readily accessible by sustainable modes, including residents living at Tipner East, Stamshaw and further south. Indeed, the viable delivery of the new open space would be heavily dependent upon the delivery of the bridge and increased public accessibility from the south and not via the motorway corridors. Furthermore, it is anticipated that significant heritage assets on the Tipner site, namely the former gunpowder Magazines, Cooperage, and Shifting House, would be re-purposed through the development and would become accessible to the public after decades of isolation and poor management. The Council will imminently own the freehold of these assets and will acquire stewardship responsibilities for them.

Public Access to Open Space and Heritage Assets

5.49 With the benefit of City Deal funding and the adoption of the new Portsmouth Local Plan 2040, inclusive of the proposed development allocation for Tipner and Horsea Island East, it is feasible to open up much improved opportunities for public access to areas of public open space planned on former landfill at Horsea Island East. This would cover an area of approximately 50ha and provide public health benefits for existing and new residential communities.

5.50 In addition, there are five Grade 2 Listed Buildings on the site which have been neglected for many years. The enabling of development of the Tipner West peninsula as supported through the City Deal and draft Local Plan allocation, alongside the imminent freehold acquisition of these assets by the City Council, provides the City Council with new opportunities and responsibilities. The listed buildings on site have a unique maritime history, in particular with regard to the holding of gunpowder and munitions and the site allocation seeks to ensure, as far as possible, the restoration, repair and re-purposing of these assets, recognising their immediate proximity to a new marine employment hub. The development allocation, alongside the City Deal, aims to deliver the necessary funding to lever in the necessary finance for these works and public access thereto, to ensure the heritage value is fully appreciated and understood for the public benefit.

[36] https://www.sehrt.org.uk/

[37] https://democracy.portsmouth.gov.uk/documents/s27256/LPT4%20Appendix%20A%20Draft%20Local%20Transport%20Plan%20Strategy.pdf

Managing existing recreational disturbance to birds on designated areas

5.51 The site is currently inflicted with unmanaged access to the coastal edge resulting in recreational disturbance of qualifying bird species on the intertidal, estuarine and terrestrial areas of the SPA/Ramsar site. Creating a deliverable development on the site will enable an on-site management plan and mitigation/avoidance strategy to be introduced to prevent and reduce direct recreational disturbance and other adverse effects to the site integrity that are arising from current uses, both formal and informal, of the land in its current status.

5.52 In summary, these other benefits, by way of significant enhancement to sustainable transport travel choices and connectivity for existing and proposed residents, the opening up of public access to new areas of public open space and several hitherto neglected heritage assets, significant contribution to meeting the City's objectively assessed housing needs, associated human health improvements in an area historically dominated by the motorway corridor (and associated background poor air quality and noise), and new opportunities for site management to protect and enhance designated site integrity, are considered to contribute cumulatively to the case for IROPI associated with draft Strategic Site Allocation Policy PLP5 by reason of **long term public benefit**.

(vi) THE OVERRIDING BALANCE

5.53 As noted in section 2.0 of this Statement of Case, consideration of IROPI necessarily involves a balancing exercise for the decision-maker. It is for the Secretary of State, in providing the requested Regulation 107 Opinion to PCC-LPA (the 'competent authority'), to consider if the interest(s) served by the Plan, as summarised above, outweighs the harm(s) (or risk of harm) to the integrity of the designated sites. Having regard to the DEFRA Guidance at Appendix A16, the Secretary of State needs to consider whether the imperative reasons and public benefits put forward above, could be considered to **override** the anticipated harms identified. As noted at 2.9 of this Statement of Case, the European Commission stated in case C-239/0482 that "..*the choice requires a balance to be struck between the adverse effect on the integrity of the SPA and the relevant reasons of overriding public interest*."

5.54 **A final determination on this question will not be possible until a full HRA has been undertaken for the draft Plan and subsequent project/s and these submitted for assessment by the relevant competent authorities, in this case PCC-LPA (Local Plan and Planning Permission) and, if necessary, the Department for Transport (TWAO).** However, having regard to this statement and supporting evidence, it is strongly contended by PCC-LPA that the deliverability of the afore-mentioned imperative and public interest benefits, through draft Strategic Site Allocation Policy PLP5 (including the medium to longer terms integrity of the designated sites), are in this instance expected to be found to be compelling and thereby **OVERRIDE** the significant adverse effects on the integrity of the SPA an Ramsar Site as provisionally identified above. Indeed, Portsmouth City Council believes that not to progress the proposed policy for Tipner West & Horsea Island West, in seeking to achieve the stated purposes, could represent a failure of its statutory duties and be administratively perverse.

6. Conclusions and Regulation 107(3) Opinion Request

6.1 Portsmouth City Council, in exercising its function as plan-making authority, is, pursuant to Regulation 107(3) of the Habitats Regulations, requesting an Opinion from the Secretary of State as to whether or not Imperative Reasons of Overriding Public Interest (IROPI) exist to support the draft allocation of Tipner West and Horsea Island East in the new Portsmouth Local Plan. This site allocation would be capable of delivering imperative social, economic, environmental, human health and safety benefits in the public interest as outlined in the preceding section.

6.2 Notwithstanding the anticipated likely significant effects upon the National Site Network and Ramsar habitats outlined above, PCC-LPA request this Opinion in order to progress with its draft Local Plan to Pre-Submission and then on to Examination with greater surety. A newly adopted Local Plan for the City with an allocation for Tipner West and Horsea Island East will be pivotal in our plan led system of planning, for delivering critically needed coastal defences, preventing contamination of the Harbour and providing marine employment alongside other enabling works that will deliver benefits in the public interest to Portsmouth City and the wider Solent region.

6.3 Only through the incorporation of the draft Tipner West & Horsea Island East policy within the proposed Regulation 19 Pre-Submission Portsmouth Local Plan (2040) would each of these tests be likely to be met by reason of the evidence outlined in this Statement. The imperative and long-term public interest benefits as outlined above would be at very significant risk of failing to be met through alternative solutions. PCC as land-use planning authority would be failing in its duty to protect the local population from flooding, prevent contamination of the Harbour, provide a specialist marine employment hub and, as enabling development, deliver much needed local homes.[38]

6.4 Any Opinion issued would be used to inform the Habitat Regulations Assessment of the Regulation 19 Pre-Submission Local Plan, including the required derogation steps. A finalised IROPI decision by the competent authority will be submitted for Examination as part of the core document library for the Local Plan. Separate HRA of the 'Project', including further detailed consideration of alternative solutions and progression of compensatory habitat mitigation, will be undertaken in association with PCC project-level applications. It is considered to be pragmatic, precautionary and prudent to seek this early Opinion as a positive Opinion will provide the necessary confidence for the LPA and TRP Promoter team to progress the significant and costly, publicly funded, work required to deliver the Plan and Project concurrently.

6.5 For the benefit of the Secretary of State, copies of previous IROPI Opinion decisions issued by the European Commission are attached at Appendix A11. Having taken advice, PCC-LPA is submitting this Opinion request to the Department of Levelling Up, Housing and Communities (DLUHC) as relevant authority for local plan making in England, whilst copying the submission to DEFRA as the Department with oversight of the Habitat Regulations. It is to be noted that conditions may be applied at the Secretary of State's discretion to any Opinion issued.

6.6 It was stated in paragraph 1.6 of this Statement of Case that an advisory meeting has been arranged with the Planning Inspectorate for **16 August 2023**. Tipner, HRA and IROPI will be on the agenda. Feedback on this document would be appreciated ahead of this meeting and ideally a representative from DLUHC would be able to attend the meeting.

[38] S.19 of the Planning and Compulsory Purchase Act 2004 (as amended).

9. List of Appendices

A1: Tipner West and Horsea Island East: Draft Tipner Policy and Strategic Site Allocation Proposals for Draft Portsmouth Local Plan 2040

A2: Southampton and Portsmouth City Deal (12th November 2013)

A3: Copy of email advance notice to Andrew Tully (Policy Lead) DEFRA Protected Areas Team, April 2023

A4: Natural England Regulation 18 Consultation response (8th November 2021)

A5: PCC HRA Screening Decision for Tipner West/Horsea Island East site allocation (dated April 2023)

A6: Environment Bank SPA Metric Process to Determine Required Compensation (for Lennox Point project, Aug 2021);

A7: TRP Preliminary Ecological Appraisal (WSP, April 2023)

A8: North Solent SMP IROPI Decision letter (DEFRA, 4th April 2011)

A9: Portsea Island Coastal Strategy IROPI Decision letter (DEFRA, 5th April 2011)

A10: Tipner, Port Solent and Horsea Island Bridge Feasibility Study, Peter Brett Associates (June 2010)

A11: European Commission IROPI Opinion (Art.6.4.2) Decisions:

(a) Deepening the Danube waterway between Straubing and Vilshofen; section Straubing-Deggendorf (Germany/Bavaria);

(b) concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port of Granadilla (Tenerife)

A12: 2040 Portsmouth City Council Local Plan - Indicative Timeframe to Adoption

A13: Portsea Island Coastal Strategy Study Statement of Case (Appendix 20) in respect of the effects on European Sites (June 2009) (*Halcrow*, for Environment Agency)

A14: Alternative Solutions (Derogation Step 1 - Provisional)

A15: Compensation Strategy (Derogation Step 3 - Provisional)

A16: Habitats Directive: guidance on the application of Article 6(4) - Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures (DEFRA, Aug 2012)

A1: Tipner West and Horsea Island East: Draft Tipner Policy and Strategic Site Allocation Proposals for Draft Portsmouth Local Plan 2040

Draft vision for Tipner West & Horsea Island East

In 2040, Tipner West & Horsea Island East will form a new gateway to the city along with Tipner East and will be home to a new healthy and happy community. People will live in good quality homes that are carbon neutral and will enjoy the new open space on Horsea Island. They will make fewer journeys by car and instead will make use of new and improved public transport connections including a bridge to the mainland. There will be a thriving new marine business hub that provides both jobs and opportunities for lifelong learning. New climate resilient sea defences will defend the new community alongside the existing residents of north Portsea Island. Historic land contamination will have been prevented from leaching into the Harbour. The Harbour's nationally and internationally designated saltmarsh and mudflat supporting populations of Brent Geese and wading birds will be cherished and protected, whilst the site's naval heritage will be positively enhanced in the public interest. The whole Tipner peninsular will be home to a community where residents, workers and visitors co-exist in harmony with nature.

Draft Strategic Site Allocation Policy PLP5: Tipner West & Horsea Island East

1. Tipner West & Horsea Island East, as shown on the Policies Map, is allocated for the mixed use development of the following uses and large scale infrastructure:

    a) A marine hub with a working quayside and up to 58,000 square metres of marine employment floorspace (class E(g) offices, research and development, light industrial, B2 general industrial and B8 storage or distribution);
    b) A new community with up to 1,250 residential dwellings (class C3);
    c) A bridge between Tipner West and Horsea Island East for the use of sustainable transport modes only;
    d) Flood defences along the peninsula edges of Tipner West and Horsea Island East in line with robust climate change scenarios;
    e) Shops selling essential goods, including food, where the shop's premises do not exceed 280 square metres (class F2a); and
    f) Meeting places for the principal use of the local community (class F2b).

2. Development proposals for the above named uses will be permitted provided that they meet all of the following site specific development requirements:

    a) Create, along with Tipner East, a new landmark gateway to the City of Portsmouth to be demonstrated through a suitably scaled conceptual site-wide masterplan with an accompanying design code framework that delivers beautiful place-making and has regard to the National Model Design Code;
    b) Break down the barriers, both physical and perceived, created by the M275 motorway and Ports Creek. This will be achieved though the design of both buildings and spaces to create excellent connections with Tipner East and the wider area;
    c) Allow views to and from Tipner West and notable landmarks within the zone of visibility including Portchester Castle, the Spinnaker Tower and His Majesty's Naval Base;

d) Integrate green and blue infrastructure into the masterplanning and design of the development and seek to mitigate the urban heat island effect;
e) Achieve at least ten per cent Biodiversity Net Gain on site or in close proximity to the site;
f) Reclaim the minimum amount of land needed to allow the viable and feasible development of the site in line with the City Deal whilst protecting the integrity of the international, national and local nature designations[39];
g) Incorporate car-free streets wherever feasible, with 'Mobility as a Service' and sustainable transport modes prioritised;
h) Improve off-road pedestrian and cycle provision linking Port Solent and Tipner to the City Centre, nearby public open spaces including Horsea Island Open Space, recreational facilities including the Mountbatten Centre and other local shops and services;
i) Provide safe and efficient vehicular access to and from the M275 and the surrounding non-strategic road network;
j) Mitigate any 'in-combination' negative effects from recreational disturbance to protected bird populations through a bespoke developer-provided package of measures for the lifetime of the development as advised by Natural England;
k) Provide for public access along the waterfront where feasible and without causing recreational disturbance to protected bird populations;
l) Deliver appropriate surface water and foul drainage infrastructure together with required nutrient neutrality and water usage mitigation measures to support the Environment Agency in achieving and/or maintaining at least 'Good' water quality status and to protect designated habitats within the Portsmouth Harbour Waterbody (pursuant to the Water Environment Regulations);
m) Mitigate and remediate contamination from current and historic uses; and
n) Provide a skills & employability plan for both the construction and occupation stages of the development;

3. The Listed Buildings located on Tipner West and the Scheduled D-Day Slipways on Horsea Island will be conserved and enhanced and their respective settings protected. This will include the investigation, recording and safeguarding of known and potential finds of archaeological significance, including those as may be identified below mean high water springs.

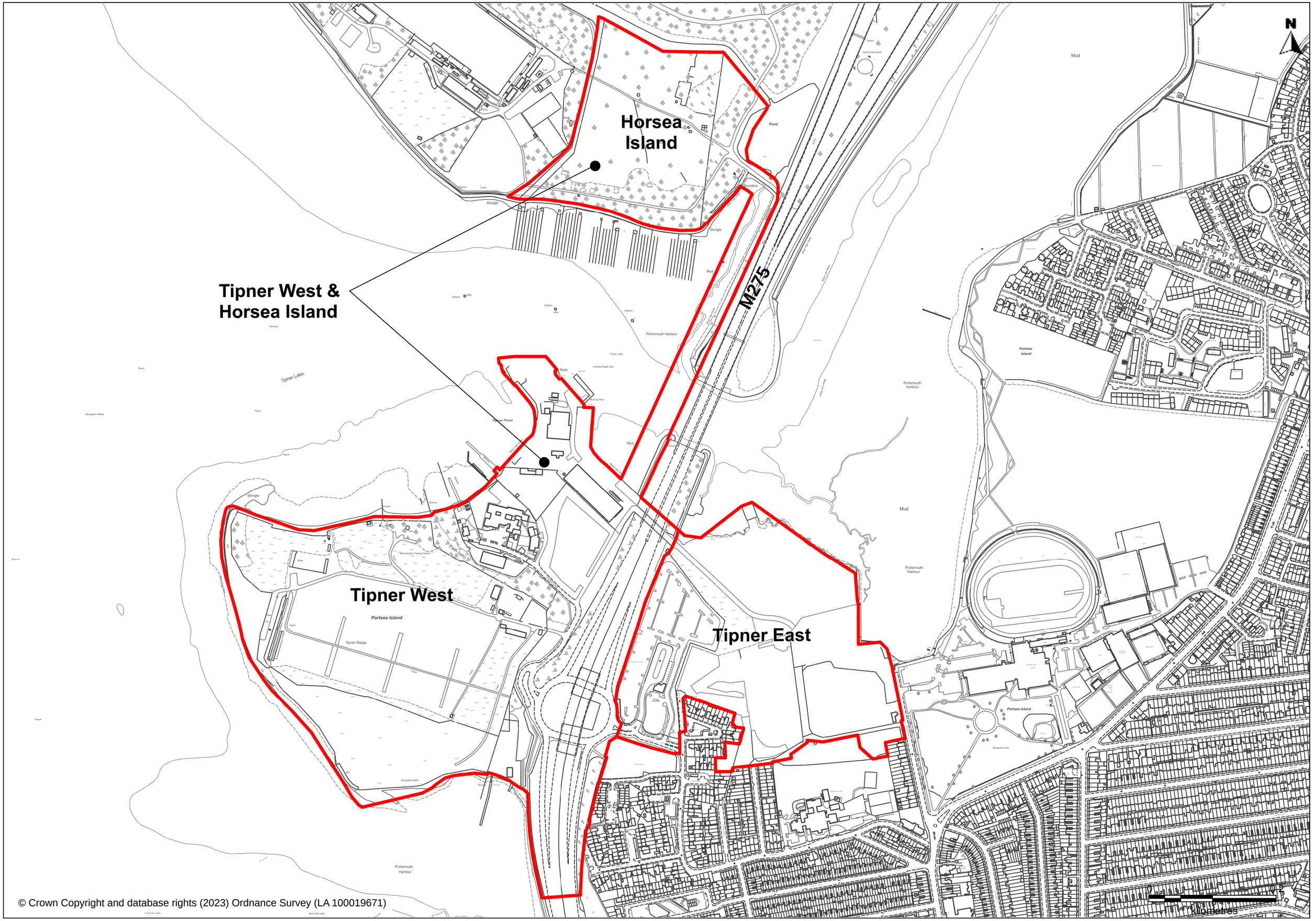
4. A segregated bus way between Tipner West and Horsea Island via the new bridge and on to Port Solent will be established and operated.

5. The deep water access to Tipner Point and the new marine hub quaysides will be maintained, with dredging as necessary, to support optimal boat access at all times whilst protecting the Scheduled D-Day Slipways and acceptable sediment transport conditions.

6. A shadow, project level Habitat Regulations Assessment (HRA) will be required to be submitted along with the planning application to the local planning authority as competent authority. This must provide sufficient evidence for the local planning authority to conclude that all three derogation tests have been passed.

[39] Notably the Portsmouth Harbour SPA and Ramsar site, Portsmouth Harbour SSSI and Solent and Dorset Coast SPA – as required by the Habitats Regulations (2017) (as amended) and related national habitats legislation.

7. Whilst the City Council wishes to see a comprehensive development of the site, it recognises that planning applications may come forward separately or in phases. As well as complying with the development requirements set out above, all development proposals need to demonstrate consistency with other permissions granted and emerging proposals. All development proposals will be supported by appropriate site phasing and sequencing strategies to ensure a holistic approach is taken to the development. Planning applications will need to demonstrate potential landscaping or other solutions for land comprising later phases in the event that such phases do not come forward within an agreed timeframe.



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A2: Southampton and Portsmouth City Deal (12th November 2013)

Southampton and Portsmouth City Deal

Executive Summary

The Southampton and Portsmouth City Deal will maximise the economic strengths of these two coastal cities and the wider Solent area, by supporting further growth in the area's maritime, marine and advanced manufacturing sectors.

Across Southampton, Portsmouth and the Solent, the marine and maritime sector already accounts for over 20% of gross value added and provides 40,000 jobs locally. Over the next 12 years this sector is expected to grow by 5%, driven in part by key assets such as the Port of Southampton, Portsmouth Naval Base; and the Solent Marine Cluster – which includes Lloyds Register and the Southampton Marine and Maritime Institute. Advanced manufacturing is also an area of strength, growing during the recent recession and creating almost 5,000 new jobs.

The flagship proposal for this City Deal will support further growth in these sectors by unlocking two high-profile sites within Southampton and Portsmouth – one of which involves Ministry of Defence owned land. These sites, once developed, will provide: new employment space; new housing; and lever in significant amounts of new private sector investment into the economy. To complement this, the City Deal will also implement programmes to: align skills provision to employer needs; tackle long term unemployment and youth unemployment; and enable small and medium enterprises to grow through the provision of effective business support. Over its lifetime the Solent Local Enterprise Partnership predict the City Deal will deliver:

- Over 4,700 permanent new jobs particularly focussed in marine, maritime and advanced manufacturing sectors.
- Over 13,000 construction jobs.
- Unlock 107,000 sq metres of new employment floor space with a focus on supporting growth in the marine, maritime and advanced manufacturing sectors.
- Support small and medium enterprises to grow through better business support over the next three years.
- Provide £115m of local and national public sector investment.
- Lever in over £838m of private sector investment into the area through site development, skills and unemployment schemes; and business support services.
- 2,370 new homes

All signatories to this City Deal recognise that the proposals within this document will support the local economy to grow and create new jobs. Every effort will be made to support the local area through the recent economic shock, including through the support that BIS and Jobcentre Plus provide through the Rapid Response Service and schemes such as the Talent Retention Solution.

Our signing of this document confirms our joint commitment to ensure full implementation of the Southampton and Portsmouth City Deal proposed by: the Solent Local Enterprise Partnership; Southampton City Council; Portsmouth City Council, Hampshire County Council and other councils that are members of the Partnership for Urban South Hampshire (Eastleigh, East Hampshire, Fareham, Gosport, Havant, Isle of Wight, New Forest, Test Valley and Winchester).

Introduction

With a population of 1.3m and over 50,000 businesses operating in the area, the Solent Local Enterprise Partnership is one of the UK's key engines of growth. As a functional economic area its economic output equates to £48.5bn (gross value added per annum of £23.7bn) and it supports 485,000 full-time equivalent jobs. At the heart of its economy are the two cities of Southampton and Portsmouth and their associated ports. Together these two cities provide nearly 39% of high-skilled jobs in the Solent and contribute 37% of its total economic output.

The coastal location of the Solent, clustering of businesses and educational strengths (with Portsmouth and Southampton at its core) places it at the heart of the UK's marine and maritime economy. This sector accounts for 20.5% of the Solent's gross value added; provides 40,000 jobs locally; and supports over 3,000 businesses. Over the period to 2025 this sector is projected to grow by 5% in the region. The Solent sub-region also plays a significant role in advanced manufacturing with significant clusters linked to our key economic assets (see box 1). Employment rates in this sector are significantly higher when compared to the UK average, particularly in: computing; electronic and optical products; and electrical equipment. Indeed from 2009-11, despite the ongoing challenges facing the manufacturing sector locally it grew by almost 8%, creating 4,600 new jobs (to 58,800).

The growth strategy across Southampton, Portsmouth and the wider Solent (Eastleigh, East Hampshire, Fareham, Gosport, Havant, Isle of Wight, New Forest, Test Valley and Winchester) recognises these comparative economic advantages and the City Deal will help Southampton and Portsmouth achieve their shared long term vision for the local economy by:

- **Maximising the economic impact of our marine and maritime assets** in the area;
- **Unlocking critical employment** sites to enable their marine, maritime and advanced manufacturing sectors of their economy to expand;
- **Providing new housing** to support their growing workforce;
- Ensuring people have the **right skills** to access employment in these growing sectors; and
- Providing **effective support to their small and medium enterprises** to enable them to grow – including marine and maritime small and medium enterprises.

Box 1: Solent Economic Assets related to the City Deal

The **Port of Southampton** is one of the UK's largest, busiest and most diverse ports providing a wide range of passenger, freight and cargo functions. It provides, directly and indirectly, 15,000 jobs[1] in the Solent and contributes over £1.2bn of output per annum. The Port is the busiest cruise port in the UK (home to the UK fleets of P&O Cruises and Cunard Line and home to Carnival – the largest Cruise operator in the world). The number of cruise ships calling has increased by over 200% in the last 10 years. The Port of Southampton is also the largest vehicle handling port in the UK, with more than 750,000 vehicle exports. The container terminal is also the second largest in the UK, handling almost 50% of UK trade with the Far East. Finally, Southampton is one of the leading hubs for the import and export of liquid bulk cargos, primarily crude oil.

Portsmouth Naval Base is at the heart of the sub-regional defence cluster providing, directly and indirectly, 20,000 jobs across the sub region and contributing over £1.6bn gross value added of output. Currently the Naval Base supports the Royal Navy surface fleet and there is a strong maritime services function offering: integrated ship support; complex software engineering and advanced manufacturing solutions; equipment management; training; and estates and logistics service. It encompasses: the Naval Base; associated Naval establishments; the defence industrial base and other dependent firms (including Babcock, BAE Systems, Lockheed Martin, Northrop Grumman, Qinetiq, Serco Denholm Ltd and Vector Aerospace).

The Marine cluster, including the marine and marine-recreational sector, is the province of smaller enterprises. This sector will be boosted by the decision of Lloyd's Register's to relocate to Southampton to be part of the Maritime Centre of Excellence, which includes the Southampton Marine and Maritime Institute (SMMI).

[1] Across the City of Southampton and surrounding areas including Isle of Wight and Districts in South Hampshire

Why do we need the City Deal?

Southampton and Portsmouth need to maximise the impact of their key marine and maritime assets through the provision of new housing and employment sites. The City Deal provides a unique opportunity to both: supporting a critically important stalled private sector led development in Southampton; and providing new employment and housing sites in Portsmouth, by unlocking land that is currently owned by the Ministry of Defence.

Marine and maritime businesses, which account for 20% of the Solent economy and are responsible for 17% of UK gross value added in the United Kingdom, contain many smaller firms with specific skills requirements. Working within the employer-led skills system the City Deal has agreed additional flexibilities to ensure marine and maritime small and medium enterprises can secure employees with the right skills, thereby enabling them to grow.

Despite the economic potential of Southampton and Portsmouth, the local area continues to face the challenge of supporting long term unemployed residents back into work. The City Deal helps address this challenge by creating new jobs and getting unemployed people – especially the long-term and young unemployed – into work.

The City Deal will also help improve the relatively low rates of new business start-ups in the area.

The Deal

At the heart of the Southampton and Portsmouth City Deal is an ambitious proposal to **maximise the impact of marine and maritime assets by unlocking critical employment and housing sites** in both cities. The two critical sites, within the wider Solent pipeline, are the Watermark West Quay site in Southampton and Tipner-Horsea in Portsmouth. To deliver this flagship proposal City Deal partners will:

- Agree a **funding package** for both sites utilising significant local funding sources, private sector investment (including developer contributions) and Government investment. This funding will facilitate the provision of enabling infrastructure to be undertaken – making these sites ready for private sector investment.
- Support **land assembly** on the Tipner-Horsea island site through the transfer of Ministry of Defence owned land, with an overage agreement, to local partners.
- Agree to expedite planning applications which relate to the **relocation of Ministry of Defence related facilities**.

The marine and maritime assets programme will be complimented by skills, labour market and business support packages. These proposals are designed to ensure local residents can access jobs in growing sectors and that local businesses are able to grow and thrive across the Solent. To achieve this City Deal partners will:

- Establish a **Skills Investment Strategy** and **Solent Skills for Growth fund**, using funding from local partners and the private sector. This strategy and fund will ensure local residents can take courses that meet employer needs.
- Create a **Solent Employer Ownership of Skills programme** that identifies immediate skills needs in small and medium enterprises, in the **advanced manufacturing sector**, and funds the provision of relevant courses though local skills providers.
- Launch a new **Solent Jobs programme** that will support long term unemployed people into sustained employment.
- Launch a **Young Person's Demonstration project** to trial new approaches to supporting young people into employment, in line with the forthcoming findings from the Government's review into employment, education and training support for 16-24 year olds.
- Provide support for those facing redundancy to access alternative employment through a Department for Work and Pensions **Rapid Response** programme.
- Establish a programme to **provide effective business support** including local schemes that promote small and medium enterprise business growth and enterprise.

Over its lifetime the Solent Local Enterprise Partnership predict the City Deal will deliver:

- Over 4,700 permanent new jobs particularly focussed in marine, maritime and advanced manufacturing sectors.
- Over 13,000 construction jobs.
- Unlock 107,000 sq metres of new employment floor space with a focus on supporting growth in the marine, maritime and advanced manufacturing sectors.
- Support small and medium enterprises to grow through better business support over the next three years.
- Provide £115m of local and national public sector investment.
- Lever in over £838m of private sector investment into the area through site development, skills and unemployment schemes; and business support services.

Geography

This City Deal sets out a range of programmes and initiatives which seek to support the Southampton, Portsmouth and the wider Solent Eastleigh, East Hampshire, Fareham, Gosport, Havant, Isle of Wight, New Forest, Test Valley and Winchester. In Portsmouth the Tipner-Horsea scheme will provide vital new employment and housing space and in Southampton the Watermark West Quay scheme will provide a new leisure quarter that will support the expanding maritime industry. The impact of both proposals will be felt across the Solent. Both cities will also benefit from new schemes that will support long term unemployed residents and young people that are unemployed. Further, across both cities and the wider Solent residents and businesses will benefit from the City Deal's skills and business support proposals.

Key Elements of the City Deal

Maximising the impact of marine and maritime assets by unlocking critical employment and housing sites

Providing suitable employment sites for Southampton and Portsmouth's growing marine, maritime and advanced manufacturing sectors that are in close proximity to key economic assets (Port of Southampton, Portsmouth Naval Base and the Solent Marine Cluster) as well as meeting growing housing demand are key economic challenges for the Solent. This City Deal will support wider work to address these two challenges by unlocking two sites in the Solent (Tipner-Horsea Island in Portsmouth and Watermark West Quay in Southampton).

These sites will be unlocked by assembling public/private sector land and agreeing funding packages to support the provision of enabling infrastructure. Both funding packages will lever in significant local and/or private sector investment.

Tipner-Horsea Island (Portsmouth)

The **Tipner-Horsea Island** site is within close proximity to Portsmouth City Centre, the Portsmouth International Port and Portsmouth Naval Base. It is comprised of five pieces of land: Port Solent; Tipner West; Tipner East; Horsea Island East; and the Tipner Firing Range. **Unlocking this site fully will enable the provision of 2,370 new homes and 58,000 square metres of employment space** for the growing marine and advanced manufacturing sectors of the Solent economy. **This will help create over 3,700 permanent jobs**.

Portsmouth City Council has already invested £24m in infrastructure around Tipner-Horsea Island to support current and future development. This includes the building of a new motorway junction, which provides access between the motorway and Tipner East, Tipner West and the Ministry of Defence Firing Range. This work will be completed in March 2014. Housing construction will also begin at Tipner East in 2014/15.

Other areas of the site currently cannot be developed due to multiple land ownership and/or the need for land remediation and enabling infrastructure to be provided. In order to overcome these barriers and unlock this site the City Deal will: assemble the land across these five sites; support the relocation of Ministry of Defence facilities; and agree a funding package that will enable the required enabling infrastructure to be undertaken.

Land Assembly

As stated above, the Tipner-Horsea Island site is comprised of the five pieces of land: Port Solent; Tipner West (owned by Tipner Regeneration Company and Portsmouth City Council); Tipner East (owned by the HCA and Tipner Regeneration Company); Horsea Island East (owned by the Ministry of Defence); the Tipner Island Firing Range (owned by the Ministry of Defence).

The Government will transfer both Ministry of Defence sites (Horsea Island East and the Tipner Firing Range), for a nominal fee, and agree an overage deal with Portsmouth City Council which will be concluded by the end of 2013/14. This overage agreement will provide for MOD to recover a fair and equitable share of the future market value of the overall development and site (after taking into account all costs incurred within this element of the deal). Portsmouth City Council will also agree to pay £3.75m to Government, which will recover the costs of relocating of Tipner Firing Range**.** The inclusion of both pieces of land in this scheme will maximise development opportunities. Once land assembly is complete, Portsmouth City Council will provide enabling infrastructure, so that the site can be made ready for private sector led development.

As part of this land assembly and transfer process the Ministry of Defence will relocate the existing firing range on Tipner to an alternative military facility – potentially to Longmoor Military Camp. As part of this deal East Hampshire Council have agreed to expedite the planning application for any such relocation, subject to full compliance with planning policies and statutory requirements, should the Ministry of Defence decide to relocate the firing range to this location.

Funding Package for Tipner-Horsea Island

The redevelopment and renewal of the Tipner-Horsea Island site will lever in significant financial investment into the local economy. Providing the required enabling infrastructure for this site will lead to an investment of £184m. This funding includes £88m in developer contributions, £47m of local investment (local authority funding, existing grant, local authority capital receipts, Community Infrastructure Levy and local business rates), Government support for this scheme will be capped at a £49m Government grant and the transfer of the two MOD sites for a nominal fee, which has an associated land value. This investment will lever in £647m of private sector development investment into the local economy.

Watermark West Quay (Southampton)

A further critical industry within our maritime sector is the growing international cruise industry. With over 400 ships expected to dock in Southampton in 2013 (providing approximately £1bn to the local economy[2]); a 200% increase in passenger numbers in the last 10 years; projected growth of 6% in the next five years; and the Cruise Liners International Association naming Southampton one of the "best cruise destinations" – providing a compelling offer for international visitors in Southampton is crucial. A significant opportunity to improve the attractiveness to visitors can be found in the stalled 49,000 square metre Watermark West Quay development in Southampton. This site, which is in close proximity to Southampton Port and the existing retail offer, will maximise the economic impact of foreign tourists that visit Southampton.

This £97m mixed-use scheme will be delivered in two phases by Hammerson. The first phase comprises: a landmark cinema building; up to 15 restaurants; additional retail space; and newly created public space in front of the city's historic walls – **creating 500 new permanent jobs**. The second phase has the potential to include: a residential tower; a hotel; flexible office space; restaurants; and additional public space. This City Deal will take forward phase one of this scheme. Due to this scheme's advanced stage construction is expected to commence in 2014 and will be completed by 2016.

Financial package to unlock the Watermark West Quay site

This development is currently stalled due to the need to provide a £10m site enabling package. This includes the relocation of the public utilities and new public infrastructure that will link the site to docked ships in the Port of Southampton via a park and plaza. The location of Southampton's historic medieval city walls to this site within the new public infrastructure also means that this enabling work needs to be undertaken sensitively. The private sector is contributing £3m to support this site enablement works. In order to fund the remaining £7m the City Deal has secured, through round four of the Regional Growth Fund (RGF), funding for the public infrastructure part of this development. In addition, given that this public realm infrastructure will not be built until the end of the construction programme, Southampton will be provided with an additional year to spend this RGF funding – enabling funding to be drawn down from Government until March 2016.

[2] On average, each docking is worth £2.5 million to the local economy

Developing a locally responsive skills system to drive economic growth

As Southampton and Portsmouth unlock new development schemes and grow their marine, maritime and advanced manufacturing sectors of the local economy it is essential that local businesses are able to employ individuals that have the appropriate skills and training. Therefore, building on the Government's recent skills reforms the Southampton and Portsmouth City Deal will ensure the local skills system further responds to employer needs by establishing a local **Skills for Growth Fund**. In addition the City Deal will also establish a Solent-wide **Employer Ownership of Skills programme** that identifies immediate skills needs in small and medium enterprises (in the advanced manufacturing sector) and funds the provision of relevant courses though local skills providers.

A system wide approach to meeting local employer skills demand

The skills infrastructure in the Solent has a long history of working together to meet the needs of local businesses and our learners. To extend this relationship, and in the spirit of collaboration, the City Deal will deliver a new three-year tripartite skills investment strategy which will identify local employer skills needs. This strategy will be supported by funding from the private sector, the seven major Further Education colleges across the Solent and the Local Enterprise Partnership's Employment and Skills Board. This funding will be aligned and placed into a single responsive Solent Skills for Growth Fund. This Solent Skills for Growth Fund will become operational in 2014 and will consist of £4m of funding over a two year period (academic years 2014/15 and 2015/16). Funding will be drawn from:

- £1m from Solent's 7 major colleges[3] each agreeing to ring-fence /co-invest funding from their Adult Skills Budget allocation;
- £1m from the Local Enterprise Partnership's European Union Structural Investment Fund (subject to its final approval); and
- £2m matched funding from local employers.

The Solent Skills for Growth Fund will be managed by the Solent Local Enterprise Partnership through the Employment and Skills Board and will complement Solent Local Enterprise Partnership's Skills Strategy, its European Union Structural Funds Investment Strategy and the forthcoming Local Growth Deal. The City Deal will also provide additional freedoms from the Skills Innovation Code, for specific courses to ensure that Further Education Colleges can align their investment and provision with the requirements of employers, linked to agreed job outputs. These flexibilities will be subject to final agreement by the end of 2013/14.

In total, over the two year period a minimum of 1,000 individuals (of which at least 600 will be aged 16-24) will participate in this programme. A minimum of 300 will be unemployed – undertaking job related training to secure sustainable employment and a minimum of 700 will be employees undertaking professional or high level training (at levels 3 or 4).

The Government will also agree specific flexibilities via the Innovation Code to enable individuals to acquire additional units of learning to supplement a qualification. This will provide broader skills, where needed, as part of the package of support for those seeking new qualifications or skills that will lead to employment. These flexibilities will be underpinned by the following principles:

- This is a commitment to funding growth in a contract that enables all of the opportunities and flexibilities of the Adult Skills Budget to be utilised. This will be offered through a 'where needed' approach in which employers and existing adult skills budget providers come to the Local Enterprise Partnership for funding for a specific need and they draw down in line with demand.
- Payment by the Skills Funding Agency will be made on profile and the contract is managed in line with the existing local authority contract.
- Government will support more flexible use of the Innovation Code for Southampton and Portsmouth for eligible learning although will need more detail from the city/Solent Local Enterprise Partnership on what specifically they want to support before programmes are agreed. The priority will be:
    - Flexibility will be for those individuals affected by the redundancies and seeking to address priority skills needs identified by the Solent Local Enterprise Partnership to remain in/find work.

[3] Brockenhurst College, Eastleigh College, Fareham College, Isle of Wight, Southdowns College, Southampton City College, Sparsholt College.

- Use of the Innovation Code must support a wider package of learning in addition to a full qualification or framework, for example undertaking additional units related to skills gaps in employment opportunities locally to supplement an Apprenticeships framework.
- Programmes should deliver good value for money and deliver transferable qualifications.

A Marine and Maritime Employer Ownership of Skills Programme

The foundations of the Solent are built upon a set of existing strengths in the maritime and marine sectors, with a particular emphasis on small and medium enterprises and micro-firms. The importance of the engineering, aerospace and marine industries to the Solent Local Enterprise Partnership area remains evident in the presence of major employers with supply chains running through the sub-region. The local area has a particularly strong concentration of employment in manufacturing, accounting for 9% of all employees (58,800 jobs). The maritime and marine sector in the Solent also accounts for 20% of the functional economic area and is responsible for 17% of UK gross value added in this sector nationally.

However it should be noted that the marine and maritime sectors contain many smaller firms which are not yet able to maximise the flexibility of the newly reformed skills system. To address this issue the City Deal will create a £3m Solent wide **Employer Ownership of Skills programme** that identifies immediate skills needs in small and medium enterprises, in the **advanced manufacturing sector**. In this programme the Solent Local Enterprise Partnership, through their Employment and Skills board, will act as the broker and aggregate up small and medium enterprise skills demands on behalf of local business. These skills gaps will be addressed through the provision of courses provided by local skills providers. "A co-investment funding model will underpin the Employer Ownership of Skills programme. £1.5m of this £3m programme will be provided by local employer contributions. Government will provide the other £1.5m (£0.75m in 2014/15 and £0.75m in 2015/16) from the adult skills budget. This will be paid into the Single Adult Skills Budget held by the Local Enterprise Partnership's accountable body (Portsmouth City Council) through their Skills Funding Agency contract in 2014/15. This £1.5m would be in addition to the £1m of Adult Skills Budget funding already indentified for the City Deal by local providers

Helping the Long Term and Young Unemployed into work

Economic analysis undertaken to support the Southampton and Portsmouth City Deal suggests that almost 10,000 jobs will be created in the two cities over the next decade. As part of the City Deal the Government and local partners are committed to opening up this potential economic opportunity to those that are furthest from the labour market, so that they can secure sustained employment.

Solent Jobs Pilot

In order to link long term unemployed people with private sector job creation this City Deal will create a new **Solent Jobs pilot targeting 1,000 of the very long-term unemployed over two years**. The cohort for this programme will be drawn from those who have left the Work Programme without finding work. The programme will include:

- **Stage 1:** A pre-employment and placement support programme aimed at identifying key barriers to work, improving basic employability and advice and guidance on how to make the transition into supported work.
- **Stage 2:** A subsidised job for up to 25 hours per week paid at the national minimum wage for up to six months, alongside caseworker support, skills and job search advice.
- **Stage 3:** Intensive post-placement support and job matching with expert senior advisors/job brokers using a payment by results mechanism.

Supported jobs will be concentrated on entry level private sector roles. Roles and sectors are to be selected on basis of client need and which offer the best opportunity for a successful placement for both the client and host. The length of placements will reflect the readiness of each client and will ensure a challenging whilst supportive environment to develop within.

The total cost of this two-year scheme is £5.8m. Local partners will provide £2.9m from local budgets and EU funding. The Government will support this scheme through the provision of £2.9m.

Supporting unemployment challenges

In addition in the light of the local redundancy situation the Department for Work and Pensions is prepared to commit up to a £1m extra funding, through its Rapid Response Service, to support those made redundant

secure new jobs as quickly as possible. That is an average of £1,000 per head of extra help on top of the normal support Jobcentre Plus offers.

Young Persons' Fund

Local partners will complement national youth unemployment programmes by designing **new demonstration projects for 18-24 year olds**. A total fund of £1.4m will be used to trial innovative new approaches to tackling youth unemployment within Southampton and Portsmouth. This will build on the forthcoming findings of the Government's review into employment, education and training support for 16-24 year olds. The new demonstration projects will build on what we know already works well in helping young people back to work including: skills training; work experience; and apprenticeships. £700K of funding will be provided by local partners (including private sector companies), with the remaining £700K will be provided by a combination of Youth Contract under spend (450K) and DWP Flexible Support fund (250K). Release of Government's contribution will be made by the end of 2013 and will subject to approval of a full business case.

Enterprise and Innovation

A new business support service[4] will boost economic growth by improving the coordination of local and national business support, making it easier for businesses to find the help they need and introducing a range of enterprise and innovation schemes tailored to the needs of local businesses. Across the Solent local partners will raise awareness and uptake of public and private sector support available at the local and national levels by effectively guiding businesses to the most appropriate support. At the same time, a suite of additional support services, including local schemes that promote small and medium enterprise business growth and enterprise will be rolled out. To support this scheme £3.1m of funding has been bid for by local partners. This will be supported by £424K of local public sector match funding and £6.5m of private sector leverage. The schemes proposed will create 310 jobs and safeguard a further 100 over a two year period (2014/15 - 2016/17).

Governance

A formal protocol of collaboration already exists between Southampton City Council and Portsmouth City Council. The formal creation of the Solent Local Enterprise Partnership, and their links with existing sub-regional bodies, Partnership for Urban South Hampshire (PUSH) and Transport for South Hampshire (TfSH) has enhanced the existing local authority governance arrangements by bringing together not only the main business organisations but also a wide range of sector based organisations that provide a strong base on which to build and drive forward an economic strategy. This will ease the transition towards a stronger governance arrangement. It has also enabled the private sector, local authorities and higher education to work together under the Solent Local Enterprise Partnership and the relevant local authorities and others to work together effectively for eight years.

As part of the Southampton and Portsmouth City Deal local partners have agreed to a "non legal entity" group comprising:

- Leader of Hampshire County Council
- Leader of Portsmouth City Council
- Leader of Southampton City Council
- Private Sector representative for the Solent Local Enterprise Partnership

The purpose will be governance relating to the City Deal. Decisions relating to statutory services will revert back to the relevant local authority or statutory body. The relevant sub regional groups are Partnership for Urban South Hampshire, TFSH/ Local Transport Board (Solent Transport). All representatives may appoint a deputy, as they see fit.

[4] This element of the Deal will be funded through a bid into the Wave 2 Business Growth programme developed by the Cities Policy Unit, BIS and Lancaster University. All commitments in this area are therefore subject to local partners being successful in their bid into this fund.

Summary of Commitments

Tipner and Horsea Island

Central Government Commitments	Southampton and Portsmouth Commitments
Ministry of Defence to designate the Tipner Firing Range as surplus to requirement and transfer ownership, for a nominal fee, to Portsmouth City Council in return for an overage agreement. This overage agreement will be concluded and approved by the end of the 2013/14 financial year and will provide for MOD to recover a fair and equitable share of the future market value of the overall development and site (after taking into account all costs incurred within this element of the deal). Ministry of Defence to transfer Horsea Island East to Portsmouth City Council, for a nominal fee, and agree an overage agreement. This overage agreement will be concluded and approved by the end of the 2013/14 financial year and will provide for MOD to recover a fair and equitable share of the future market value of the overall development and site (after taking account all costs incurred within this element of the deal). Provision of £48.75m in Government Grant to Portsmouth City Council to support the provision of enabling infrastructure to make the Tipner-Horsea Island site ready for private sector investment. This funding will be transferred through a Section 31 payment to Portsmouth City Council in 2014/15.	Portsmouth City Council to oversee the assembly of land on Tipner-Horsea Island. Portsmouth City Council to procure organisations to undertake (either or both) remediation activity and provision of enabling infrastructure at the Tipner-Horsea Island site. This activity will make the site ready for sale to one or more private sector developers. Portsmouth City Council to agree an overage agreement with the MOD as part of the transfer of the Tipner Firing Range and Horsea Island East. Portsmouth City Council will pay £3.75m to Government, which will recover the costs of re-providing the Tipner firing range. Portsmouth City Council to provide £47.2m in local investment (local authority funding, existing grant, local authority capital receipts, Community Infrastructure Levy and local business rates) to support the provision of enabling infrastructure and land remediation to make the Tipner-Horsea Island site ready for private sector investment. Secure £87.8m in developer contributions to support the provision of enabling infrastructure and land remediation to make the Tipner-Horsea Island site ready for private sector investment. Agreement by East Hampshire Council to expedite the planning application, subject to full compliance with planning policies and statutory requirements, for the re-provision of the Tipner firing range at the Longmoor Military Camp – should the Ministry of Defence decide to relocate the firing range at this location. Portsmouth City Council to upload all their land and property assets onto the ePIMS database, managed by the Government Property Unit.

Watermark West Quay

Central Government Commitments	Southampton and Portsmouth Commitments
Provision of up to £7m of RGF Round 4 funding in 2013/14 to support site enabling works for the Watermark West Quay site. Government commitment to expedite the conclusion of RGF due diligence for the Watermark West Quay site. Agreement to provide additional flexibility to the RGF award, allowing funding to be spent and claimed by March 2016.	£90m private sector led investment into Southampton to create a significantly enhanced leisure and culture offer for the city. £3m private sector contribution to the site enabling works. Southampton City Council to upload all their land and property assets onto the ePIMS database, managed by the Government Property Unit.

Developing a locally responsive skills system to drive economic growth

Central Government Commitments	Southampton and Portsmouth Commitments
Subject to final agreement from the Skills Funding Agency, flex rules on the use of the Innovation Code for programmes funded through the Solent Skills for Growth programme in the two year period 2014/15 and 2015/16 – focusing on point 15 within the "How to use the Innovation Code in 2013/14" (Version 1.0). Each programme flexibility will be agreed on a case-by-case basis before the end of 2013/14. £1.5m from BIS Adult Skills over two years to support the co-investment funding model underpinning the Solent Employer Ownership of Skills programme for advanced manufacturing (marine and aerospace), of which no more than 5% of this funding will be used for administration. £750k will be provided in 2014/15 and £750k in 2015/16.	Creation of a tripartite skills investment strategy that will identify critical skills needs of local employers and ensure provision of appropriate courses through a Solent Skills for Growth Fund. Create a £4m Solent Skills for Growth fund over a two year period (2014/15 academic year and 2015/16 academic year) funded through: • £1m Solent Local Enterprise Partnership European Union Structural Investment Fund • £1m ring fenced from within FE colleges Adult Skills budgets • £2m private sector contribution This fund will be managed by the Solent Local Enterprise Partnership Employment and Skills Board. The Solent Local Enterprise Partnership through their Employment and Skills Board will establish and manage a Solent wide Employer Ownership of Skills Programme that will: identify immediate skills needs in small and medium enterprises within the advanced manufacturing (marine and aerospace) sector; aggregate their skills needs up; and broker the provision of these skills with local providers. Provision of £1.5m of funding to over two years from local employer contributions in 2014/15 and 2015/16 to fund the Solent Employer Ownership of Skills programme as part of the co-investment funding model. This will fund provision that will tackle immediate/short term skills needs in the advanced manufacturing (marine and aerospace) sector.

Helping the Long Term and Young Unemployed into work

Central Government Commitments	Southampton and Portsmouth Commitments
Provision of £2.9m of funding to fund the Solent Jobs pilot. Department for Work and Pensions will work with Southampton City Council to support the commissioning of the Solent Jobs Pilot. £450K from the Youth Contract under spend and £250K from DWP Flexible Support Fund to align with local funding to create a Young Persons Fund, subject to approval of a full business case.	Southampton City Council, on behalf of the Solent Local Enterprise Partnership, will finalise the design of the Solent Jobs Pilot with Department for Work and Pensions and local partners. The council will also act as the programme management organisation for the pilot, overseeing its delivery and ensuring performance benchmarks are met. Southampton City Council will lead the commissioning of the Solent Jobs Pilot and Young Persons Fund, working with local partners and the Department for Work and Pensions. Provision of £2.9m from local funds to fund the delivery of the Solent Jobs pilot. Creation of a Young Persons Fund with £700,000 from local public sector and private sector funding.

Supporting unemployment challenges

Central Government Commitments	Southampton and Portsmouth Commitments
Government to commit up to £1m of extra funding, through its Rapid Response Service, to support those made redundant into new jobs.	Southampton and Portsmouth to pro-actively work with DWP to implement the Rapid Response Service.

Enterprise and Innovation

Central Government Commitments	Southampton and Portsmouth Commitments
Subject to a successful bid into the Wave 2 Business Growth programme, Southampton and Portsmouth will receive £3.1m of funding for a range of bespoke business and innovation schemes. Enhanced engagement with the Technology and Strategy Board, UKTI and Growth Accelerator to support better business support co-ordination across the market.	Creation of an enhanced business support co-ordination function for small and medium enterprises across the Solent. This co-ordination function will be lead by a collaboration of the Hampshire Chamber of Commerce, Hampshire Business Alliance, Solent Local Enterprise Partnership, Southampton City Council, Portsmouth City Council, Hampshire County Council, University of Portsmouth, University of Southampton and Southampton Solent University. Provision of tailored business support programmes for high growth businesses in targeted sectors (including marine). These include: • Growth and Skills Audits undertaken by University of Portsmouth Business School. • Enterprise vouchers (up to £20K per company). • Small and medium enterprise business growth grants of between £50K - £100K per company. Provision of £6.5m of private sector funding and £424K of local public sector funding to support delivery of the tailored business support programmes.

A3: Copy of email advance notice to Andrew Tully (Policy Lead) DEFRA Protected Areas Team, April 2023

From: Tully, Andrew <Andy.Tully@defra.gov.uk>
Sent: 18 April 2023 12:03
To: Lloyd-Davies, Nick <Nick.Lloyd-Davies@portsmouthcc.gov.uk>
Cc: Howard, Lucy <Lucy.Howard@portsmouthcc.gov.uk>; Maguire, Ian <Ian.Maguire@portsmouthcc.gov.uk>
Subject: RE: Tipner West IROPI statement of case

Hi Nick,

Thanks for clarifying.

Andy

Andy Tully | Policy Advisor | Protected Areas Team | Biodiversity Policy | Department for Environment, Food and Rural Affairs. Direct line: 02080 266 564 | Email: Andy.Tully@defra.gov.uk | Address: 2nd Floor, Horizon House, Deanery Road, Bristol, BS1 5AH.

From: Lloyd-Davies, Nick <Nick.Lloyd-Davies@portsmouthcc.gov.uk>
Sent: 18 April 2023 10:14
To: Tully, Andrew <Andy.Tully@defra.gov.uk>
Cc: Howard, Lucy <Lucy.Howard@portsmouthcc.gov.uk>; Maguire, Ian <Ian.Maguire@portsmouthcc.gov.uk>
Subject: RE: Tipner West IROPI statement of case

Hi Andrew
Thanks for this.
I wanted to clarify the nature of this submission. It will be pursuant to Reg 107 of the Regulations, purely seeking an early IROPI Opinion from DLUHC for the purposes of guiding the emerging Portsmouth Local Plan. For the avoidance of doubt, the HRA process for the Local Plan has only just commenced and this will be submitted with the draft Submission Local Plan for Reg 19 Consultation and Examination later this year. The submission of the Derogation Notice would only happen prior to proposed adoption of the Plan.

As far as I am aware, our Reg 107 submission is the first to be made in the UK since Brexit (where previously such requests were made to the EU Commission). What this Statement of Case does is provide an indication of the proposed 'case' for IROPI, along with supporting evidence and a summary of the likely direct/indirect impacts and the cases to be put forward for Alternative Solutions - but this is NOT the full HRA.

I will of course copy you in on the submission. Note that it will be supported by evidence explaining the potential cases to be made for the other Derogation steps. We are also consulting Natural England on it and their comments will follow in due course, but they have indicated that they are not likely to comment much at this stage, since the IROPI case will be a matter for the competent authority to make ultimately (which will need DLUCH SoS agreement via Derogation Notice at that

stage). They will be formally consulted on the formal Reg 19 submission of the Local Plan later this year.

Many thanks and I hope that makes sense!

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A4: Natural England Regulation 18 Consultation response (8th November 2021)

Date: 08 November 2021
Our ref: 368175

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Planning Policy team
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BY EMAIL ONLY

Dear Sir/Madam

Regulation 18 Portsmouth City Council Local Plan Public Consultation

Thank you for your consultation on the above dated 20 September 2021 which was received by Natural England on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Please see below for our specific comments on the 'Regulation 18' Consultation Document, Habitats Regulations Assessment (HRA) and Sustainability Appraisal.

REGULATION 18 CONSULTATION DOCUMENT

Portsmouth's Strategic Development Strategy

Draft Vision, Objectives and Key Themes

It is welcomed that the Local Plan sets out several Strategic Objectives including 'A healthy and happy city' that encourages access to green spaces, and 'A green city' that promotes protection and enhancement of biodiversity and outlines the intention to mitigate and adapt to the likely impacts of climate change. Four 'Key Themes' that underlie the whole Plan are identified that include Delivering Sustainable Development, Improving Air Quality, Enhancing Health and Wellbeing and Tackling Climate Change, recognising such issues cannot be addressed by a singular policy. These are welcomed and we agree a more encompassing, cross-policy approach is required to address these issues.

However we advise the Local Plan in its Vision is stronger in its particular acknowledgement of the climate and ecological emergencies currently underway and recognises the important role of the natural environment to deliver measures that reduce the effects of climate change and enable nature recovery. Alongside its housing delivery targets, the Plan should have a clear aim to significantly and demonstrably improve the natural environment to ensure housing and infrastructure needs are met sustainably. Please see further advice on these aspects below.

Economic Development and Regeneration

Policy E1: Economic Development and Regeneration

The Policy sets out various measures by which it will deliver 'clean' economic growth by

encouraging low and zero carbon design and technology, requiring the achievement of net gain for biodiversity and consideration of the green infrastructure (GI) network. It is advised that the Policy clearly sets out how the Policy will ensure that economic development and regeneration across the City will be sustainable, avoid adverse impacts on the natural environment and enhance the local nature recovery network.

***Policy E2: Employment Land* – OBJECTION to allocation of Tipner West (and Horsea Island)**

Natural England have serious concerns with the proposed redevelopment of Tipner West and Horsea Island that would require reclamation of approximately 28ha of internationally designated site Portsmouth Harbour Special Protection Area (SPA). The site is also designated as a Ramsar site and notified at a national level as the Portsmouth Harbour Site of Special Scientific Interest (SSSI). Please see below for more detailed comments under Policy S2 that relates to the proposal.

Community and Infrastructure

Policy C2: Open Spaces and Outdoor Recreation

Natural England welcomes new open space provision which is multifunctional. This may include areas which contribute to green infrastructure objectives, net gain ambitions, strategic mitigation and wider biodiversity benefits, including climate change adaptation. To better inform how multifunctional open space can be integrated into development, we recommend that examples or suggested options are provided.

Portsmouth's Environment

Policy G1: Biodiversity

Portsmouth's Ecological Network

Please note Figure 20 depicts International and National Nature Designations, however the legend or symbology is not clear. It is recommended the map is modified to clearly show the international and national designations in and around Portsmouth, including Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar sites and Sites of Special Scientific Interest (SSSI).

Designated sites

The Local Plan should set criteria based policies to ensure the protection of designated biodiversity and geological sites. Such policies should clearly distinguish between international, national and local sites[1]. Natural England advise that all relevant Sites of Special Scientific Interest (SSSIs), European sites (Special Areas of Conservation and Special Protect Areas) and Ramsar sites should be included on the proposals map for the area so they can be clearly identified in the context of proposed development allocations and policies for development. Table 5 should also be updated to reflect the hierarchy of designated sites. Designated sites should be protected and, where possible, enhanced.

The Local Plan is supported by a HRA, please see below for our specific comments on it. Natural England would welcome further discussion on the Habitats Regulations Assessment (HRA) of the plan and can offer further advice as policy options are progressed.

SPA supporting habitat – Solent Wader and Brent Goose Strategy

[1] International sites include: Special Protection Areas (SPAs); Special Areas of Conservation (SACs) and Ramsar sites . National sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) Local sites include wildlife Sites or geological sites (a variety of terms are in use for local sites).

Natural England strongly recommends that the Local Plan includes a stand-alone policy to ensure the protection of the network of SWBGS sites in the City. The Local Plan Habitats Regulations Assessment will need to appropriately address the impact of development allocations on the network of SWBGS sites. Please see further comments on this aspect in relation to the Local Plan HRA below. Note that comments in relation to impacts to SPA supporting habitat are also provided in our advice for individual allocation policies.

The Solent Wader and Brent Goose Strategy identifies a network of non-designated terrestrial wader and brent goose sites that support the Solent and Southampton Water SPA, Portsmouth Harbour SPA, and Chichester and Langstone Harbours SPA (commonly referred to as the 'Solent SPAs') and aims to protect it from land take and recreational pressure associated with new development. These sites can be referred to as 'SPA functionally linked land' or 'SPA supporting habitat'.

The terrestrial wader and brent goose sites are located on land that falls outside of the Solent SPAs boundaries. However, as this land is frequently used by SPA species (including qualifying features and assemblage species), it supports the functionality and integrity of the designated sites for these features. This land will contribute to the achievement of the SPAs' conservation objectives and is therefore protected in this context. This land supports the ecological network by providing alternative roosting and foraging sites.

A framework for guidance on mitigation and off-setting requirements (2018) has been prepared by the SWBGS Steering Group[2] to achieve the long-term protection of the wider brent goose and wader network of sites. The network extends across a number of local planning authority boundaries in Hampshire, the Isle of Wight and Sussex. This network is under pressure from the growth planned in this area and formal guidance was considered necessary to define an approach for the non-designated sites.

The non-designated sites are classified as Core Areas, Primary Support Areas, Secondary Support Areas, Low Use and Candidate Sites and a map of sites can be viewed here. Sites are classified based on certain criteria and the Strategy is regularly updated and reviewed.

Natural England welcome that the Policy refers to the Solent Waders and Brent Goose Strategy (2020) and that all proposals affecting the network will be assessed on a case by case basis under the Habitats Regulations. We recommend the Policy outlines that where impacts are identified or uncertainty remains, appropriate avoidance and/or mitigation measures should be secured in line with the Solent Waders and Brent Goose Strategy Guidance on Mitigation and Off-setting requirements, to be agreed with Natural England.

Any disputes on site classification should follow the guidance, as discussed below under HRA comments.

Disturbance from Construction

To avoid noise disturbance impacts on SPA birds at the SPA sites or at identified terrestrial SPA supporting habitat sites, Natural England advise percussive piling or works with heavy machinery (i.e. plant resulting in a noise level in excess of 69dbAmax – measured at the sensitive receptor) should be avoided during the bird overwintering period (i.e. October to March inclusive). Where disturbance may occur as a result of construction activities, an assessment of impacts must be undertaken and mitigation measures outlined.

Recreational disturbance

Natural England welcomes the commitment of Portsmouth City Council in supporting the Solent

[2] The Solent Waders and Brent Goose Strategy Steering Group includes representatives from the Hampshire and Isle of Wight Wildlife Trust, Natural England, RSPB, Hampshire County Ecologists and East Solent Coastal Partnership

Recreation Mitigation Strategy and the proposal to ensure conformity of this strategic mitigation solution with Local Plan policy.

We recommend that the Local Plan includes a stand-alone policy to counteract the likely significant effects of recreational disturbance, (either alone or in-combination) associated with residential development within a 5.6km zone of influence on the Solent SPAs (Solent & Southampton Water, Portsmouth Harbour Chichester and Langstone Harbours and Solent and Dorset Coast).

Biodiversity Opportunity Areas and Nature Recovery Networks

Natural England welcomes the recognition of the need to focus on 'opportunities around existing designations at Portsdown Hill, Portsmouth Harbour and Langstone Harbour and other green and/or open spaces within the city, with the aim of linking, expanding and/or restoring habitat corridors as part of wider recovery networks'.

Work is underway within Natural England and with partners on several of the key elements of the Environment Bill, including Nature Recovery Networks and Local Nature Recovery Strategies. It should be noted that the term Nature Recovery Network (NRN) is used to refer to a single, growing national network of improved joined-up, wildlife rich places which will benefit people and wildlife. Local Nature Recovery Strategies (LNRSs) will be the key mechanism for planning and mapping local delivery of the NRN. LNRSs will form a new system of spatial strategies for nature that will be mandated by the Environment Act. They will cover the whole of England and will be developed by Responsible Authorities (RAs) appointed by the Secretary of State, usually at a county scale. Each strategy will:

- Map the most valuable existing habitat for nature
- Map specific proposals for creating or improving habitat for nature and wider environment goals
- Agree priorities for nature's recovery

It is the government's intention that mandatory biodiversity net gain (see comments on BNG below) will provide a financial incentive for development to support the delivery of LNRSs through an uplift in the calculation of biodiversity units created at sites identified by the strategy. LNRSs have also been designed to help local planning authorities deliver existing policy on conserving and enhancing biodiversity and to reflect this in the land use plans for their area.

Five LNRS pilots across the country ran from August 2020 until May 2021. Please see this report that shares the main lessons and findings. This report will inform the development of the LNRS policy for the rollout of the strategies across England. According to the current timetable LNRSs should be rolled out in Spring 2022.

Given that national guidance on LNRSs and their relationship to strategic planning is still in development, it is recommended that Local Plan policy recognises and references its support to the delivery of the emerging NRN and LNRS covering the area.

Minimising Impacts on Biodiversity

Paragraph 5.1.14 states the Council's approach to biodiversity is to 'conserve existing habitats and to minimise impacts where possible'. It is our advice that the Local Plan should seek to protect and enhance the natural environment including the provision of biodiversity net gains, in line with the updated National Planning Policy Framework (NPPF, July 2021) paragraphs 8, 20, 174, 179 and 180. We would draw your attention in particular to paragraph 174 d) of the NPPF 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…' and paragraph 179 b) that sets out that Plans should 'promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity'. Please see further advice on biodiversity net gain below.

Biodiversity net gain

We welcome the requirement within Policy G1 for development to achieve a net gain for biodiversity. Biodiversity net gain is a key tool to help nature's recovery and is also fundamental to health and wellbeing as well as creating attractive and sustainable places to live and work in. We recommend that minimum requirement for biodiversity net gain provision is set.

We recommend a separate stand alone Policy for Biodiversity Net Gain is proposed with the Local Plan that reflects the approach to biodiversity net gain in the NPPF and in anticipation of mandatory net gain. It is recommended the local plan policy sets a minimum requirement for biodiversity net gain provision. Policy should also set out a requirement for the development and adoption of a Supplementary Planning Document (SPD) which can set out further detail relating to mandatory net gain, upon which the Council can build. Natural England will be happy to advise further to aid the development of such an SPD.

Policy should set out how biodiversity net gain will be delivered, monitored and managed and the priorities for habitat creation or enhancement in different parts of the plan area. The plan policy should set out the approach to onsite and offsite delivery. Natural England advises that on-site provision should be preferred as it helps to provide gains close to where a loss may have taken place. Off-site contributions may, however, be required due to limitations on-site or where this best meets wider biodiversity objectives set in the development plan. We therefore welcome the intention for the Council to prepare a shortlist of suitable biodiversity creation and/or enhancement projects to which off-site contributions could be made to help local development achieve biodiversity net gain.

The plan's approach to biodiversity net gain should be compliant with the mitigation hierarchy, as outlined in paragraph 175 of the NPPF. The policy should ensure that biodiversity net gain is not applied to irreplaceable habitats and should also make clear that any mitigation and/or compensation requirements for Habitats sites should be dealt with **separately** from biodiversity net gain provision.

Policies and decisions should first consider options to avoid adverse impacts on biodiversity from occurring. When avoidance is not possible, impacts should be mitigated and finally, if there is no alternative, compensation provided for any remaining impacts. Biodiversity net gain should be additional to any habitat creation required to mitigate or compensate for impacts. It is also important to note that net gains can be delivered even if there are no losses through development.

- Calculating net gain

Please note that Biodiversity Metric 3.0 has now been published. We recommend that the Policy is updated to refer to this and that this metric is used to measure gains and losses to biodiversity resulting from development, and implement development plan policies on biodiversity net gain.

Net gain calculations can be complex and open to a considerable degree of interpretation and wide margin of error that could potentially lead to biodiversity loss if not properly validated. Natural England therefore strongly advises that developers are required to agree their calculations with your Council through a suitably designed process or protocol.

Please note that paragraph 5.1.22 of the Regulation 18 document lists '…roosting or nesting provisions on buildings' as suggestions for achieving net gain. It is our advice that features such as bird and bat boxes, swift bricks, bee hotels etc should be classed as general biodiversity enhancements that should be included as part of a wider biodiversity enhancement and mitigation plan. Net gain specifically should derive strictly from habitat enhancement and creation, required as calculated using the metric.

- Monitoring of net gain

Your plan should include requirements to monitor biodiversity net gain. This should include

indicators to demonstrate the amount and type of gain provided through development. The indicators should be as specific as possible to help build an evidence base to take forward for future reviews of the plan, for example the total number and type of biodiversity units created, the number of developments achieving biodiversity net gains and a record of on-site and off-site contributions. LPAs should work with local partners, including the Local Environmental Record Centre and Wildlife Trusts, to share data and consider requirements for long term habitat monitoring. Monitoring requirements should be clear on what is expected from landowners who may be delivering biodiversity net gains on behalf of developers. This will be particularly important for strategic housing allocations and providing as much up front information on monitoring will help to streamline the project stage.

- Wider environmental gains

Your authority should consider the requirements of the NPPF (paragraphs 51, 73, 104 and 120) and seek opportunities for wider environmental net gain wherever possible. This can be achieved by considering how policies and proposed allocations can contribute to wider environment enhancement, help adapt to the impacts of climate change and/or take forward elements of existing green infrastructure, open space or biodiversity strategies. Opportunities for environmental gains, including nature based solutions to help adapt to climate change, might include:

- Identifying opportunities for new multi-functional green and blue infrastructure.
- Managing existing and new public spaces to be more wildlife friendly (e.g. by sowing wild flower strips) and climate resilient
- Planting trees, including street trees, characteristic to the local area to make a positive contribution to the local landscape.
- Improving access and links to existing greenspace, identifying improvements to the existing public right of way network or extending the network to create missing footpath or cycleway links.
- Restoring neglected environmental features (e.g. a hedgerow or stone wall or clearing away an eyesore)
- Designing a scheme to encourage wildlife, for example by ensuring lighting does not pollute areas of open space or existing habitats.

Any habitat creation and/or enhancement as a result of the above may also deliver a measurable biodiversity net gain.

Policy G2: Green Infrastructure

Natural England fully supports the inclusion of a stand-alone green infrastructure policy to achieve net gain in green infrastructure across the city and prevent any net loss from new development. We welcome the recognition of the various benefits of green infrastructure and open space in Portsmouth in terms of natural capital and ecological benefits as well as wider health, wellbeing, social and community benefits. We support the proposal to secure better access to high quality open space that is also designed to maximise opportunities for biodiversity enhancement, creating linkages and enhancing ecological networks and corridors, and connecting the green and blue open spaces.

Natural England welcomes the proposal to encourage innovative design of green infrastructure in the urban environment that might utilise additional opportunities, such as roof tops and walls of buildings in order to help deliver net gains in green infrastructure, enhance the ecological network and achieve biodiversity gain. At coastal locations, consideration could also be given to shingle roofs that may benefit waders, as well as supporting wider coastal habitats.

Natural England supports the proposal to link up green spaces by adopting the green corridor approach throughout the City that maximises multi-functional opportunities including ecological enhancements and benefits to the local population from a health and wellbeing perspective.

Natural England welcomes the proposal to adopt the ‘Urban Greening Factor’ Tool within Portsmouth as a mechanism to help address the current deficit in green infrastructure within the City

and to address the pressures from future development. We also support the local plan commitment to doubling the number of trees over the next 25 years within the City and the proposal of new green corridors to strengthen the existing GI network across the City. It is welcomed that the Policy will also require that development on, or adjacent to, these corridors protects and contributes towards the creation or enhancement of green infrastructure, for example by providing more trees, wildflower areas, sustainable drainage systems (SuDS), or features which support coastal habitats.

Natural England is currently leading national work on a Green Infrastructure Standards project, expected to launch in 2022. This will be a vital contribution to delivery of the 25 Year Environment Plan and can assist your authority in delivering your green infrastructure objectives. The framework for the Green Infrastructure Standards will set out principles of good green infrastructure, benchmarks, national mapping and guidance on how the standards can be used. We will be happy to continue to advise your authority as this work progresses.

New development located in easy walking distance from existing natural greenspace and publicly accessible nature reserves will benefit substantially by the presence of such facilities in the locality. However, through an increase in visitors, ongoing visitor management costs will inevitably increase. Where the management of such green infrastructure is not already secured, local plan policy should require development to make a financial contribution appropriate to the scale of the development to the managers of the reserve / greenspace to cover these additional costs. This is particularly important where the nature reserves, or nature parks, are run by charities that do not have secured income to cover the in perpetuity management costs associated with new housing development.

Policy G3: Water Quality (Nutrient Neutrality)

Natural England welcomes a policy that will require new development proposing a net increase in overnight accommodation to address in-combination effects on the Solent designated sites via eutrophication from nutrients in wastewater. Natural England is aware the Council is currently enabling development in the City to achieve nutrient neutrality via its Interim Nutrient Neutral Mitigation Strategy, which is due to end in 2024.

It is advised a nitrogen budget is calculated for the Local Plan that outlines the expected level of increased nitrogen that local plan development will deliver. To accompany the Local Plan nutrient budget, Natural England strongly recommend that the Local Plan includes a formalised nutrient management plan or similar strategy that clearly sets out the mitigation options to be employed, including those following the Interim approach, to demonstrate how nutrient neutrality across the entire Plan period will be achieved. Where informed by a nitrogen budget, development proposals requiring mitigation should be accompanied by an appropriate mitigation scheme, which will need to be secured as part of any permission.

Mitigation can come forward via several different options including on-site provision by larger development sites through green infrastructure/open space or by a local authority-led scheme for the smaller/windfall development or where any top-up is required from larger developments. Other wider strategic schemes approved by the local authority and Natural England may also be available. Where strategic schemes are relied upon it is advised that credits are secured/reserved to ensure that there is adequate supply available for the local plan growth. Bespoke solutions at Neighbourhood plan or development level can also come forward.

Please note that the term ‘nutrient’ or ‘nitrogen’ should be used when discussing eutrophication of the marine Solent designated sites (‘nitrates’ specifically is a component of total nitrogen).

Policy G5: Flood Risk and Drainage

Natural England supports well designed sustainable drainage schemes (SuDS). In addition to the management of the quantity of surface water, SuDS can significantly reduce a development’s impacts on surrounding water quality and above-ground SuDS features can contribute to Green Infrastructure, biodiversity net gain and natural capital provision(s). Where a development site drains or is hydrologically linked to a designated site, it is particularly important that SuDS are

appropriately designed to protect the water quality of the receiving waterbody and the designated site. We advise that policy ensures SuDS schemes are designed to maximise other environmental benefits wherever possible and where there could be impacts to designated sites, water quality is protected and management and monitoring is secured for the lifetime of the development.

Sustainable Design & Heritage

Policy D2: Sustainable Design and Construction

Health and Wellbeing

The wider health, wellbeing, social and community benefits of features such as green infrastructure and access to greenspace are indicated above (Policy G2). Natural England welcomes early consideration of how such features can be incorporated into plans and proposals to ensure development provides safe and healthy places which support local communities and the natural environment.

Climate Change Adaptation and the Risks of Overheating

Natural England welcomes the requirement for development to produce a Cooling Strategy that includes how green/blue infrastructure will be integrated to help adapt to the heating effects of climate change. Please see our more detailed comments under Policy D4 on how nature based solutions should be utilised in adapting to and mitigating climate change.

Water Resources and Water Quality

Natural England welcomes that the policy requires a water consumption for new dwellings of no more than 110 litres per person per day. Natural England recommends that the policy encourages the re-use of water in line with best practice, for example by developments incorporating grey water recycling systems and efficient appliances.

Policy D3: Pollution, Health and Amenity

Air Quality

It is advised that Policy D3 incorporates a requirement for impacts on the natural environment to be considered as well as human receptors.

We would expect the plan to address the impacts of air quality on the natural environment. In particular, it should address the traffic impacts associated with new development, particularly where this impacts on Habitats sites and SSSIs. The environmental assessment of the plan (SA and HRA) should consider any detrimental impacts on the natural environment, and suggest appropriate avoidance or mitigation measures where applicable.

Natural England advises that one of the main issues which should be considered in the plan and the SA/HRA are proposals which are likely to generate additional nitrogen emissions as a result of increased traffic generation, which can be damaging to the natural environment.

The effects on local roads in the vicinity of any proposed development on nearby designated nature conservation sites (including increased traffic, construction of new roads, and upgrading of existing roads), and the impacts on vulnerable sites from air quality effects on the wider road network in the area (a greater distance away from the development) can be assessed using traffic projections and the 200m distance criterion followed by local Air Quality modelling where required. We consider that the designated sites at risk from local impacts are those within 200m of a road with increased traffic, which feature habitats that are vulnerable to nitrogen deposition/acidification. APIS provides a searchable database and information on pollutants and their impacts on habitats and species.

Please see comments under the local plan HRA for further detailed comments on assessing air

quality impacts on Habitats sites under the Habitats Regulations.

Policy D4: Low Carbon and Carbon Neutral Development

Natural England welcome that the Council declared a Climate Emergency in 2019 and pledged to become a carbon neutral city by 2030. 'Tackling Climate Change' forms one of the Key Themes of the Local Plan. The policy outlines that all new development should be designed so that it can function within a net zero carbon emissions future.

Natural England supports the embedding of policy that will deliver measures to increase sustainability of development over the Plan period, including reduced consumption of energy. The Council also promotes the increased use of renewable energy sources across the City, including a requirement for major development to ensure at least 20% of energy requirements is met by the provision of on-site renewable energy.

We welcome the consideration to require all new development to be zero carbon through the local plan update, that includes the approach of collecting financial contributions from major development to offset residual carbon emissions elsewhere in the City to a 'Carbon Offset Fund', to provide offsetting 'through investment and delivery of carbon mitigation projects elsewhere within the city'.

It is strongly recommended that Local Plan policy recognises the role of the natural environment to deliver measures to reduce the effects of climate change, for example tree planting to moderate heat island effects. In addition, factors which may lead to exacerbate climate change (through more greenhouse gases) should be avoided (e.g. pollution, habitat fragmentation, loss of biodiversity) and the natural environment's resilience to change should be protected. Green Infrastructure and resilient ecological networks play an important role in aiding climate change adaptation.

Climate change is already impacting on nature and society in England. The projected scale and rate of climate change, coupled with existing environmental pressures, has serious implications for the natural environment and the services it provides to society. The faster that we can rapidly reduce greenhouse gas emissions, the more we can reduce the overall pressure on the natural environment. Positive management, guided by the best available evidence, can build resilience to the impacts of climate change. 'Nature-based solutions', are essential to achieve this. These involve the restoration of ecosystems for the long-term benefit of people and nature. Examples include:

- Expansion of tree and woodland cover - to strengthen woodland habitat networks, protect soils, provide shade whilst capturing additional carbon from the atmosphere.

- Restoration and creation of priority habitats such as lowland meadows, lowland fens and rush pastures. This improves places where people live and recreate, protecting carbon stores and strengthening the nature recovery network.

- Natural floodplain management, through the use of tree planting, habitat creation and restoration, to alleviate flooding further downstream.

- Retrofitting of green and blue infrastructure such as trees and sustainable urban drainage systems (SUDS) in urban localities to address flood risk and heat island effects

We therefore suggest 4 specific actions to include in the plan and/or policy:

1. Set an ambitious climate-specific targets within the Policy for reducing greenhouse gas emissions that can be monitored over the Plan period, in line with the national commitment to achieving the national statutory target of net zero emissions by 2050;

2. Identify opportunities to increase tree and woodland cover consistent with the UK target. Wherever possible, this should provide multi-functional benefits. Planting on open priority habitats must be avoided.

3. Identify areas where nature-based solutions can provide benefits to people whilst reducing climate change vulnerability in the natural environment.

4. Identify habitats and protected sites that are particularly vulnerable to the impacts of climate change and consider how the planning system can work to reduce these vulnerabilities.

We advise that these actions are integrated into a strategic approach alongside green infrastructure, health and wellbeing, biodiversity net gain, natural flood management, air and water quality to deliver multifunctional benefits to people and wildlife. The policy should make clear that development will be consistent with these policies, to ensure sustainable development is properly achieved across the plan period. Meaningful targets should be set that can be appropriately monitored over the Plan period to demonstrate the effectiveness of the plan and policy in addressing climate change and to ensure appropriate remedial action can be taken as necessary.

Natural England has published a range of resources to help with the recommended actions; please see links listed under Annex 1 of this letter. Natural England would be happy to advise further on this aspect of the Local Plan development.

Strategic Development Sites

Tipner (Policy S2)

Three options are described for the redevelopment of this area. It is understood Option 1 has currently been paused, however we provide our advice and comments on all options below.

- ***Option 1 Policy S2: Tipner*** – **OBJECTION**

Natural England have serious concerns with the proposed redevelopment of Tipner West and Horsea Island. Our objection relates, in principle, to the adverse effects on the integrity of Portsmouth Harbour SPA which would occur as a result of this development option. As indicated in section 7.22 of the HRA of the Local Plan, 'considerable uncertainty remains over the details of the land reclamation and any compensation measures required', and this supports our position. We recognise that the Council is currently working on the provision of additional information to meet the requirements of the derogation tests under the Habitats Regulations. We agree that until more specific details are available and it is demonstrated that the derogation tests are met, adverse effects on Habitats Sites cannot be excluded either alone or in-combination with other plans and projects. We acknowledge that the HRA will be revisited once additional information comes available, and we will continue to provide advice as appropriate to inform this scheme, the HRA and the development of your Local Plan. Detailed advice on the direct and indirect impacts associated with this option are provided below.

Option 1 proposes up to 4,200 new homes and a marine employment hub of approx. 59,000 sqm. A new bridge connecting Tipner West and Horsea Island is also proposed that will cross the harbour, which would facilitate a new Bus Rapid Transport system which would connect Tipner and the city centre with the wider travel to work area beyond the administrative area of the city.

Habitats sites

Option 1 will see extensive land reclamation directly from Portsmouth Harbour SPA. SPAs are Habitats sites as defined within the National Planning Policy Framework. Habitats sites are afforded protection under The Conservation of Habitat and Species Regulations 2017, as amended (the 'Habitats Regulations'). The site is also designated as a Ramsar site (afforded the same protection as a Habitats site by the NPPF) and notified at a national level as the Portsmouth Harbour Site of

Special Scientific Interest (SSSI).

The Option 1 proposals to regenerate and develop the Tipner West area will incur significant and permanent direct loss of habitat within the SPA and Ramsar sites. The proposals are complex and extensive and are also likely to impact the designated sites via various other pathways, alone and/or in combination with other relevant plans or projects. These include changes to hydrodynamics and coastal processes as a result of the development's extension into the marine environment that could lead to further loss of habitat; requirements for further coastal defences potentially giving rise to further habitat losses; impacts upon water quality (in particular additional nutrient loads from sewage) that could lead to impacts on birds' prey availability (e.g. through the profusion of algal mats overlying mudflats) and additional loss of habitat (e.g. smothering of saltmarsh habitat from algal mats); and an increase in disturbance pressure to overwintering birds from recreational activities in the Solent as a result of additional residents.

The proposed bridge may cause further loss of designated site associated with its footprint as well as impacts on the ecological function of this area of the SPA and the wider network of designated and supporting habitat associated with the SPA, e.g. via flight and sight line impacts from tall structures.

Option 1 will also involve the loss of functionally-linked habitat (also referred to as SPA supporting habitat) at the Tipner firing range. This area is classified as a 'Primary' site within the Solent Wader and Brent Goose Strategy for consistently supporting high numbers of brent geese. The Strategy forms a network of terrestrial sites across the Solent area that are functionally linked to the Solent SPAs by providing high tide roosts and foraging areas for SPA birds. Primary Support Areas are land that, when in suitable management, make an important contribution to the function of the Solent waders and brent goose ecological network. The preferred approach is for development to be located outside the network of sites. Natural England strongly recommends that any allocation of land on a Primary Support Area will need to be accompanied by an appropriate mitigation and offsetting strategy that has been agreed with Natural England, that is secured and deliverable with appropriate management.

The Policy option also outlines that Horsea Island Country Park is being developed and will be brought into use for residents of Tipner West and the wider surrounds, and up to 30,270sqm is allocated for marine employment. It should be noted the majority of Horsea Island is currently classified as 'Primary' and 'Core' sites within the Solent Wader and Brent Goose Strategy. The sites at Horsea Island support hundreds of brent geese and significant numbers of waders that use the sites as high tide roosts and foraging areas. Consideration of recreational disturbance impacts on these sites will be required with suitable mitigation outlined. We consider that with careful design and management, it may be possible to provide an offsetting site within Horsea Island and in the Port Solent area due to its close proximity to the Portsmouth Harbour SPA, with significant potential benefits for both wildlife and people. Natural England would be happy to advise further on this aspect in due course.

No information currently appears to support the Policy with regard to how direct and indirect impacts on functionally-linked habitat will be appropriately mitigated.

<u>Assessment under the Habitats Regulations</u>

Likely significant effect

The Local Plan is supported by a Habitats Regulations Assessment (HRA) that identifies the Policy would require the loss of approximately 28ha of Portsmouth Harbour SPA to land reclamation, and therefore likely significant effects cannot be excluded. The Policy is taken forward for consideration within an Appropriate Assessment under the Habitats Regulations.
Natural England is a statutory consultee on the Appropriate Assessment stage of the HRA process, and a competent authority should have regard for Natural England's advice.

Appropriate Assessment

Appropriate assessments cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned. Complete information is required to ensure that the plan or proposal will not affect the integrity of the international sites.

The Local Plan Appropriate Assessment identifies a wide range of potential impact pathways on Habitats sites as a result of the Policy proposal, and outlines that at least 166ha of Portsmouth Harbour SPA and Ramsar will be impacted, including 28ha of intertidal habitat, 3ha of subtidal habitat, 4ha of terrestrial habitat, 6ha of functionally-linked habitat at Tipner Range, and 125ha of habitat indirectly impacted by dredging (the latter described as potentially temporary effects). The Appropriate Assessment acknowledges that permanent direct loss of a Habitats site of this scale cannot be avoided or mitigated.

The Local Plan HRA makes the following conclusions and recommendations:

- Loss of Functionally Linked Habitat

The HRA recommends that 'Strategic Sites should avoid the loss of SPA / Ramsar bird supporting habitats, as the identification of replacement is likely to prove extremely difficult'. It suggests some wording for strategic policies (S1-S5) to include 'If the site is found to be functionally linked to European sites, mitigation and / or avoidance measures will be required, and the planning application will need to be supported by a bespoke Habitats Regulations Assessment to ensure that the development does not result in adverse effects on site integrity'. It goes on to conclude that 'provided that the above text is included in the Reg.19 PLP, it is concluded that the Plan would have no adverse effects on the site integrity of SPAs / Ramsars in the Solent'.

It is important to note the judgement relating to People Over Wind v Coillte Teoranta (C-323/17) outlines that a competent authority must take account of measures intended to avoid or reduce the harmful effects of a plan or project as part of the appropriate assessment. Only then can a conclusion be drawn as to whether the plan or project will have an adverse effect on the integrity of the site

It is Natural England's advice that, due to their identified importance within the network, Local Plan allocations affecting land on a Primary or Core Support Area within the SWBGS network will need to be accompanied by an appropriate mitigation and offsetting strategy that has been agreed with Natural England, that is secured and deliverable with appropriate management. Until such proposals can be agreed, we consider it is not currently possible for the Local Plan HRA to conclude no adverse effect on site integrity with respect to loss of SPA supporting habitat as a result of the Option 1 development.

- Direct Habitat Loss from the Portsmouth Harbour SPA / Ramsar

The HRA concludes that adverse effects on site integrity of the Portsmouth Harbour SPA and Ramsar site from direct habitat loss **cannot be excluded**, either alone or in-combination with other plans and projects.

Derogation tests

Where adverse effects on integrity of the designated site cannot be ruled out, a development can only proceed where it can be demonstrated that all 3 legal tests for a derogation under the Habitats Regulations have been passed. This involves confirmation that there are no feasible alternatives, **and** the proposal must be carried out for imperative reasons of overriding public interest. Before a competent authority can grant permission on the basis of a derogation under article 6(4), it must inform the appropriate authority, which is the relevant Secretary of State.

Where it is agreed that a potentially damaging plan or project can go ahead for imperative reasons of overriding public interest, Article 6(4) of the Habitats Directive and Regulation 68 of the Regulations require that all necessary compensation measures are taken to ensure the overall coherence of the UK national site network is protected.

The Local Plan Appropriate Assessment outlines that work is currently underway to assess the proposals against these tests that will inform the HRA of the Regulation 19 version of the Local Plan in 2022. This includes work on compensation proposals including compensatory habitat for waders and brent geese. No further assessment is available at this time. Natural England has provided advice to Portsmouth City Council on a previously proposed compensation package for the direct loss of SPA and Ramsar habitat, via our Discretionary Advice Service (DAS). Please refer to our letter dated 25 May 2018 for the most recent advice on this matter; which is provided without prejudice to any subsequent consideration by the competent authority under Article 6(4) of the Habitats Directive. At this time, our overarching advice on the derogation tests has been provided below.

- *Alternatives test*

The first of the derogation tests require the competent authority to objectively demonstrate the absence of feasible alternative solutions to achieve the objectives of a plan. From the information provided, the objectives include meeting housing need and creating a more balanced community with a better mix of homes, jobs and facilities. It is Natural England's view that the stringent alternatives test would be very difficult to pass in this case.

Natural England expects any alternatives assessment to consider options including, *inter alia*, 'do nothing', neighbouring authorities delivering any shortfall in housing need under Duty to Cooperate, higher densities and taller buildings, improving links with existing mixed use development in the city.

Consideration should also be given to alternative locations outside of the city that could deliver a similar development in a less environmentally damaging way.

Please note statutory nature conservation bodies should be asked to provide advice to developers, competent authorities, and appropriate authorities on the likely impacts of alternative solutions.

- *Imperative reasons of overriding public interest*

If it can be established that there are no feasible alternative solutions, the competent authority must be able to identify "imperative reasons of overriding public interest" (IROPI) that justify the plan or project despite the environmental damage it will cause. These reasons include human health, public safety, beneficial consequences of primary importance to the environment and those relating to social or economic benefit.

When identifying IROPI, a competent authority must consider whether all three elements of IROPI are met:

- Imperative: the plan or project is necessary (whether urgent or otherwise) for one or more of the reasons outlined above.
- Overriding: the interest served by the plan or project outweighs the harm to the integrity of the site as assessed in light of the weight to be given to the protection of such sites under the directive.
- Public Interest: a public good is delivered rather than a solely private interest.

This assessment should assess the necessity and urgency of the project. The greater the harm to the designated site, the greater the overriding interest needs to be to outweigh this harm. It is Natural England's view that the direct loss of 22 hectares of SPA habitat and other additional impacts would be a significant loss and the overriding interest must be sufficient to outweigh this harm.

- *Compensation package*

If the above tests are met, a compensation package will need to be agreed. The compensatory measures must be sufficient to offset the identified harm and secured before the damage occurs. All legal, technical and financial arrangements will need to be in place to ensure all measures can be successfully implemented in practice. If there is uncertainty or a time lag between harm to the site and the establishment of compensatory measures, a larger area of compensation may be needed.

Compensation proposals should be coupled with a monitoring and management strategy that would require the applicant to take action if the compensation is not successful. Consideration will also need to be given to any further indirect impacts on the SPA and Ramsar site that may arise from the development.

Nationally designated sites

Additionally, the Policy allocates land at Horsea Island for marine employment. Portsmouth Harbour SSSI includes a small area of terrestrial habitat extending along the southern side of Horsea Island, where chalk spoil dumped early in the 20th century supports a rich chalk grassland flora. The proposals have the potential to damage to this interest feature, for example via direct loss from construction works and potential recreational damage from workers and members of the public, including trampling and eutrophication from dog waste.

Locally designated sites

The proposals may also result in the loss of locally designated Site of Important for Nature Conservation (SINC) where the southern part of Horsea Island is included for development. The proposed Policy does not appear to consider impacts on locally designated sites and biodiversity in general.

Implications for Portsmouth Local Plan

Natural England consider Option 1 is contrary to the Habitats Regulations objective to protect Habitats Sites, due the extent and magnitude of the direct and indirect habitat losses as a result of the development. These losses would result in an adverse effect on the integrity of the Portsmouth Harbour SPA and Ramsar site.

We consider it will be difficult to provide the necessary justification that there are no feasible alternatives and there are imperative reasons of overriding public interest for the development to proceed.

Option 1 will also damage or destroy the interest features for which Portsmouth Harbour Site of Special Scientific Interest has been notified. Additionally it may also result in unmitigated loss of locally designated SINC habitat. It is considered the policy would not meet several requirements of the revised National Planning Policy Framework (July 2021), in particular the following paragraphs:

> *171. Plans should reduce risk from coastal change by avoiding inappropriate development in vulnerable areas and not exacerbating the impacts of physical changes to the coast…*
>
> *174. Planning policies and decisions should contribute to and enhance the natural and local environment by:*
>
> *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
>
> *b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
>
> *c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
>
> *d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

e) *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; …*

175. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

179. To protect and enhance biodiversity and geodiversity, plans should:

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

As you are aware, the Portsmouth Local Plan and its allocation sites must be both legally compliant and sound. The NPPF sets out four tests of soundness including:

a) Positively prepared – providing a strategy which, as a minimum, seeks to meet the area's objectively assessed needs[21]; and is informed by agreements with other authorities, so that unmet need from neighbouring areas is accommodated where it is practical to do so and is consistent with achieving sustainable development;

b) Justified – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence;

c) Effective – deliverable over the plan period, and based on effective joint working on cross-boundary strategic matters that have been dealt with rather than deferred, as evidenced by the statement of common ground; and

d) Consistent with national policy – enabling the delivery of sustainable development in accordance with the policies in this Framework and other statements of national planning policy, where relevant.

It is Natural England's view that it would be very difficult for the Local Plan to demonstrate it is **Positively prepared**, **Justified** and **Consistent with national policy** where Option 1 is taken forward for progression as a strategic policy.

Natural England objects to the Tipner West and Horsea Island Option 1 policy. We strongly recommend that Portsmouth City Council progresses alternative options to meet housing need that are less environmentally damaging and more sustainable.

- ***Option 2 Policy S2: Tipner and Option 3 Policy S2: Tipner***

Two further Options are put forward as alternatives to Option 1 in delivering strategic policy Tipner (Policy S2).

Option 2 proposes 800 homes and up to 25,000sqm of employment space on the existing site at Tipner West. It removes the proposal for any land reclamation from Portsmouth Harbour, development on Horsea Island, or bridge to Horsea Island (although it sets out that development must not prejudice any future provision of a bridge between Tipner and Horsea).

Option 3 removes allocation of development at Tipner West, proposing up to 700 dwellings at Tipner

East.

We consider both Options will still have likely significant effects, alone and/or in-combination with other relevant plans and/or projects, on Portsmouth Harbour SPA and Ramsar site via various impact pathways. These include (but are not limited to):

- Potential land take of designated site associated with flood defence works;
- Impacts on SPA functionally linked land (at Tipner West, Tipner East and Horsea Island) either through direct loss or increased recreational disturbance of SPA birds;
- Increased recreational pressure at the SPA coastline as a result of an increase in residential and other overnight accommodation in the area;
- Increased impacts on water quality from waste water and surface drainage;
- Construction impacts;
- Other associated direct and indirect impacts from infrastructure requirements to deliver the site such as marine employment.

The nature of the impacts will depend on the size, scale and design of the scheme. Please note that even small scale loss of habitat within a Habitats Site cannot be directly mitigated for; where adverse effects on the integrity of the site cannot be excluded, habitat creation and enhancement should be regarded as compensation (please refer to relevant case law Briels v Minister van Infrastructuur en Milieu (C-521/12)). The derogation tests of alternatives and imperative reasons of over-riding public interest would therefore need to be met to address these losses, as detailed above.

Please also note that Portsmouth Harbour is protected at a national level as a Site of Special Scientific Interest (SSSI). Detailed consideration will need to be given to whether the proposals will damage or destroy the interest features of the SSSI in line with the Wildlife and Countryside Act 1981 as amended.

Policy S5: St James' and Langstone Campus

This allocation includes two areas identified as supporting habitat for the Solent SPAs; P23B at the eastern end of the site is classified as a core area, and P25 towards the centre of the site (including the sports pitches) is classified as a secondary support area.

Policy S5 includes 'enhancement of open space provision and protection of the over-wintering Brent Geese and Waders feeding grounds.' However it is not clear if proposals for new development under this policy will result in any loss of core or secondary site. Natural England have several concerns regarding the direct and/or indirect impacts of development within this allocation on SPA supporting habitat.

Natural England advise that allocation policies that affect Core Areas, such as this site, identify mitigation and offsetting replacement habitat which is agreed with Natural England at the earliest possible stage. This is to ensure that the replacement habitat can offset any loss and that it can be delivered and secured with the required level of certainty for the Habitats Regulations. Without this level of information Natural England advise it is not possible for the Local Plan HRA to conclude no adverse effect on integrity of the designated site(s). We advise that this policy is accompanied by an appropriate mitigation and offsetting strategy that has been agreed with Natural England, that is secured and deliverable with appropriate management.

Policy S6: Lakeside North Harbour

This site includes an area of supporting habitat for the Solent SPAs, currently identified as a 'candidate' site Candidate sites have records of large numbers of waders or brent geese, but the large numbers have been recorded less than 3 times from 2006/2007 to present day. The Solent Waders and Brent Goose Strategy states that development proposals which are likely to affect candidate sites will need to undertake additional survey work, as per the agreed survey methodology, to confirm the site's classification prior to assessing off-setting and mitigation requirements. Depending on the existing records for the site, a minimum of one year survey, in

appropriate management conditions, will be necessary to confirm the classification of the site. For some sites, where there has only been one survey to date, two years' of data may be necessary. We advise that the requirement for consideration of impacts of developing this site on the network of SPA supporting habitat is assessed at the earliest possible stage, to inform the sustainable development of this site, including the requirement for mitigation.

Area Allocations

Policy S7: Portsmouth City Council Estate Renewal

The area of Paulsgrove, one of the areas included within this policy, lies directly adjacent to Portsdown SSSI, which is designated for chalk grassland and invertebrate assemblages. Development proposals in this area should include an assessment of any potential impacts to the SSSI, and where required, be accompanied by appropriate mitigation measures. Your authority may wish to include specific reference to the SSSI in policy wording for this area.

Policy S8: The Seafront

We welcome the clear requirements for the protection and enhancement of the natural environment included in this policy, including reference to the Seafront Masterplan SPD (March 2021) which provides some additional detail on construction and disturbance impacts. Thorough consideration of the impacts of development on designated sites and supporting networks including SPA supporting habitat will be required, together with the need for mitigation and/or compensation. However, Natural England recommends construction work (including any noisy activities in excess of 69 dB $L_{AF,max}$) should avoid the bird overwintering period which we advise covers October to March inclusive.

The identified Seafront Area includes numerous parcels identified as supporting habitat for the Solent SPAs. To support existing approaches outlined in the Masterplan, and to inform any development coming forward in this area outside of the Masterplan, we advise Policy S8 includes a clear reference to the potential for development in this area to impact SPA supporting habitat. Similarly, any impacts to adjacent Habitats Sites should also be robustly assessed, and appropriate mitigation or compensation strategies developed. Project-level HRA may be required.

Policy S10: Coastal Zone

Natural England suggest consideration is also given to the North Solent Shoreline Management Plan refresh and its associated sub-categories and the Southern Region Habitat Creation Programme.

Natural England suggests that the following bullet point in the summary table: "avoid adverse impacts upon marine and maritime related uses, infrastructure and activities; and" would benefit from the inclusion of the term coastal fringe. As an example: "avoid adverse impacts upon the coastal fringe, marine and maritime related uses, infrastructure and activities; and".

HABITATS REGULATIONS ASSESSMENT (AECOM, AUGUST 2021)

In this section we provide comments on the Local Plan HRA relating to aspects of the Plan other than Tipner West. Comments on the HRA in relation to Tipner West are contained in the previous section focussed on Policy S2.

We acknowledge that additional work to inform further iterations of the HRA will be provided as the preparation of the Plan progresses, including in relation to Tipner. At this stage we have provided initial comments on the HRA's findings, with advice on any additional information required to support subsequent versions of the HRA.

Atmospheric Pollution

The HRA screens Portsmouth Harbour SPA and Ramsar, the Chichester and Langstone Harbours SPA and Ramsar and the Solent Maritime SAC into an appropriate assessment on the basis of potential adverse impacts from air quality as a result of the local plan. The AA outlines that further air quality modelling work is being undertaken to support the Regulation 19 Local Plan and will be drawn upon in the accompanying HRA.

It is advised that assessment of impacts, alone and in combination with other plans and projects, should be carried out in line with Natural England guidance that provides a simple step by step approach to assessing road traffic emissions under the Habitats Regulations. All designated sites that may be impacted by the affected road network within a reasonable buffer zone should be screened in for consideration under the Local Plan appropriate assessment. Please note that the method for assessing in combination effects has changed in the past few years due to a number of high profile appeal decisions. They include the following: The Wealden Judgement; The People Over Wind Case; and CJEU Ruling In The Netherlands Nitrogen And Agriculture Cases C-293/17 and C-294/17. As such we would be looking for a more detailed in-combination assessment with other plans/projects in the area and with Local Plans.

- Ammonia (NH_3)

Ammonia, along with nitrous oxides (NO_x), can contribute to N-deposition in the soil and potential eutrophication of habitats. Whereas background levels of nitrous oxides have shown a steady decline over time due to reduced emissions from vehicles and other sources, levels of ammonia have remained relatively stable over the last 30 years.

The HRA outlines that the main source of ammonia emissions is agricultural practice and that material increases in NH_3 emissions are unlikely to be associated with the proposed local plan.

Ammonia can be emitted from vehicle exhaust emissions as a by-product of the catalytic conversion process designed to reduce emissions of nitrogen oxide. As traffic composition transitions toward more petrol and electric cars (i.e., fewer diesel cars on the road), catalytic converters may aid in reducing NOx emissions but result in increased ammonia emissions. Ammonia emissions from road traffic therefore could make a significant difference to nitrogen deposition close to roads.

Natural England therefore advise that ammonia sourced from traffic emissions should be included for assessment within the local plan HRA, as the impact from this source on designated sites is currently unclear. For further information please see this report from Air Quality Consultants (AQC) that looks at ammonia emissions from roads for assessing impacts on nitrogen-sensitive habitats. Whilst we are aware that the current CREAM model created by AQC used to assess ammonia emissions from road traffic has not been peer reviewed, at this time it has been recognised as a Best Available Tool and we deem it appropriate to be used where any caveats associated with this model are also considered within the assessment. An assessment based on the best available approach is necessary. The next stage of assessment can then consider uncertainties in the model and site specifics to decide if mitigation needs to be considered.

Natural England will be happy to advise further as the Plan progresses.

SPA supporting habitat

The HRA makes a recommendation that ‘Strategic Sites should avoid the loss of SPA / Ramsar bird supporting habitats, as the identification of replacement is likely to prove extremely difficult’.

The HRA concludes that adverse effects on integrity of the Portsmouth Harbour SPA and Ramsar site can be excluded provided the strategic policies are updated with extra wording to ensure impacts are properly addressed. The suggested wording reads as follows:

“***To meet the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended), the developer should provide evidence that the allocated site will not result in***

the loss of habitat that is functionally linked to Solent's SPAs / Ramsars. To demonstrate this, non-breeding bird surveys between October and March (typically two survey seasons) will be required to determine if the allocation itself or land adjacent to it, constitute an area of significant supporting habitat. If the site is found to be functionally linked to European sites, mitigation and / or avoidance measures will be required, and the planning application will need to be supported by a bespoke Habitats Regulations Assessment to ensure that the development does not result in adverse effects on site integrity."

Natural England strongly advise that where the classification of a SWBG network site is disputed, winter bird surveys are carried out over a minimum of three consecutive years with the site under appropriate management for SPA birds, in line with the SWBGS Guidance on Mitigation and Off-setting requirements (2018), following which a reclassification may be considered. It is advised the strategic policies and any other relevant policy within the Plan (e.g. Policy G1 or a stand alone SWBG Policy as recommended above) is updated to reflect this to ensure clarity to developers about the level of detail required to inform a project-level Appropriate Assessment. Further advice on considerations for impacts to SPA supporting habitat is provided in our comments above, under Policy G1.

Natural England advise that allocation policies that affect Core Areas and Primary Support Area identify mitigation and offsetting replacement habitat which is agreed with Natural England at an early stage as possible. This is to ensure that the replacement habitat can offset any loss and that it can be delivered and secured with the required level of certainty for the Habitats Regulations. You may wish to consider specific reference to these requirements in relevant allocation policies, in order to promote early consideration of issues and mitigation options. Without this level of information Natural England advise **it is not possible** for the Local Plan HRA to conclude no adverse effect on integrity of the designated site(s).

<u>Recreational pressure (in European sites and functionally linked habitat)</u>

We have recommended that a standalone policy is developed to address impacts on Solent SPAs from recreational disturbance. However, subject to compliance with the agreed SRMS, as currently indicated in Policy G1, we are content that the plan will not result in adverse effects on the integrity of Solent SPAs from recreational disturbance. It should be noted that in some cases (depending on the scale or relationship with the SPA), bespoke solutions may be required, and this is outlined in the SRMS.

<u>Visual and noise disturbance from construction</u>

It is acknowledged that construction activities can have impacts on SPA birds. We agree that avoidance of impacts through considered allocation, then site layout and design should be the first steps. Where this is not possible or impacts remain, we have provided advice on the consideration, assessment and mitigation of construction impacts under Policy G1, which align with the recommendations set out in the conclusions of the HRA. We advise that policy is clear on these requirements, noting that project level HRA may be necessary. No conclusion is provided in the HRA as to whether averse effects on the integrity of Habitats sites from construction disturbance can be ruled out. However, Natural England consider that the recommendations appear appropriate for this stage of the Plan's preparation.

<u>Water quality</u>

At this stage of the plan preparation process, the HRA concludes that adverse effects on the integrity of the Solent designated sites cannot be ruled out, as a plan-level nitrogen budget has not been provided, and mitigation solutions have not been finalised. We have advised that a nitrogen budget is calculated for the Local Plan that outlines the expected level of increased nitrogen that planned development will deliver, plus a formalised nutrient management strategy that sets out the mitigation options. Without such an approach, it is difficult to demonstrate how nutrient neutrality across the entire Plan period will be achieved. Provision of a detailed assessment of mitigation

options (and where they might come forward), informed by an approximate nutrient budget for planned development should allow the HRA to make a more evidenced conclusion in relation to nutrient neutrality.

Coastal squeeze

There are some inconsistencies with regard to how the impact of coastal squeeze on designated sites is assessed within the HRA; for example Sections 4 and 5 of the HRA do not consider impacts on the Solent Maritime SAC yet it is considered within the Appropriate Assessment.

The HRA concludes no adverse effect on integrity of European sites based on Policy S10 (Coastal Zone) requiring new/replacement coastal defence schemes to be in line with the Shoreline Management Plan and FCERM strategy. Natural England concur with this conclusion, however we advise that the various inconsistencies with the HRA as described are addressed appropriately.

Impact of Development on Flight lines and Sight Lines

The HRA indicates that given the strategic nature of the local plan, it is not possible to fully assess the impacts of development on flight lines and sight lines of SPA birds, and concludes that the plan will not result in adverse effects on the site integrity of Habitats sites in relation to these impacts. Natural England recognises that details of such impacts are limited at this stage, but this in itself cannot rule out adverse effects, and **Natural England therefore does not agree with this conclusion**. However, the HRA recommends additional text for inclusion in Policy G1 which recognises potential impacts to slight/sight lines, and will ensure that this impact pathway is considered early in development. Natural England supports this recommendation. The addition of this policy wording will help support the conclusion of no adverse effect on integrity, taking into account the strategic nature of the plan and how this is reflected in Local Plan HRAs.

General comments on the HRA

- Section 3: European Sites

Wording under 'Threats / Pressures to Site Integrity' for some of the individual European Sites refers to Portsmouth Harbour SPA. This needs to be corrected.

- Section 4: Background to Impact Pathways

There appears to be no consideration of recreational pressure on Solent Maritime SAC habitat. There appears to be a general lack of consideration on non-bird impacts in this section.

- Appendix A: Map of European Sites

The Solent and Dorset Coast SPA is missing.

SUSTAINABILITY APPRAISAL (AECOM, SEPTEMBER 2021)

Natural England consider that the Sustainability Appraisal (SA) is key to ensuring that a robust consideration of proposals and their alternatives is undertaken to confirm that the most sustainable development allocations are selected, considering all elements of sustainable development on an equal basis.

The SA in its conclusions identifies the SA objective 'SA-9: Conserving and enhancing the natural environment in Portsmouth' will have potential for negative effects of significance in relation to biodiversity and water quality. This is partly based on the SPA reclamation proposals under Policy S2 Option 1 at Tipner West.

SA Framework

Please see below our comments on the SA objectives, assessment criteria and indicators.

SA-4: To tackle climate change, flooding and coastal change in Portsmouth

Nature-based solutions, as discussed above, form a key component for mitigating and adapting to

the impacts of climate change, however there are no ecological indicators suggested under this climate change objective. The enhancement and expansion of the local nature recovery network will be key to help species adapt to the effects of climate change and is key to sustainable development. It would therefore seem appropriate to make reference to biodiversity within SA Objective 4, with an appropriate indicator(s) for monitoring. Natural England will be happy to advise further on this aspect.

SA-6: To promote healthy communities
The health benefits that interaction with the natural environment helps deliver are well documented and there is significant potential for these to be an integral component to help manage health inequalities across Portsmouth City. It would therefore seem appropriate for the decision making questions to ensure that impacts to the existing public rights of way network and accessible natural greenspace are considered as part of the SA and also detailed within the Indicators.

SA-9: Conserving and enhancing the natural environment in Portsmouth
The questions should be broadened to fully reflect the breadth of biodiversity resource across Portsmouth including designated sites, non-designated sites/habitats of conservation importance, protected and priority species and to reflect the requirement for BNG. It would also appear appropriate to consider habitat linkages and contribution to the green infrastructure policy within this Objective.

It is advised the second potential indicator under this objective is amended to read 'Condition of ~~SPAs~~ Habitats Sites and SSSIs in Portsmouth' to ensure impacts on SACs and Ramsar sites are also taken into account.

The Indicators should be amended to better reflect how the Plan will deliver sustainable development by avoiding impacts on biodiversity and securing net gain, in line with the 'avoid, mitigate, compensate' decision making hierarchy.

It may also be appropriate for the Indicators to reflect how the local plan will achieve the Council's Greening Strategy and its commitments climate change, water quality and air quality.

<u>Strategic Site Options - Tipner (BL1)</u>
The SA refers to the SA process in support of the Portsmouth Local Plan Issues and Options Consultation Report (August 2017) where 'alternatives were previously identified and assessed'. It should be noted that the 2017 SA report assessed the Strategic Development Site 'Tipner (Tipner West, Tipner East and Tipner Firing Range)' but the proposal did not include reclamation of SPA habitat.

Under the 'Establishing reasonable alternatives' section, the report outlines that 'it would be prudent to explore spatial strategy options where there is less reliance on the delivery of new homes at strategic sites during the plan period', including options that include 'no reclamation of land at Tipner'. Under the Appraisal of the Draft Plan section, paragraph 9.122 of the report refers to ongoing work by the Council and a consultancy in developing IROPI and No Alternatives cases for the Tipner proposals. On that basis it identifies potential significant negative effects and highlights the need for further work to ensure 'appropriate mitigation and compensation measures are in place at the next stage of plan making'.

Natural England reiterate that the Local Plan must ensure it meets the four tests of soundness set out within the NPPF, that includes the need for the Plan to be 'Justified' which requires reasonable alternatives to be taken into account. We advise that the Council explores alternatives to proposed S2 Option 1 Policy including with neighbouring areas through its Duty to Cooperate to meet unmet housing need outside of the borough boundary, and the SA updated accordingly. It is our view that it would be very difficult for Policy S2 Option 1 to pass the stringent alternatives test under the Habitats Regulations.

If you have any queries relating to the advice in this letter please contact me on 07787005505.

Yours faithfully

Becky Aziz
Senior Advisor Sustainable Development
Thames Solent Area Team
Natural England

Annex 1

Climate change – further resources

Please see below links to further resources that may be useful in developing local policy to address climate change within the local authority area.

- The Climate Change Adaptation Manual - provides extensive information on climate change adaptation for the natural environment. It considers the potential impacts of climate change on individual priority habitats and outlines possible adaptation responses. It includes the Landscape Scale Adaptation Assessment Method to assist those wanting to undertake a climate change vulnerability assessment for an area larger than an individual site or specific environmental feature, focussing on identifying vulnerabilities to climate change.

- The National Biodiversity Climate Change Vulnerability Model is a mapping tool that helps identify areas likely to be more vulnerable to the impacts of climate change.

- Carbon Storage and Sequestration by Habitat 2021 (NERR094) – a recently updated report that reviews and summarises the carbon storage and sequestration rates of different semi-natural habitats that can inform the design of nature-based solutions to achieve climate mitigation and adaptation.

- The Nature Networks Evidence Handbook – aims to help the designers of nature networks by identifying the principles of network design and describing the evidence that underpins the desirable features of nature networks. It builds on the Making Space for Nature report of Lawton et al. 2010), outlining some of the practical aspects of implementing a nature network plan, as well as describing the tools that are available to help in decision making.

- Natural England Climate Change webinars - a range of introductory climate change webinars available on YouTube.

- England Trees Action Plan 2021- 2024 – a plan to deliver a more joined up approach to land use management, recognising the value of woodland planting across the UK to meet net zero.

A5: PCC HRA Screening Decision for Tipner West/Horsea Island East site allocation (April 2023)

Habitat Regulation Assessment (HRA) Screening (Stage 1)

HRA drafting date:	Work in progress
HRA completion date:	Anticipated by end June 2023 to support Pre-Submission Local Plan. Final HRA to be completed on the adoption of the Local Plan in 2024-25
Plan reference:	Draft Regulation 19 Pre-Submission Local Plan 2040
Site Allocation:	Tipner West and Horsea Island East
Site Allocation proposals:	Comprehensive redevelopment of the site to provide no more than 1,250 homes, 58,000sqm of employment floorspace and associated infrastructure including a bridge between Tipner West and Horsea Island East
Lead Contact:	Lucy Howard: lucy.howard@portsmouthcc.gov.uk
Please note that all references in this assessment to the 'Habitats Regulations' refer to The Conservation of Habitats and Species Regulations 2017 (as amended).	

Stage 1 - details of the plan or project	
National Site Network designated site (or Ramsar site) potentially impacted by planning application, plan or project:	*Portsmouth Harbour Special Protection Area (SPA)/ Ramsar site* *Chichester and Langstone Harbours SPA/ Ramsar Site* *Solent and Isle of Wight Lagoons Special Area of Conservation (SAC)* *Solent Maritime SAC* *Solent and Southampton Water SPA* *Solent and Dorset Coast SPA*
Is the Plan directly connected with or necessary to the management of the site (if yes, Applicant should have provided details)?	In part, yes. The proposed site allocation is to provide the development plan framework necessary for the levering-in of developer investment in the site's re-development to assist in the delivery of the City Deal (2013) and in particular the urgent need for new sea defences and site decontamination. In a 'Do Nothing' scenario, the existing site defences are already beyond their theoretical lifespan and the site would be exposed to significant flooding events by reason of modelled sea level rise in the next few decades. Significant site contamination would be likely to leachate into the Portsmouth Harbour SPA and Ramsar sites harming the condition and integrity of these protected habitats.
Are there any other projects or plans that together with the Plan or planning application being assessed could affect the site?	Yes. All new housing developments within 5.6km of the Solent SPAs are considered to contribute towards an impact on site integrity as a result of increased recreational disturbance. Furthermore there is evidence that increased levels of nitrogen and phosphorus input

	into the water environment within the Solent from all new residential development is causing eutrophication at internationally designated sites. The PUSH Spatial Position Statement (https://www.push.gov.uk/work/planning-and-infrastructure/push-position-statement/) sets out the scale and distribution of housebuilding which is being planned for across South Hampshire up to 2034. The residential development site allocations within the emerging Portsmouth Local Plan 2040 will therefore, cumulatively, be expected to give rise to likely significant effects, as would the adjacent site allocation for residential-led mixed use development and expanded Park and Ride at Tipner East. The Portsmouth Plan 2040 will supercede the Portsmouth Plan adopted in 2012 and saved policies from the 2006 Local Plan. Other relevant plans and programmes are the Shoreline Management Plan (2011), which covers the whole Solent coastline and the North Portsea Coastal Scheme covers 8.4km of coastline from Tipner through to Milton with works taking place in five phases from 2015-2024.

Stage 2 - HRA screening assessment

Screening under Regulation 63(1)(a) of the Habitats Regulations

The proposed development of Tipner West & Horsea Island East is allocated in a draft strategic site allocation policy of the emerging Portsmouth Local Plan 2040 to include the following key elements:

i. Construction of sea defences to the Tipner West peninsula edge;
ii. Construction of a bridge between Tipner West and Horsea Island East, for sustainable transport modes only;
iii. Construction of a new working quayside to support a Marine Employment Hub of circa 58,000sqm and associated land thereto (including land at Horsea Island East);
iv. Minimum land reclamation where required to facilitate the above;
v. Enabling development, including site decontamination and land raising as required;
vi. Land for construction of no more than 1,250 homes, as necessary development subsidy, including public open space, incidental uses and site infrastructure to support a new community; and
vii. Retained, repaired (wherever possible) and re-purposed on-site Listed Buildings.

All of the above are individually, and in-combination, capable of giving rise to likely significant effects upon the following designated sites:

Habitat Designation	Primary Citation Habitats and Species
Portsmouth Harbour SPA[1]	Dark bellied brent goose, *Branta bernicla bernicla* Black-tailed godwit, *Limosa limosa islandica*

[1] https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9011051&SiteName=portsmouth&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&HasCA=1&NumMarineSeasonality=4&SiteNameDisplay=Portsmouth%20Harbour%20SPA#SiteInfo

	Dunlin, *Calidris alpina alpina* Red-breasted merganser, *Mergus serrtor*
Portsmouth Harbour Ramsar[2]	Ramsar criterion 3 - The intertidal mudflat areas possess extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei* which support the grazing dark-bellied brent geese populations. The mud-snail *Hydrobia ulvae* is found at extremely high densities, which helps to support the wading bird interest of the site. Common cord-grass *Spartina anglica* dominates large areas of the saltmarsh and there are also extensive areas of green algae *Enteromorpha* spp. and sea lettuce *Ulva lactuca*. More locally the saltmarsh is dominated by sea purslane *Halimione portulacoides* which gradates to more varied communities at the higher shore levels. The site also includes a number of saline lagoons hosting nationally important species. Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation); Species with peak counts in winter: - Dark-bellied brent goose, 2105 individuals, representing an average of 2.1% of the GB population (5-year peak mean 1998/9-2002/3).
Solent and Dorset Coast SPA[3]	Sandwich tern (Breeding) Common tern (Breeding) Little tern (Breeding)
Chichester and Langstone Harbour SPA	A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding) A048 *Tadorna tadorna*; Common shelduck (Non-breeding) A050 *Anas penelope*; Eurasian wigeon (Non-breeding) A052 *Anas crecca*; Eurasian teal (Non-breeding) A054 *Anas acuta*; Northern pintail (Non-breeding) A056 *Anas clypeata*; Northern shoveler (Non-breeding) A069 *Mergus serrator*; Red-breasted merganser (Non-breeding) A137 *Charadrius hiaticula*; Ringed plover (Non-breeding) A141 *Pluvialis squatarola*; Grey plover (Non-breeding) A144 *Calidris alba*; Sanderling (Non-breeding) A149 *Calidris alpina alpina*; Dunlin (Non-breeding)

[2] https://rsis.ramsar.org/ris/720

[3] http://publications.naturalengland.org.uk/publication/5294923917033472

	A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding) A160 *Numenius arquata*; Eurasian curlew (Non-breeding) A162 *Tringa totanus*; Common redshank (Non-breeding) A169 *Arenaria interpres*; Ruddy turnstone (Non-breeding) A191 *Sterna sandvicensis*; Sandwich tern (Breeding) A193 *Sterna hirundo*; Common tern (Breeding) A195 *Sterna albifrons*; Little tern (Breeding)
Chichester and Langstone Harbour Ramsar	The site comprises two large, interconnected sheltered estuarine basins providing extensive intertidal mud and sand flats with eelgrass *Zostera* spp. beds, large areas of mixed saltmarsh and extensive cord-grass *Spartina* spp. swards in an advanced state of degeneration. Fringing habitats include shingle spits, saline, brackish and freshwater lagoons, coastal grazing marsh and deciduous woodland. The site supports important overwintering populations of migratory waterfowl.
Solent and Isle of Wight Lagoons Special Area of Conservation (SAC)	**1150 Coastal lagoons * Priority feature** The Solent on the south coast of England encompasses a series of **Coastal lagoons**, including percolation, isolated and sluiced lagoons. The site includes a number of lagoons in the marshes in the Keyhaven – Pennington area, at Farlington Marshes in Chichester Harbour, behind the sea-wall at Bembridge Harbour and at Gilkicker, near Gosport. The lagoons show a range of salinities and substrates, ranging from soft mud to muddy sand with a high proportion of shingle, which support a diverse fauna including large populations of three notable species: the nationally rare foxtail stonewort *Lamprothamnium papulosum*, the nationally scarce lagoon sand shrimp *Gammarus insensibilis*, and the nationally scarce starlet sea anemone *Nematostella vectensis*. The lagoons in Keyhaven – Pennington Marshes are part of a network of ditches and ponds within the saltmarsh behind a sea-wall. Farlington Marshes is an isolated lagoon in marsh pasture that, although separated from the sea by a sea-wall, receives sea water during spring tides. The lagoon holds a well-developed low-medium salinity insect-dominated fauna. Gilkicker Lagoon is a sluiced lagoon with marked seasonal salinity fluctuation and supports a high species diversity. The lagoons at Bembridge Harbour have formed in a depression behind the sea-wall and sea water enters by percolation. Species diversity in these lagoons is high and the fauna includes very high densities of *N. vectensis*.

Solent Maritime SAC	**1130 Estuaries** The Solent encompasses a major estuarine system on the south coast of England with four coastal plain **estuaries** (Yar, Medina, King's Quay Shore, Hamble) and four bar-built **estuaries** (Newtown Harbour, Beaulieu, Langstone Harbour, Chichester Harbour). The site is the only one in the series to contain more than one physiographic sub-type of estuary and is the only cluster site. The Solent and its inlets are unique in Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area. Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting eelgrass *Zostera* spp. and green algae, sand and shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity in the upper reaches of the estuaries to very sheltered almost fully marine muds in Chichester and Langstone Harbours. Unusual features include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of the polychaete *Sabellaria spinulosa* on the steep eastern side of the entrance to Chichester Harbour. **1320 Spartina swards (Spartinion maritimae)** Solent Maritime is the only site for smooth cord-grass *Spartina alterniflora* in the UK and is one of only two sites where significant amounts of small cord-grass *S. maritima* are found. It is also one of the few remaining sites for Townsend's cord-grass *S.* x *townsendii* and holds extensive areas of common cord-grass *Spartina anglica*, all four taxa thus occurring here in close proximity. It has additional historical and scientific interest as the site where *S. alterniflora* was first recorded in the UK (1829) and where *S.* x *townsendii* and, later, *S. anglica* first occurred. **1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)** The Solent contains the second-largest aggregation of **Atlantic salt meadows** in south and south-west England. Solent Maritime is a composite site composed of a large number of separate areas of saltmarsh. In contrast to the Severn estuary, the salt meadows at this site are notable as being representative of the ungrazed type and support a different range of communities dominated by sea-purslane *Atriplex portulacoides*, common sea-lavender *Limonium vulgare* and thrift *Armeria maritima*. As a whole the site is less truncated by man-made features than other parts of the south

	coast and shows rare and unusual transitions to freshwater reedswamp and alluvial woodland as well as coastal grassland. Typical **Atlantic salt meadow** is still widespread in this site, despite a long history of colonisation by cord-grass *Spartina* spp.
Solent and Southampton Water SPA	A046a Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding) A052 Anas crecca; Eurasian teal (Non-breeding) A137 Charadrius hiaticula; Ringed plover (Non-breeding) A156 Limosa limosa islandica; Black-tailed godwit (Non-breeding) A176 Larus melanocephalus; Mediterranean gull (Breeding) A191 Sterna sandvicensis; Sandwich tern (Breeding) A192 Sterna dougallii; Roseate tern (Breeding) A193 Sterna hirundo; Common tern (Breeding) A195 Sterna albifrons; Little tern (Breeding) Waterbird assemblage

Such likely significant effects may comprise, including in-combination effects and cumulatively with other Plans and projects:

Direct effects through:

- Development on the existing land mass;
- Limited reclamation of harbour habitat, for enabling works;
- Loss of intertidal habitat through dredging, to provide improved subtidal channel;
- Loss of intertidal and subtidal habitat for bridge/causeway construction and associated culverting, if required;
- Disturbance of roost sites adjacent to areas of direct impact (to be regarded as direct loss); and
- Loss of functional supporting habitat on the former firing range.

Indirect effects through:

- Existing subtidal habitat to be dredged for the access channel to the marine hub;
- Re-profiling of the channel edges as required, with associated temporary disturbance;
- Habitat Impacts related to sediment transport by reason of bridge structures;
- Reduction in function condition from construction and operational disturbance;
- Post-development impacts associated with the increased proximity and intensification of new development adjacent to the designated sites; and
- Hard defences affecting coastal processes, restricting natural evolution of the estuary function and ability of habitats to adapt naturally to sea level rise.

Furthermore, the proposed development allocation is within 5.6km of the Solent SPAs. In accordance with advice from Natural England and as detailed in the *Solent Recreation Mitigation Strategy (2017)* and *Portsmouth Local Plan Core Strategy (2012) Policy PCS13: A Greener Portsmouth*, a net increase in housing development within 5.6km of the Solent SPAs is likely to result in impacts to the integrity of those sites through a consequent increase in recreational disturbance.

Development within the 5.6km zone will increase the human population at the coast and thus increase the level of recreation and disturbance of bird species. The impacts of recreational disturbance (both at the site-scale and in combination with other development in the Solent area) are analogous to impacts from direct habitat loss as recreation can cause important habitat to be unavailable for use (the habitat is functionally lost, either permanently or for a defined period). Birds can be displaced by human recreational activities (terrestrial and water-based) and use valuable resources in finding suitable areas in which to rest and feed undisturbed. Ultimately, the impacts of recreational disturbance can be such that they affect the status and distribution of key bird species and therefore act against the stated conservation objectives of the designated sites.

Natural England has also provided further guidance advising that it is likely that increased residential development may be resulting in higher levels of nitrogen and phosphorus input to the water environment in the Solent with evidence that these nutrients are causing eutrophication at internationally designated sites.

Would the proposal lead to a likely significant effect on National Site Network site integrity? Yes

The draft Local Plan will be subject to full HRA and this work is already underway. It will form a component of the Regulation 19 Consultation later this year and in particular subject to consultation with Natural England, before anticipated submission of the draft Local Plan for independent examination in early 2024.

If 'Yes' the Plan should progress to Stage 2 of the Habitat Regulations Assessment, being the Appropriate Assessment stage.

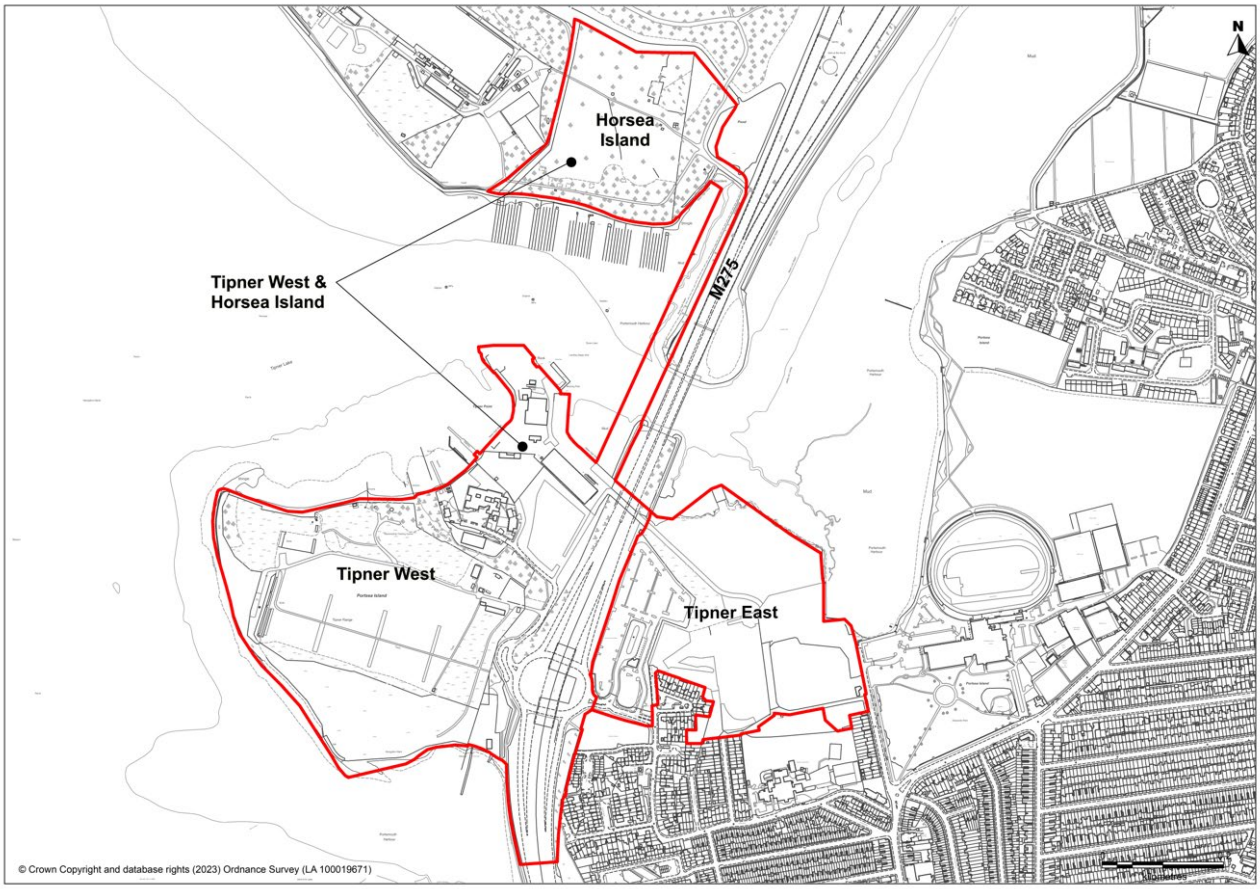
Signed:

Ian Maguire
Assistant Director of Planning and Economic Growth, PCC Regeneration

Date: 20/04/2023

On behalf of: **Councillor Lee Hunt, Portfolio Holder for Planning Policy and City Development**

Fig 1. Draft Tipner West and Horsea Island East Development Allocation Site



A6: Environment Bank SPA Metric Process to Determine Required Compensation (for Lennox Point project, Aug 2021)

the Environment Bank

BRIEF ON SPA METRIC PROCESS TO DETERMINE REQUIRED COMPENSATION

FOR LENNOX POINT

Report Ref: EB03130-B1

19 August 2021

Project reference	EB03130
Project site	Lennox Point (Tipner)
Client	Portsmouth City Council; Agent Savills
Report title	Brief on SPA Metric Process to Determine Required Compensation
Report reference	EB03130-B1
Report version	04
Report author(s)	Louise Martland
Approved by	Abby Thomas
Final draft date	19 August 2021

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement. Where information is provided by others, EBL shall bear no liability in respect of any advice given on the basis of that information. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations (date, work, interpretation of that data or work) completely defined the degree or extent of e.g., species abundances, habitat management efficacy, conservation credit calculations and hence credit requirements, described in the report. Nor does EBL accept any liability for any decisions made by the CLIENT on the basis of the information, consultancy or advice provided by EBL.

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BRIEF ON SPA METRIC PROCESS TO DETERMINE REQUIRED COMPENSATION

FOR LENNOX POINT

1 INTRODUCTION

In 2017 Environment Bank were engaged by Savills on behalf of Portsmouth City Council to provide advice on a mitigation and compensation approach for the anticipated impacts to the Portsmouth Harbour Special Protection Area (SPA) of the proposed Lennox Point development (then called Tipner). Note; the harbour is also covered by additional SSSI and RAMSAR designations. In the event that the project passes the HRA tests, the work would be used to identify the extent, nature and location of the compensation measures needed.

As opposed to traditionally used hectare 'ratios' to determine compensation requirements (e.g., compensate for direct impacts at a 2:1 scale), it was proposed to modify the Defra biodiversity metric to provide a framework for assessment of impacts to the SPA and the bird populations for which it is designated. In turn, this will facilitate a more granular approach to compensation design.

Through 2017 and 2018 an approach was developed and utilised on iterations of development design; during this time there were various meetings and consultation sessions with Natural England (NE) and Environment Agency (EA) to keep them informed and secure their preliminary agreement to this approach. To date, NE and EA have outlined their agreement in principle to the approach, with final approval to be sought upon the final confirmation of the SPA metric methodology set out in this paper.

The SPA metric is modified from the original DEFRA metric released in 2012. Subsequent revisions of the metric have been released, the most recent of which, the biodiversity metric 3.0, on the 7th July 2021. As a result, the SPA metric is being cross referenced with the metric updates to ensure the best approach is adopted.

2 DEFRA BIODIVERSITY METRIC OVERVIEW

The Defra biodiversity metric, originally published in 2012, is a tool that has been developed to allow quantification of the broad biodiversity value of habitats; it does not assess value for species. It can be used to assess current biodiversity value (baseline), direct habitat impacts (losses) and biodiversity enhancement through habitat creation or restoration (gains) covering all on-site landscaping and any offsite provision, providing a net biodiversity impact score in a land change scenario.

The metric works by providing a comparative measure of each habitat on-site in 'biodiversity units' by multiplying its area (hectares), distinctiveness score (based on general habitat type, richness and rarity) and current condition score (an assessment of each habitat at that particular site). See Table 1.

Biodiversity units = area x habitat distinctiveness x habitat condition

Table 1. Illustration of baseline biodiversity scoring

		Biodiversity distinctiveness		
		Low	Medium	High
Condition	Poor	2	4	6
	Moderate	4	8	12
	Good	6	12	18

During habitat creation or restoration, the metric incorporates risk factors. These factors are associated with the delay between the loss of the baseline habitat and the proposed habitats achieving their assigned target condition and habitat type (time to target risk factor), in addition to the inherent difficulties associated with habitat creation and restoration (difficulty risk factor). These risk factors reduce the gain in biodiversity value calculated for higher risk habitats.

Draft changes to an updated biodiversity metric[1] (biodiversity metric 2.0), released in July 2019, introduced a connectivity factor and a strategic location factor to the metric. These changes were included in the beta test release at the time of the last SPA metric assessment.

[1] http://publications.naturalengland.org.uk/publication/5850908674228224

A final metric version (biodiversity metric v3.0[2]) has since been released (7th July 2021). This metric version excludes the connectivity factor incorporated within the 2.0 beta release but retains the strategic location factor. In addition, the ability to modify the time to target risk multiplier has been incorporated. This allows the metric assessor to account, where necessary, for the early initiation of any proposed compensation works (reducing the overall biodiversity unit requirement), or account for any delays in compensation works initiation (increasing the biodiversity unit requirement).

3 SPA Metric Methodology for Development Impact

The SPA assessment developed for this project follows a metric of similar format to the Defra biodiversity metric but assesses the impact of the habitat loss to the birds utilising the area, as opposed to the general biodiversity value of those habitats. As a result, the SPA metric assessment is distinct from a biodiversity metric assessment, which will be undertaken independently.

It is acknowledged that the SPA is of statutory designation status as a result of its biological importance. However, whereas the biodiversity metric would assess the site as uniform high distinctiveness and good condition, here we look to ascertain which areas of the site are of particularly high value (e.g., roosting areas) or low value (e.g., terrestrial area with no roosting opportunities) to the birds, to allow a more fine-tuned assessment of impact and compensation requirements.

The resulting SPA metric units will not be comparable to biodiversity metric units but will allow assessment of compensation requirements when evaluating losses and gains quantified using the same methodology.

The following provides a break-down of the approach used. Note: this process was developed prior to the introduction of the biodiversity metric 3.0. As appropriate, the SPA metric methodology will be reviewed in light of the updated biodiversity metric release.

3.1 Target Species and Habitats

Following a review of the Portsmouth Harbour SPA, Site of Special Scientific Interest (SSSI) and Ramsar designations the assessment will focus on habitat important for use by the respective citation species:

- Dark-bellied brent goose, *Branta bernicla bernicla*
- Black-tailed godwit, *Limosa limosa islandica*
- Dunlin, *Calidris alpina*

[2] http://publications.naturalengland.org.uk/publication/6049804846366720

- Grey plover, *Pluvialis squatarola*
- Red-breasted merganser, *Mergus serrator*

The SPA metric assessment will include assessment of all intertidal and subtidal areas within the SPA and within the zone of influence of the development (the ZOI maybe subject to change to align with the determination of the HRA). It will also look at intertidal and terrestrial areas outside of the SPA where these habitats are of supporting functional use by the target bird species. All other terrestrial habitats, considered to have zero value for the SPA designated bird species, will be accounted for within the independent biodiversity metric analysis for the development footprint and final masterplan.

3.2 SPA Function Value of Habitats

The metric seeks to attribute an SPA function value (value to the cited birds) to each habitat within the assessment area. Habitat function is assessed in relation to the recorded use by target species of different habitat types and was determined through the interrogation of WSP bird survey data (location and abundance) against habitats.

High function habitats were shown during survey work to be key provisioning habitats for target species; habitat with evidence of more limited use were assessed as medium; habitat with no recorded usage by any species were recorded as low function.

Table 2 shows how SPA function scores are assigned to different habitats.

Table 2. SPA function classification

SPA function score	Definition
Very High	Areas important as roost sites for bird(s)*
High	Habitats of significant usage by bird(s)**, within or adjacent to the SPA
Medium	Habitats of significant usage by bird(s), but outside of designation***
Medium	Habitats of regular usage, but not significant use to bird(s), within or adjacent to the SPA
Low	Habitats of no usage by bird(s), within the SPA (site fabric).

*all references to birds, means that the habitat has been identified as important for 1 or more of the bird species identified in section 3.1.
** Analysis of bird use of each habitat was assessed by species, assessing maximum count, average count and total count, by habitat and by habitat hectare.
*** Supporting habitat, e.g., amenity grassland in close proximity to the SPA and used by Brent Goose.

Table 3 and 4 below outline the SPA function assigned to each habitat type assessed within the February 2020 assessment, including the bird species for which the habitat was identified as important. Intertidal and subtidal habitats with no recorded usage by the species were recorded as low function and were typically SPA fabric (Table 3). The habitats assessed within Table 4 were identified to be predominantly outside of the SPA, excluding a few small areas of phase 1 habitat mapping provided, which fell within the SPA but were not identified within the EUNIS data.

Table 3. EUNIS habitats and SPA habitat function values

EUNIS code	EUNIS description	SPA function factor	Habitat of high importance to which bird(s)
A1.3142	[Ascophyllum nodosum] on full salinity mid eulittoral mixed substrata	High	Brent goose, Dunlin, Grey plover
A2.245	[Lanice conchilega] in littoral sand	High	Brent goose, Grey plover
A2.3	Littoral mud	High	Red-breasted merganser
A2.321	[Nephtys hombergii] and [Streblospio shrubsolii] in littoral mud	High	Black-tailed godwit, Red-breasted merganser
A2.3223	[Hediste diversicolor] and oligochaetes in littoral mud	High	Brent goose, Black-tailed godwit, Grey plover
A2.421	Cirratulids and [Cerastoderma edule] in littoral mixed sediment	High	Brent goose, Black-tailed godwit, Dunlin, Red-breasted merganser
C1	Surface standing waters	High	Red-breasted merganser
A1.153	[Fucus serratus] with sponges, ascidians and red seaweeds on tide-swept lower eulittoral mixed substrate	Medium	
A2.11	Shingle (pebble) and gravel shores	Medium	
A5	Sublittoral sediment	Medium	
B1.4	Coastal stable dune grassland (grey dunes)	Low	
G5.62	Mixed scrub woodland	Low	

Table 4. Supporting habitat function values

Phase 1 code	Phase 1 habitat description	SPA function factor	Habitat of high importance to which bird(s)
H1.1	Intertidal mud/sand	High*	Black-tailed godwit
H1.2	Intertidal shingles/cobbles	High	
H1.3	Intertidal boulders/rocks	Medium*	
B2.2	Semi-improved neutral grassland – Tipner Range	Medium	
B6	Species-poor semi-improved grassland – Tipner Range	High	Brent goose
J1.2	Amenity grassland – at east of Tipner lake	Medium	Brent goose

*Small areas have a lower function value where reduced suitability is known. E.g., northeast corner of Tipner island at boat yards.

Figure 2 in section 8 shows a plan of SPA function classification across the site.

3.3 Baseline Condition of Habitats

Due to the site designation as an SPA, in addition to the lack of more detailed information confirming the presence or absence of undesirable features that would restrict habitat condition, all habitats were assigned a precautionary good condition as requested by NE.

3.4 Direct and Indirect Habitat Impacts

Habitat impacts across the assessment area are assessed in numerous ways:

- Direct loss of habitat – through:
    - Development on land.
    - Reclamation of harbour habitats for development.
    - Loss of intertidal habitat – i.e., the dredging of intertidal habitats to form a subtidal channel.
        - This provides corresponding creation of sub-tidal habitats.
    - Disturbance of roost sites adjacent to areas with direct impact will be considered as direct loss.
- Indirect impacts:
    - Existing subtidal habitat to be dredged for the access channel.
        - Assessed as 1 step reduction of condition from good to moderate.
    - Intertidal areas along the edge of the access channel to be reprofiled but remain intertidal following temporary disturbance.
        - Assessed as 1 step reduction of condition from good to moderate.
    - Permanent reduction in function condition of the SPA from disturbance from construction and occupied development.
        - A 250m buffer around the development, into the harbour, has been applied to assess a potential impact by disturbance. This buffer has been informed through a literature search of disturbance effects on waterbirds both in relation to construction and operation. The literature search included research of waterbird species included in the SPA citation. 50% of each disturbed habitat area will be assessed for a reduction from good to moderate condition. This is deemed an appropriate approach given that disturbance will not be constant over this area.
    - Disturbance of Tipner Lake and adjacent playing field.
        - In addition to the 250m buffer, it is assumed that Tipner lake and the adjacent playing field may also be subject to increased disturbance and a reduction in condition to moderate as per the above is included.

See Figure 3 in section 8 for areas of assessed impact.

3.5 In Application

Base line habitat value and therefore the value of SPA loss will be determined using the metric:

SPA value = Area (ha) x SPA function x SPA condition

Therefore, for direct impacts:

SPA value direct loss = Area of loss (ha) x SPA function x SPA condition

Where there is potential for indirect effects on habitats via increased disturbance and loss in condition, a precautionary approach will be taken, and habitat will be assessed as having a one-step reduction in condition to moderate:

SPA value indirect loss = Proposed SPA value – Current SPA value

The results of this assessment will calculate SPA unit loss caused by the development. The impact score can be broken down to direct and indirect impacts, impacts to marine and terrestrial habitats and impacts within and outside the SPA. These results provide a framework for the minimum extent of required compensation measures.

4 Estimating Required Compensation

Ultimately the SPA metric will be utilised to calculate the units of SPA value generated at specific compensation sites; assessing baseline and projected target value, taking into account risk factors of delay and difficulty for specific compensation sites. However, at this stage it is useful to reverse-engineer the metric to allow input of the required units of compensation and a metric scenario, to provide a range in the number of hectares of required compensation for the proposed development.

When assessing risk, the target for compensation areas will not be broad ecological functionality, but the ability of a habitat to provide suitable resource for the foraging and roosting of target species.

It is recognised that at this stage estimations are, by necessity, a broad analysis of theoretical compensation scenarios, the ultimate factors used will depend on the individual and specific habitat compensation scenario, baseline to target habitat, when specific compensation sites are being scoped and designed.

For the purposes of preliminary estimation of the compensation requirement, the habitat compensation requirement has been simplified to the following 2 broad habitat types:

- Intertidal foraging habitat
    - Recharge – 10 years, low difficulty

    - Realignment – 10 years, medium difficulty
- Grassland foraging habitat – 5 years, low difficulty

Provision of roosting sites will be optimised within onsite design and offsite compensation as appropriate.

Notes on compensation scenarios:

Compensation within existing SPAs will only be considered where a clear gain in SPA function can be evidenced, such as through enhanced foraging availability through increased tidal exposure.

For the purposes of compensation requirement estimation, compensation outside the SPA is limited to a precautionary target of medium SPA function. This restriction may or may not apply once compensation parcels have been identified, depending on factors including location.

5 Example of Results – Assessment from February 2020

Portsmouth Harbour SPA is 1,247ha in size, with a considered zone of impact for Tipner (both direct and indirect) of 165.45 ha of this 143.39 ha falls within the SPA. The direct impact of the development is calculated as 40.94 ha, with 35.43 ha located within the boundary of the SPA. This is equivalent to a direct impact on 2.84 % of the SPA area (Table 5). A further 124.51 ha is identified under the indirect impacts of the development, with 111.36 ha located within the SPA boundary (8.9 % of the SPA area). In total, a total of 11.50 % of the Portsmouth Harbour SPA area is considered to be impacted (direct and indirect) by the development.

There is an estimated net impact to SPA function of -1,055.98 units. Of which -936.50 units is to marine habitats (direct and indirect impacts to SPA function of target bird species) and -119.48 units to brent goose terrestrial grazing habitats. See table 5.

Table 5. Summary of SPA impact results

		TOTAL assessment area	**Marine habitat Incl. roost sites**	**Terrestrial habitat**
Existing habitat	Hectares	165.45	146.79	18.66
	SPA value	2719.98	2469.00	250.98
Direct impacts	Hectares	40.94	35.43	5.51
	SPA value	-688.56	-595.38	-93.18
Indirect impacts	Hectares	124.51	111.36	13.15
	SPA value	-367.42	-341.12	-26.30
TOTAL gross impacts	SPA value	**-1055.98**	**-936.50**	**-119.48**

Compensation of intertidal habitat impacts will require an estimated 93 – 162 ha, dependent on compensation scenario.

Compensation of terrestrial grazing habitats will require an estimated 10 – 36 ha, dependent on compensation scenario, but it is likely that no more than 20 ha will be required.

The impact assessment will be recalculated as the development design becomes final. In addition to confirming direct impacts, measures will be taken to reduce indirect impacts to Portsmouth Harbour and Tipner lake; at present indirect impacts are estimated with a generalised methodology. Within the final assessment any unavoidable indirect impacts will be individually assessed when the specific nature of these impacts is understood in more detail. Offsite compensation is required and is currently estimated based on broad scenarios; the compensation generated from each offsite enhancement area will also be assessed based on site specific design and risk.

6 Revision of the SPA Metric

The current SPA metric described above was designed to allow assessment of the impacts of the development and is underpinned by bird survey data. However, now that there is further work in identifying and designing offsite compensation areas, we are reviewing the SPA metric methodology to ensure it facilitates assessment of projected uplift in value for the target species through habitat change, and that is also supports the function of long-term monitoring.

Therefore, we will be reviewing how SPA function and condition factors are determined, considering not just bird usage but also looking at physical habitat attributes important in habitat/area usage by the birds, such as parcel size, openness and proximity to undesirable features.

As part of this process, we will, where appropriate, look to incorporate features from the finalised metric 3.0 (e.g., strategic location).

Since the original development of this SPA metric, the Solent and Dorset Coast SPA has also been designated and covers the proposed development site; target species and classification of SPA function value of habits will be reviewed as appropriate in light of potential additions to target species.

Environment Bank will consult with WSP as the appointed ecologists for the project for this updated SPA metric (this work is already underway), and then 1-on-1 feedback sessions will be held with NE and EA to allow for their input and to seek confirmed support for this approach as we approach formal submission of the assessment into planning.

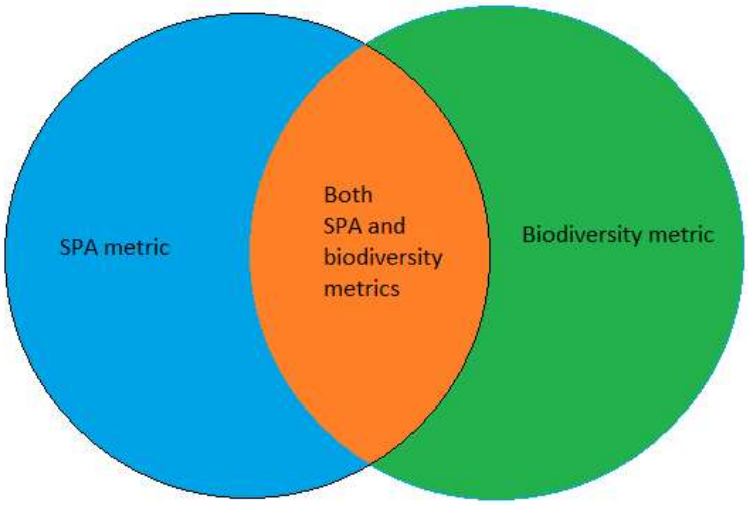
7 INTERACTION BETWEEN THE SPA AND BIODIVERSITY METRICS

In addition to the SPA metric, it will be required of the development to assess its general biodiversity impact i.e., the within-development site impacts, in line with national planning legislation and guidance. It will therefore be a requirement to deliver a minimum of a 10% gain in biodiversity (BNG) once the Environment Bill is enacted in autumn 2021 (and although there is a two-year transition of the mandatory policy, the delivery of BNG will need to be set out prior to submission of a planning application).

Through necessity, the SPA and biodiversity metrics will in some areas be applied to the same parcels of land. For example, the grassland within the firing range is important functional habitat for brent geese (high SPA function), but only of medium biodiversity distinctiveness, whereas the scrub dunes at the south of Tipner range and within the SPA are of low SPA function but medium-high biodiversity value.

The two metric assessments will be completed independently: one assessing impact to SPA bird populations, and the other assessing impact to general biodiversity. The unit results are not directly comparable or interchangeable, but when combined provide a full scope of potential compensation requirements.

Figure 1. Illustrative areas assessed within SPA and biodiversity metrics



Tables 6, 7 and 8 below provide an illustrative example of the areas assessed by the two metrics and the associated results and how this can inform a complete compensation package.

Table 6. Illustrative example of SPA and biodiversity metric assessment areas

	SPA metric	Biodiversity metric
Direct marine impact (ha)	35	26
Indirect marine impact (ha)	110	0
Direct terrestrial impact (ha)	5	24
Indirect terrestrial impact (ha)	15	0
Total hectares assessed	**165**	**50**

Table 7. Illustrative example of SPA and biodiversity metric assessment net impact results

	SPA metric	Biodiversity metric
Marine impact	900	400
Terrestrial Impact	100	100
Net impact	**1,000**	**500**

Table 8. Illustrative example of SPA and biodiversity metric compensation requirements

	SPA metric	Biodiversity metric	Comment
Marine impact (ha)	140	80	SPA compensation likely to have sufficient biodiversity uplift to also meet biodiversity requirement.
Terrestrial Impact (ha)	20	25	SPA compensation requirement likely to provide low biodiversity uplift and so be in addition to biodiversity requirement.
Net requirement	**160**	**105**	

When assessing the biodiversity value of a compensation package we will also take into account a potential 'domino effect' (not assessed above), whereby creation of intertidal habitats from coastal realignment may cause loss of a priority terrestrial habitat which will itself require compensation.

8 Natural England and Environment Agency Engagement

Previous consultation with NE and EA resulted in their agreement in principle to the approach adopted. Throughout the consultation process to date, the comments and amendments set out below were highlighted for review:

- The release of the updated SWBGS 2019 support site data – This data has since been obtained from the WSP and will be incorporated within future revisions of SPA metric assessment due to its potential impact on the SPA Function scores and indirect impact buffer zone.

- Clarification of SPA Function Methodology – further information to be outlined within the future SPA metric assessment report upon the finalisation and approvement of all methodological changes.
- Inclusion of references for 250 m indirect buffer - to be included within the subsequent revision of the SPA assessment report.
- Review of condition methodology – to include SSSI condition data and SPA condition reports, where appropriate.
- Indirect impact condition methodology – to be outlined in full in the subsequent report.

Subsequent to the conclusion of the metric methodology revisions, NE and EA will be consulted to outline and discuss the finalised assessment methodology, with a view to receiving written support of the approach from both NE and EA.

9 FIGURES

Figure 2. SPA function banding plan: February 2020 assessment

Figure 3. SPA impact assessment plan: February 2020 assessment

Figure 2 – SPA function banding plan

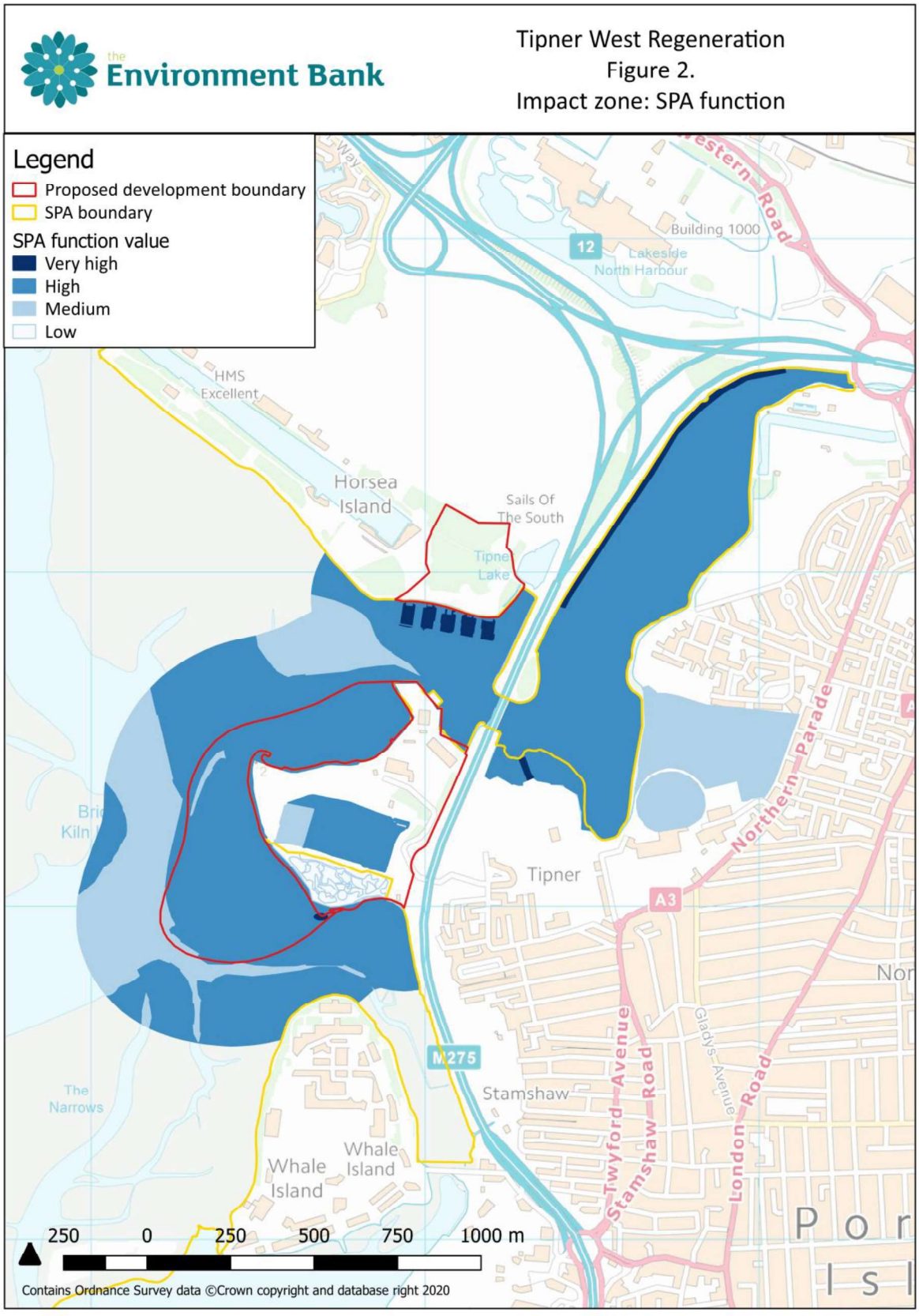
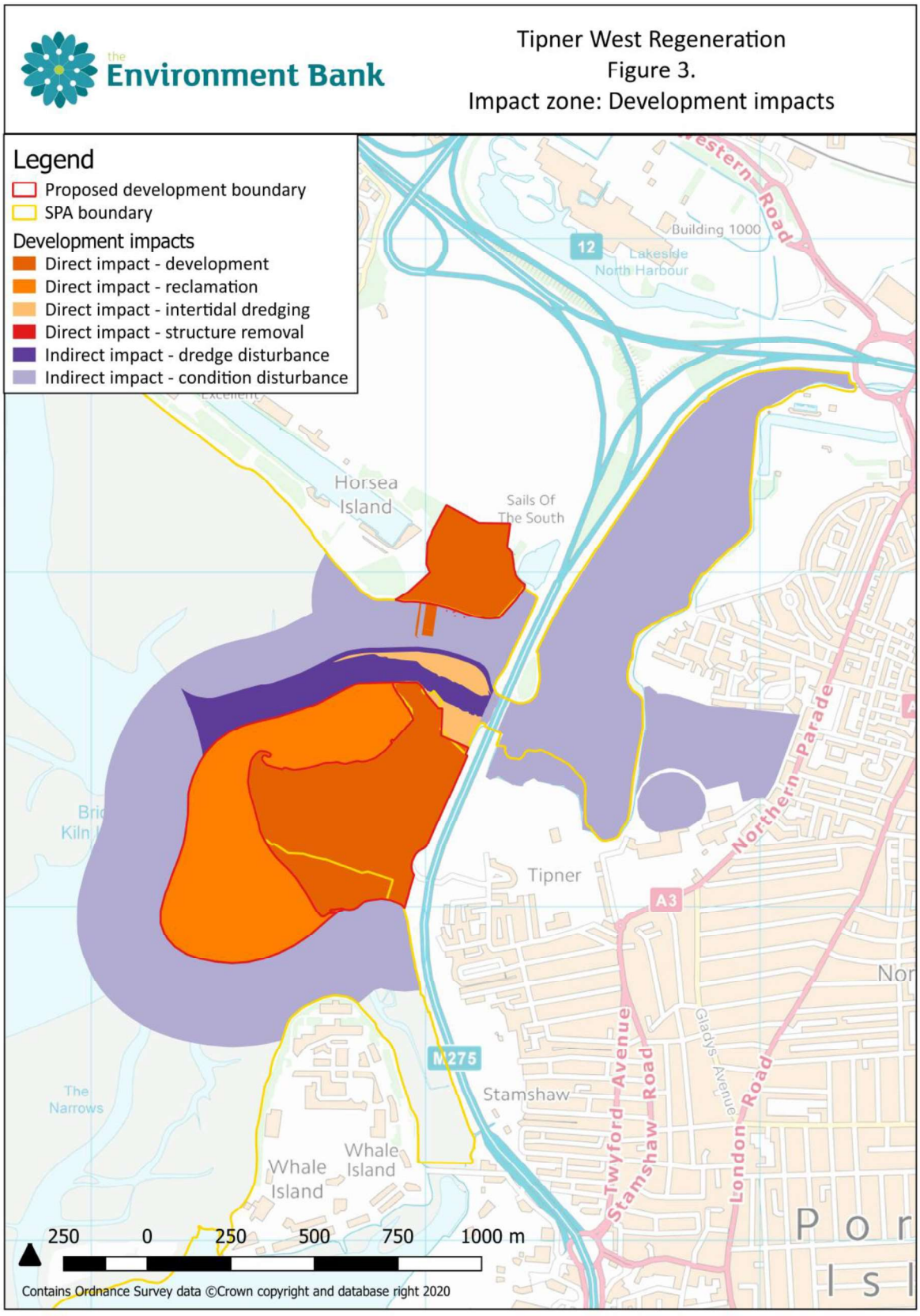


Figure 3. SPA impact assessment.



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A7: TRP Preliminary Ecological Appraisal (WSP April 2023)

Portsmouth City Council

TIPNER WEST REGENERATION

PRELIMINARY ECOLOGICAL APPRAISAL

70064592-PEA
DECEMBER 2022

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EXECUTIVE SUMMARY

Tipner West Regeneration is a joint initiative agreed between Portsmouth City Council (PCC) and Southampton City Council and the UK government in regard to the proposed regeneration of Tipner West and Horsea Island East (TW and HIE). This land has been identified by PCC as a potential strategic location that could help to support the UK's growing marine and maritime sector and help meet Portsmouth's housing need hereafter referred to as the 'Proposed Development'. The indicative location of which will be referred to as the 'Site' and is shown on Figure 1. WSP was commissioned by Portsmouth City Council (PCC) to complete a Preliminary Ecological Appraisal of the Site. The scope included reviewing existing ecological data received from Hampshire Biodiversity Records Centre for this area, completing an ecological desk study, recording terrestrial habitats present and assessing the potential of these to support protected or notable species.

A number of ecological surveys have been completed previously on behalf of Portsmouth City Council, covering land within the Site. These included surveys for wintering birds in 2009/10 (Environmental Gain, 2010) and an extended Phase 1 habitat survey plus surveys for wintering birds, breeding birds, bats, badger, reptiles, great crested newts, terrestrial invertebrates and vegetation/notable plants in 2015 (Atkins, 2016 and WSP, 2018). These surveys recorded birds of conservation concern using the Site during the breeding and wintering season and eight species of bats foraging or commuting, though no roosts were identified within suitable buildings. Slow worm and common lizard, terrestrial invertebrates of District importance, three nationally scarce plants and coastal vegetation shingle Habitats of Principal Importance were recorded. Great crested newts and badgers were considered to be likely absent.

Updated surveys for wintering birds, breeding birds, barn owl, tern foraging, bats, marine mammal, badger, reptiles, marine ecology (including habitats and benthic invertebrates), terrestrial invertebrates and notable plants were completed in 2021 and 2022, extending into 2023 for wintering birds. An ecological desk study was also undertaken in 2021 to collate records of protected and notable species. The search area for this included a radius of up to 5km from the Site boundary for all protected and notable species.

The desk-based study also included a search within a 10km and 2km radius for statutory and non-statutory designated sites, respectively. This identified nine statutory designated sites of European or international importance within 10km of the Site boundary. Two further statutory designated sites of national importance and nine non-statutory designated sites were identified within 2km. Four of the statutory designated sites occur within the Site boundary, as Portsmouth Harbour is a designated wetland of international importance (Ramsar), covered by Portsmouth Harbour and Solent and Dorset Coast Special Protection Areas (SPA) and is a Site of Special Scientific Interest (SSSI). The reasons for these designations differ slightly but all reflect the harbours tidal mudflat habitats and the ability to support large populations of breeding and overwintering birds including waders and waterfowl species. Six sites listed within the Solent Wader and Brent Goose Strategy 2020 (HIWWT, 2020) also lie within the Site boundary.

There are a number of parcels of habitat within the 2km search radius which are listed as Habitats of Principal Importance in accordance with the Natural Environment and Rural Communities Act 2006. Four habitats listed within this database occur within the Site boundary, specifically deciduous woodland, coastal and floodplain grazing marsh, lowland calcareous grassland and mudflats. Surveys undertaken in 2017 also identified intertidal seagrass within Tipner Lake (Ecospan, 2020). The desk study identified a large number of species records within the search area including species results for nine bats, five other mammals, three marine mammal species, 143 birds, two reptiles, 307 invertebrates and 126 plants. Seventeen species listed as invasive non-native species under the Wildlife and Countryside Act, 1981 (as amended) Schedule 9, were recorded within the 5km search area; with a further 33 listed as invasive in Hampshire identified.

The Phase 1 habitat survey concluded the Site was dominated by grassland, ranging from amenity grassland through species poor semi-improved grassland to areas relatively species rich. Dense scrub was also extensive within the Horsea Island East and Tipner Range. Small pockets of semi-natural broadleaf woodland and plantation woodland and numerous buildings were present. The Site also included areas of coastal vegetated shingle and saltmarsh and several nationally scarce plants. A large part of the site was intertidal mudflat, with shingle shorelines. Marine surveys (Ecospan, 2021) of a survey area surrounding the Site landmass identified three habitats of conservation importance (UK Habitats of Principal Importance\Priority Habitats) within the survey area. These were: inter-tidal mudflats, inter-tidal sheltered muddy gravels and *Zostera noltii* beds. The inter-tidal mudflats occurred primarily within Tipner Lake and its approaches, the approaches to Port Solent and east of Whale Island. The sheltered muddy gravels occupied the majority of the inter-tidal area within the rest of the survey area. The *Zostera noltii* beds which are a Habitat of Principal Importance, as well as being on the OSPAR List of Threatened and/or Declining Species and Habitats, were found within Tipner Lake.

Overall, the habitats recorded have potential to support roosting and foraging bats, badgers, reptiles, wintering and breeding birds, invertebrates (terrestrial and marine), notable plants, fish and marine mammals. Detailed surveys for all of these potential receptors have been carried out over an extensive period of time and the survey methods and results documented in individual reports.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1. Land at Tipner West and Horsea Island East (TW and HIE) (hereafter referred to as the 'Site') has been identified by Portsmouth City Council (PCC) as a potential strategic location for a marine employment led hub, integrated with a new urban quarter (hereafter referred to as the 'Proposed Development'), that could help to support the UK's growing marine and maritime sector and help meet Portsmouth's housing and employment needs. The indicative location of which will be referred to as the 'Site' and is shown on Figure 1.

1.2 ECOLOGICAL BACKGROUND

1.2.1. Multiple ecological surveys have been completed on the Site or parts of this area by WSP from 2015 to present and by Atkins prior to 2015. A summary of these surveys undertaken prior to the completion of this Phase 1 habitat survey is provided in Appendix A.

1.3 SCOPE OF REPORT

1.3.1. PCC commissioned WSP to complete a Preliminary Ecological Appraisal (PEA) of the Site in January 2021 as an update to the previous PEA and ecological survey work. The brief of the PEA was to:

- Provide an update to the baseline ecological information about the Proposed Development;
- Identify the habitat types present within the Proposed Development; and
- Evaluate the habitats present for the presence or potential presence of protected species.

2 METHODS

2.1 OVERVIEW

2.1.1. This appraisal has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017a, 2017b and 2018), and Joint Nature Conservation Committee (JNCC, 2010); and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2013 (British Standards Institute (2013).

2.1.2. This PEA is based on the following data sources:

- an ecological desk study;
- a habitat survey; and
- a protected/notable species assessment.

2.2 DESK STUDY

2.2.1. The desk study was undertaken in April 2021 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii around the Site. This approach is consistent with current good practice guidance published by the CIEEM, 2017a and 2017b. To provide the baseline data for the ecological desk study, the following information was requested from Hampshire Biodiversity Records Centre (HBIC):

- records of legally protected and notable species within 5km of the Site; and
- records of non-statutory sites designated for nature conservation value within 2km of the Site.

2.2.2. Freely downloadable datasets (available from Natural England) were consulted for information regarding the presence of statutory designated habitats[1] within 2km of the Site. This search was extended to 10km for Natura 2000 sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) of European importance and internationally designated Ramsar sites.

[1] Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

2.2.3. Freely downloadable datasets (available from Natural England) were consulted for information regarding Habitats of Principal Importance (HPI)[2] within 2km and woodland listed on the Ancient Woodland Inventory[3].

2.2.4. In addition, open source 1:25,000 Ordnance Survey mapping was used to identify any mapped water bodies and watercourses within 500m of the Site.

2.2.5. The findings of the desk study have been incorporated within Section 3 and a summary is given in Appendix B of this report and are shown on Figures 2-7.

2.3 HABITAT SURVEY

2.3.1. A Phase 1 habitat survey of HIE was carried out on 28 January 2021 in dry, mild and overcast conditions and a Phase 1 habitat survey of TW was undertaken on 1 February 2021 also in dry, mild and overcast conditions.

2.3.2. Where access was permitted, the survey covered the entire Site including boundary features. The Phase 1 habitat survey was carried out by an associate member of CIEEM, with extensive experience within the last five years of completing PEAs of a variety of greenfield and brownfield sites.

2.3.3. Habitats were described and mapped following the standard Phase 1 habitat survey methodology (JNCC, 2010). Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species are recorded, and habitats are classified according to their vegetation types. Where appropriate consideration was given to whether habitats qualify, or could qualify, as a Habitat of Principal Importance following habitat descriptions published by the Joint Nature Conservation Committee (JNCC, 2008). The habitats were also classified using the UK Habitat classification system (Butcher et al, 2020) and were subject to a condition assessment (Crosher et al, 2019) in order for the data to be suitable for use in future biodiversity net gain calculations.

2.3.4. A list of plant species was compiled (Appendix C), with relative plant species abundance estimated using the DAFOR scale[4]. The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2019) and are also listed in Appendix C.

[2] Mapped locations of HPI are usually not available, but HPI aligns with habitats listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 which has succeeded the UKBAP Biodiversity Action Plan. These inventories have been prepared by a variety of organisations and at a national (Natural England priority habitat inventory) and local scale (e.g. by local records centres). In some instances, these are primarily based on aerial photograph analysis rather than field survey.

[3] The ancient woodland inventory in England lists areas over two hectares in size which have been continuously wooded since at least 1600.

[4] The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare

2.3.5. Habitats were digitally mapped using a Geographical Information System (GIS). The smallest area to be mapped was 2m^2, which was selected as a suitable scale to sample the range of different vegetation types present.

2.3.6. Target notes were made to provide information on specific features of ecological interest (e.g. a badger *Melees meles* sett) or habitat features too small to be mapped. These are included in Appendix D.

2.3.7. Any invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981) (as amended) (WCA) which were evident during the Phase 1 habitat survey were also target noted. Detailed mapping of such species; or a full survey of the Site for all invasive plant species is beyond the scope of this commission.

2.4 PROTECTED SPECIES ASSESSMENT

2.4.1. The potential for the Site to support legally protected and notable species was assessed using the desk study results and combined with field observations during the habitat survey. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat suitability assessment for key faunal groups including: birds (Gilbert et al, 1998 and Bibby et al, 2000), great crested newt *Triturus cristatus* (Gent and Gibson, 2003 and English Nature, 2001); reptiles (Froglife, 1999 and Gent and Gibson, 2003); bats (Collins, 2016 and Mitchell-Jones, 2004); badger (Harris et al, 1991 and Roper, 2010); hazel dormouse *Muscardinus avellanarius* (English Nature, 2006); otter *Lutra lutra* (Chanin, 2003); water vole *Arvicola amphibious* (Dean et al, 2016) and invertebrates (Drake et al, 2007 and Kirby, P, 2001).

2.5 NOTES AND LIMITATIONS

2.5.1. Every effort has been made to provide a comprehensive description of the Site; however, the following specific limitations apply to this assessment:

- Ecological survey data is typically valid for 18 months (CIEEM, 2019) unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management.
- Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- The survey was not completed during the optimal survey season for Phase 1 habitat survey, generally accepted to be from April-September (inclusive). Botanical surveys are seasonally limited, and throughout the spring and summer period certain species will be more or less evident at different times (i.e. depending on the flowering season). However, it is considered that sufficient information was gathered to enable an assessment of the habitat types present, in line

(R) – 1-10% cover., The term ‘Locally’ (L) is also used where the frequency and distribution of a species are patchy and ‘Edge’ (E) is also used where a species only occurs on the edge of a habitat type.

with standard Phase 1 habitat categories and the potential for these to support protected or notable species.

- A number of locations within the Site could not be accessed. Pounds Marine and Harbour School in TW was not accessed as access permission was not available. The coastal areas were also not accessed due to health and safety reasons. Aerial imagery was used to identify which habitats were present in these areas. It is, therefore, considered that the Phase 1 habitat types were accurately identified.
- The Phase 1 Habitat survey was carried out over the period of two days, as such only a selection of all species that occur within the Site will have been recorded. However, through use of desk study information to supplement site survey data, it is considered that an accurate assessment of the potential for the Site to support protected species or those of conservation concern was possible.
- The extended Phase 1 habitat map (Figure 8) has been reproduced from field notes and plans. Whilst this provides a sufficient level of detail to fulfil the requirements of a PEA, the maps are not intended to provide exact locations of key habitats.
- A number of ornamental plant species were present within the Site. These have been identified to species level where possible; however, owing to the large number of horticultural varieties some plants could not be identified. Ornamental plants may be of value to wildlife; however, none are characterised as rare or notable from a native biodiversity conservation perspective. Thus, this limitation does not affect the overall conclusions of this appraisal.

3 RESULTS

3.1 DESIGNATED SITES

STATUTORY SITES

3.1.1. The desk study identified nine internationally designated statutory nature conservation sites within 10km of the boundary of the Site, three of which occur within the Site. A description of these are detailed in Table 3-1 and shown on Figure 2. Two nationally designated sites were identified within 2km of the Site boundary, one of which was within the Site. These are described in Table 3-2 and shown on Figure 3.

Table 3-1 - Statutory designated sites of International importance

Site	Approximate distance to Site	Reason for Designation
Solent and Dorset Coast SPA	Within the Site	The site regularly supports more than 1% of the Great British breeding populations of sandwich tern *Sterna sandvicensis*, common tern *Sterna hirundo* and little tern *Sterna albifrons.* The recently designated SPA covers the area that breeding terns use for foraging during April - September ▪ A191; Sandwich tern (Breeding) ▪ A193; Common tern (Breeding) ▪ A195; Little tern (Breeding)
Portsmouth Harbour SPA	Within the Site	**Article 4.2 Qualification:** Over winter the area supports significant numbers of: ▪ A046a *Branta bernicla*; Dark-bellied brent goose (Non-breeding) ▪ A069 *Mergus serrator*; Red-breasted merganser (Non-breeding) ▪ A149 *Calidris alpina*; Dunlin (Non-breeding) ▪ A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
Portsmouth Harbour Ramsar	Within the Site	**Ramsar criterion 3 -** The intertidal mudflat areas possess extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei* which support the grazing dark-bellied brent geese populations. The mud-snail *Peringia ulvae* is found at extremely high densities, which helps to support the wading bird interest of the site. Common cord-grass *Spartina anglica* dominates large areas of the saltmarsh and there are also extensive areas of green algae *Enteromorpha* spp. and sea lettuce *Ulva lactuca*. More locally the saltmarsh is dominated by sea purslane *Halimione portulacoides* which gradates to more varied communities at the higher shore levels. The site also includes a number of saline lagoons hosting nationally important species. **Ramsar criterion 6 – species/populations occurring at levels of international importance.** Qualifying Species/populations (as identified at designation); Species with peak counts in winter: ▪ Dark-bellied brent goose, 2105 individuals, representing an average of 2.1% of the GB population (5-year peak mean 1998/9-2002/3).

Site	Approximate distance to Site	Reason for Designation
Solent Maritime SAC	2.6km east	**Article 4.4 Qualification:** Annex I habitats that are a primary reason for selection of this site: ▪ H1320. Spartina swards *Spartinion maritimae*; Cord-grass swards ▪ H1130. Estuaries ▪ H1330. Atlantic salt meadows *Glauco-Puccinellietalia maritimae* ▪ Annex I Habitats (qualifying but not primary reason for selection): ▪ H1110. Sandbanks which are slightly covered by sea water all the time ▪ H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats ▪ H1150. Coastal lagoons[5] ▪ H1210. Annual vegetation of drift lines ▪ H1220. Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves ▪ H1310. Salicornia and other annuals colonising mud and sand; glasswort and other annuals colonising mud and sand ▪ H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram ▪ H2130 Fixed coastal dunes with herbaceous vegetation ("grey dunes")[6] **Annex II Species (qualifying but not primary reason for selection):** ▪ S1016. *Vertigo moulinsiana*; Desmoulin`s whorl snail
Chichester and Langstone Harbours SPA	2.6km east	**Article 4.1 Qualification (79/409/EEC):** During the breeding season the area regularly supports: ▪ A191; Sandwich tern (Breeding) ▪ A193; Common tern (Breeding) ▪ A195; Little tern (Breeding) **Article 4.2 Qualification (79/409/EEC):** Over winter the site regularly supports: ▪ A046a; Dark-bellied brent goose (Non-breeding) ▪ A048 *Tadorna*; Common shelduck (Non-breeding) ▪ A050 *Anas penelope*; Eurasian wigeon (Non-breeding) ▪ A052 *Anas crecca*; Eurasian teal (Non-breeding) ▪ A054 *Anas acuta*; Northern pintail (Non-breeding) ▪ A056 *Anas clypeata*; Northern shoveler (Non-breeding)

[5] Denotes a priority natural habitat or species. Some of the natural habitats and species for which UK SACs have been selected are considered to be particular priorities for conservation at a European scale and are subject to special provisions in the Habitats Regulations. The term 'priority' is also used in other contexts, for example with reference to particular habitats or species that are prioritised in UK Biodiversity Action Plans. It is important to note however that these are not necessarily the priority natural habitats or species within the meaning of the Habitats Regulations.

Site	Approximate distance to Site	Reason for Designation
		▪ A069; Red-breasted merganser (Non-breeding) ▪ A137 *Charadrius hiaticula*; Ringed plover (Non-breeding) ▪ A141; Grey plover (Non-breeding) ▪ A144 Calidris alba; Sanderling (Non-breeding) ▪ A149; Dunlin (Non-breeding) ▪ A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding) ▪ A160 *Numenius arquata*; Eurasian curlew (Non-breeding) ▪ A162 *Tringa totanus*; Common redshank (Non-breeding) ▪ A169 *Arenaria interpres*; Ruddy turnstone (Non-breeding) The reasons for designation also include the overall waterfowl assemblage present.
Chichester and Langstone Harbours Ramsar	2.6km east	**Ramsar criterion 1** - Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. **Ramsar criterion 5 - Assemblages of international importance:** ▪ Species with peak counts in winter: 76480 waterfowl (5-year peak mean 1998/99-2002/2003). **Ramsar criterion 6 - Species/populations occurring at levels of international importance**. Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: ▪ ringed plover, Europe/Northwest Africa 853 individuals, representing an average of 1.1% of the population (5-year peak mean 1998/9-2002/3); ▪ black-tailed godwit, Iceland/W Europe 906 individuals, representing an average of 2.5% of the population (5-year peak mean 1998/9-2002/3); and ▪ common redshank, 2,577 individuals, representing an average of 1% of the population (5-year peak mean 1998/9-2002/3). Species with peak counts in winter: ▪ dark-bellied brent goose, 12,987 individuals, representing an average of 6% of the population (5-year peak mean 1998/9-2002/3); ▪ common shelduck, NW Europe 1,468 individuals, representing an average of 1.8% of the GB population (5-year peak mean 1998/9-2002/3); ▪ grey plover, E Atlantic/W Africa -wintering 3,043 individuals, representing an average of 1.2% of the population (5-year peak mean 1998/9-2002/3); and ▪ dunlin, W Siberia/W Europe 33,436 individuals, representing an average of 2.5% of the population (5-year peak mean 1998/9-2002/3).
Solent and Isle of Wight Lagoons SAC	3.6km east	**Article 4.4 Qualification:** Annex I habitats: ▪ H1150. Coastal lagoons[6]
Solent and Southampton Water SPA	7.9km west	**Article 4.1 Qualification (79/409/EEC):** During the breeding season the area regularly supports:

Site	Approximate distance to Site	Reason for Designation
		▪ Mediterranean Gull *Larus melanocephalus*, 20.0% of the GB population; ▪ little tern, 2.0% of the GB population; ▪ roseate tern Sterna dougallii, 3.3% of the GB population; ▪ common tern, 2.2% of the population; and ▪ sandwich tern, 1.7% of the GB population. **Article 4.2 Qualification (79/409/EEC)** Over winter the area regularly supports: ▪ teal, 1.1% of the population; ▪ dark-bellied Brent goose, 2.5% of the population; ▪ ringed plover, 1.1% of the population; and ▪ black-tailed godwit, 1.6% of the population. **Article 4.2 Qualification: (79/409/EEC)** An internationally important assemblage of birds (the area regularly supports at least 20000 waterfowl): ▪ 5,1361 individuals were recorded, (5-year peak mean 1991/2 - 1995/6) including teal, ringed plover, black-tailed godwit, dark-bellied Brent goose.
Solent and Southampton Water Ramsar	7.9km west	**Ramsar criterion 1 -**The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs. **Ramsar criterion 2 -The site supports an important assemblage of rare plants and invertebrates.** ▪ At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site. **Ramsar criterion 5 - Assemblages of international importance**: Species with peak counts in winter: ▪ 51343 waterfowl (5-year peak mean 1998/99-2002/2003). Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: ▪ ringed plover, Europe/Northwest Africa 397 individuals, representing an average of 1.2% of the GB population (5-year peak mean 1998/9- 2002/3). Species with peak counts in winter: ▪ dark-bellied Brent goose, 6456 individuals, representing an average of 3% of the population (5-year peak mean 1998/9-2002/3). ▪ Eurasian teal, NW Europe 5514 individuals, representing an average of 1.3% of the population (5-year peak mean 1998/9-2002/3).

Site	Approximate distance to Site	Reason for Designation
		▪ black-tailed godwit, Iceland/W Europe 1240 individuals, representing an average of 3.5% of the population (5-year peak mean 1998/9-2002/3).

Table 3-2 - Statutory designated sites of national importance

Site Name	Approximate Distance and orientation from Site	Description
Portsmouth Harbour SSSI	Within the Site	The mudflats support extensive beds of eelgrasses and an abundant fauna of benthic marine animals, with some species present in high numbers. Portsmouth Harbour is of national importance for grey plover *Pluvialis squatarola*, black-tailed godwit, dunlin and dark-bellied brent geese. The total numbers of waders and wildfowl present has at times exceeded 20,000. The SSSI also includes a small area of terrestrial habitat extending along the southern side of HIE, where chalk spoil dumped early in the 20th century supports a rich chalk grassland flora invaded by hawthorn and two brackish lagoons in the south west of the harbour.
Portsdown SSSI	1.6km north	An isolated chalk anticline, running east to west with a long south-facing escarpment. This area supports a rich chalk grassland flora with areas of hawthorn *Crataegus monogyna* scrub. The insect fauna is diverse and well-studied; species including chalk downland butterflies *Lepidoptera*, beetles *Coleoptera*, and bees *Hymenoptera*.

NON-STATUTORY SITES

3.1.2. The desk study identified nine non-statutory nature conservation sites within 2km of Site boundary. A description of these sites is detailed in Table 3-3 below and shown on Figure 4. The closest sites are situated within the Site boundary, Horsea Island and Tipner Ranges (part) local wildlife sites (referred to in Hampshire as Sites of Importance to Nature Conservation (SINC)).

Table 3-3 - Non-statutory designated sites

Site	Approximate distance to Site	Reason for Designation[6]
Horsea Island SINC	Within the Site	**2D** - Grasslands which have become impoverished through inappropriate management, but which retain sufficient elements of relic unimproved grassland to enable recovery. **6A** - Sites which support one or more notable species: ▪ Divided Sedge *Carex divisa* [Section 41 SPI] The LWS is also part of a Dutch elm disease resistant trial run by Butterfly Conservation. It is considered that these trees may support white letter hairstreak *Satyrium w-album.*
Tipner Ranges (Part) SINC	Within the Site	**4A** - Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands.
East of Lakeside SINC	0.8km north	**4A** - Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands **6A** - Sites which support one or more notable species. ▪ Pale Flax *Linum bienne* [County Scarce] ▪ Narrow-Leaved Bird's-Foot-Trefoil *Lotus glaber* [County Scarce]
Urchins Copse SINC	1.1km north west	**2B** - Semi-improved grassland which retains a significant element of unimproved grassland **6A** - Sites which support one or more notable species. ▪ Golden-Samphire [Nationally Scarce] ▪ Fiddle Dock *Rumex pulcher* [County Scarce] ▪ *Salicornia europaea agg.* [County Rare]
Hilsea Lines SINC	1.5km north east	**2B** - Semi-improved grassland which retains a significant element of unimproved grassland **4A** - Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands. **5A** - Areas of open freshwater (e.g. lakes, ponds, canals, rivers, streams and ditches) which support outstanding assemblages of floating/submerged/ emergent plant species, invertebrates, birds or amphibians. **6A** - Sites which support one or more notable species.

[6] Hampshire County Council (1996) - Criteria for selecting Sites of Importance for Nature Conservation in Hampshire. Available at: https://documents.hants.gov.uk/biodiversity/SINCCriteria.pdf.

Site	Approximate distance to Site	Reason for Designation[6]
		▪ Slender Hair's Ear *Bupleurum tenuissimum* [Section 41 SPI] ▪ Divided Sedge [Section 41 SPI] ▪ Golden-Samphire [County Scarce] ▪ Spiny Restharrow Ononis spinosa [Red Data Book] **7A** - Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities e.g. community wildlife sites.
Castle Shore Park SINC	1.3km north west	**2B** - Semi-improved grasslands which retain a significant element of unimproved grassland. **4A** - Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands. **6A** - Sites which support one or more notable species.
Portchester Paddock SINC	1.4km north west	**4A** - Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands.
Paulsgrove Chalk Pit SINC	1.7km north	The site is an old chalk pit, directly adjacent to the Portsdown SSSI. At the northern edge of the site there is extensive exposed chalk along the sides of the quarry. At their base is a mix of scrub and unimproved chalk grassland. The site is rich in chalk grassland species as well as some chalk ruderal species.
James Callaghan Drive SINC	1.9km north	The site is a long stretch of road verge along the top of Portsdown Hill. The site is adjacent to the Portsdown SSSI and the proposed Fort Widley SINC. The verge supports unimproved rough chalk grassland as well as areas of less diverse mesotrophic sward.

SOLENT WADER AND BRENT GOOSE STRATEGY 2020

3.1.3. Forty-three sites listed under the Solent Wader and Brent Goose Strategy 2020 were identified within 2km of the Site. Six of these sites occur within the Site boundary.

3.1.4. This listing is not a statutory or non-statutory designation, but these sites are referenced in local planning policy. The purpose of the strategy is to identify a network of core areas of fundamental importance to over wintering water birds and provide a strategy that will ensure protection of the network of sites which function as undesignated supporting habitat for species for which the statutory sites are designated. The details of these sites are outlined in Table 3-4 overleaf and shown on Figure 5.

Table 3-4 – Solent wader and Brent goose strategy sites

SWBGS Site	Site Assessment Classification[7]	Approximate distance to Site	Area (ha)	Species Recorded and Maximum Counts
P48B	Core Area	Within the Site	9.89	▪ Brent goose (1000). ▪ Oystercatcher (3), redshank (3).
P48C	Secondary Support Area	Within the Site	46.58	▪ Curlew (40), common snipe (1), lapwing (15), turnstone (15), redshank (344).
P60	Primary Support Area	Within the Site	6.66	▪ Brent goose (500).
P76	Secondary Support Area	Within the Site	0.11	▪ Dunlin (30), lapwing (40), redshank (350).
P77	SPA Site	Within the Site	0.57	▪ Brent goose (100) ▪ Curlew (2), dunlin (40), greenshank (2), lapwing (40), oystercatcher (50), redshank (370).
P80A	SPA Site	Within the Site	17.82	▪ Brent goose (317) ▪ Common sandpiper (1), curlew (700), greenshank (1), lapwing (30), redshank (185), turnstone (31).
P75	Secondary Support Area	Immediately adjacent to the Site	0.99	▪ Black-tailed godwit (3), common sandpiper (1), curlew (6), dunlin (5), greenshank (3), lapwing (120), golden plover (1), oystercatcher (3), redshank (370).
P80	SPA Site	Immediately adjacent to the Site	41.35	▪ Brent goose (259). ▪ Bar-tailed godwit (1), black-tailed godwit (20), common sandpiper (1), curlew (30), dunlin (400), golden plover (1), greenshank (3), grey plover (20),

[7] Classification within the Solent Brent goose and Wader Strategy (HIWWT, 2010) as 'Important' or 'Uncertain' depended upon the confidence that the sites were used regularly. This was later updated to Core Areas, Primary Support Areas, Secondary Support Areas, Low Use, Candidate Sites or not classified SPA Site, based on the quantitative scores of five assessment metrics (Whitfield, 2017).

SWBGS Site	Site Assessment Classification[7]	Approximate distance to Site	Area (ha)	Species Recorded and Maximum Counts
				lapwing (120), oystercatcher (100), redshank (500).
P139	Secondary Support Area	0.1km east	0.19	▪ Redshank (200).
P141	SPA Site	0.1km south	1.09	▪ Brent goose (72). ▪ Common sandpiper (1).
P136	Low Use Site	0.2km east	1.40	▪ Brent goose (11).
P143	SPA Site	0.2km south	0.45	▪ Brent goose (153). ▪ Bar-tailed godwit (1), common sandpiper (2), whimbrel (4).
P38	Low Use Site	0.3km east	1.60	▪ Brent goose (3).
P40	Primary Support Area	0.4km east	10.28	▪ Brent goose (800). ▪ Oystercatcher (19).
P140	Secondary Support Area	0.4km south	4.54	▪ Brent goose (464).
P48A	Core Area	0.4km west	4.87	▪ Brent goose (1500). ▪ Oystercatcher (1).
P148	Primary Support Area	0.5km South	0.26	▪ Unknown
P39	Low Use Site	0.5km east	3.63	▪ Oystercatcher (1).
P40A	Primary Support Area	0.5km east	2.87	▪ Brent goose (270). ▪ Oystercatcher (1).
P43	Primary Support Area	0.6km east	6.82	▪ Brent goose (224).
P97	SPA Site	0.6km north west	0.39	▪ Brent goose (35). ▪ Dunlin (5), redshank (8), ringed plover (40), turnstone (1).
F78	SPA Site	0.6km west	43.40	▪ Brent goose (300). ▪ Dunlin (600), oystercatcher (7), ringed plover (131), sanderling (1).
P96	SPA Site	0.7km north west	1.76	▪ Brent goose (50).

SWBGS Site	Site Assessment Classification[7]	Approximate distance to Site	Area (ha)	Species Recorded and Maximum Counts
P108	Secondary Support Area	0.7km south	0.25	▪ Brent goose (73).
P138	Secondary Support Area	0.8km north	2.00	▪ Brent goose (40).
P147	Low Use Site	0.8km south	0.07	▪ Redshank (80).
P93	SPA Site	1.0km north west	2.09	▪ Brent goose (119). ▪ Black-tailed godwit (7), curlew (1), dunlin (200), oystercatcher (60), redshank (40), turnstone (47).
F16	Secondary Support Area	1.1km north west	3.47	▪ Brent goose (15). ▪ Bar-tailed godwit (15), curlew (1), oystercatcher (3), turnstone (30).
P65	SPA Site	1.1km north west	0.07	▪ Brent goose (14). ▪ Dunlin (110), redshank (225), turnstone (46).
P94	SPA Site	1.1km north west	0.21	▪ Brent goose (64).
F14	Low Use Site	1.1km west	2.47	▪ Brent goose (7).
P49	Secondary Support Area	1.2km north west	3.37	▪ Brent goose (60).
P98	SPA Site	1.2km north west	1.23	▪ Brent goose (1531). ▪ Black-tailed godwit (15), dunlin (35), oystercatcher (2) redshank (86), turnstone (6).
P64	SPA Site	1.3km north west	0.09	▪ Brent goose (204) ▪ Dunlin (19), redshank (29).
P68	SPA Site	1.3km north west	0.11	▪ Brent goose (200). ▪ Ringed plover (13)
P102	SPA Site	1.3km west	1.20	▪ Brent goose (300). ▪ Black-tailed godwit (145), curlew (3), dunlin (17), redshank (69).
P131	Low Use Site	1.4km	0.24	▪ Redshank (20).

SWBGS Site	Site Assessment Classification[7]	Approximate distance to Site	Area (ha)	Species Recorded and Maximum Counts
P67	Primary Support Area	1.4km	0.1	▪ Brent goose (125). ▪ Redshank (37), turnstone (19).
P146	Secondary Support Area	1.4km north west	0.01	▪ Dunlin (1), greenshank (1) redshank (160), turnstone (35).
P92	SPA Site	1.4km west	15.07	▪ Brent goose (91). ▪ Black-tailed godwit (16), dunlin (3480), redshank (32).
F94	Secondary Support Area	1.5km north west	1.38	▪ Brent goose (64).
P61B	Low Use Site	1.6km north east	1.56	▪ Redshank (1).
F45	Low Use Site	1.8km	1.83	▪ Greenshank (1).

OTHER HABITATS OF CONSERVATION IMPORTANCE

3.1.5. A total of 207 parcels of habitats of principal importance (HPI) were identified within 2km of the Site. A summary of these habitats is provided in Table 3-5 and shown on Figure 6. Four HPI identified were within the Site boundary. These include coastal and floodplain grazing marsh, deciduous woodland, lowland calcareous grassland and mudflats. No parcels of ancient woodland were identified within 2km of the Site boundary.

3.1.6. Surveys undertaken in 2017 (Ecospan Environmental Ltd, 2017) recorded the following intertidal habitats in a survey area encompassing the Site.

- *Nephtys hombergii* and *Streblospio shrubsolii* in littoral mud (LS.Lmu.Uest.NhomStr)
- Cirratulids and *Cerastoderma edule* in littoral mixed sediment (LS.LMx.Mx.CirCer)
- *Hediste diversicolor* and oligochaetes in littoral mud (LS.Lmu.Uest.Hed.OI)
- *Lanice conchilega* in littoral sand (LS.Lsa.MuSa.Lan)
- *Zostera noltii* beds in littoral muddy sand (LS.LMp.LSgr.Znol)
- *Fucus serratus* with sponges, ascidians and red seaweeds on tide swept lower eulittoral mixed substrata (LR.HLR.FT.FserTX)
- *Ascophyllum nodosum* on full salinity mid eulittoral mixed substrata (LR.LLR.F.Asc.X).

The vast majority of the survey area consisted of intertidal mudflats (LS.Lmu.Uest.NhomStr and LS.LMp.LSgr.Znol) or sheltered muddy gravels (LS.LMx.Mx.CirCer) and are listed as an HPI.

Two small beds of seagrass *Zostera noltii* were identified within Tipner Lake, east of the Site, and are also listed on OSPAR list of threatened and/or declining species[8] and form part of the designation of Portsmouth Harbour Ramsar.

3.1.7. Three waterbodies (ponds and coastal waters) are present within 500m of the Site. These include Portsmouth Harbour (Porchester Lake, Tipner Lake and Port Solent Marina), the HMS Excellent Defence Diving School pool and an attenuation pond. Of these only Portsmouth Harbour falls within the Site, with the attenuation pond located immediately north within HIE and the Defence Diving School approximately 75m west of the Site. The attenuation pond is also listed as a primary support site within the SWBGS. The location of the waterbodies is shown on Figure 7.

Table 3-5 – Habitats of Principal Importance

Habitat of Principal Importance	No. Parcels within 2km	Approximate distance to Site
Coastal and floodplain grazing marsh	14	Within the Site
Deciduous woodland	64	Within the Site
Lowland calcareous grassland	36	Within the Site
Mudflats	79	Within the Site
No main habitat but additional habitats[9]	8	0.6km east
Coastal saltmarsh	3	1.4km west
Traditional orchard	2	1.4km west
Good quality semi-improved grassland (non-priority)[10]	1	1.5km west

[8] The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) List of threatened and/or declining species and habitats/ Available at: https://www.ospar.org/work-areas/bdc/species-habitats/list-of-threatened-declining-species-habitats (Accessed on: April 2021)

[9] This category comprises parcels where unspecified HPI has been recorded as present but not at sufficient densities to qualify as the main habitat within that parcel.

[10] Good quality semi-improved grassland is not classified as HPI under Section 41 of the NERC Act 2006, however this category comprises grasslands which have been historically identified (e.g. lowland meadows, lowland calcareous grassland, lowland dry acid grassland) that are now listed as HPI but which have not been recently assessed.

3.2 HABITAT SURVEY

OVERVIEW

3.2.1. The following account summarises the findings of the Phase 1 habitat survey. Twenty-eight Phase 1 habitat types were identified in the Site. They are mapped on Figure 8 and are listed in Table 3-6 along with areas in hectares (or meters for linear features). A description of the dominant and notable species, the composition and management of each habitat is provided below and an indicative species list is provided in Appendix C. Photographs of habitats and Target Notes are provided in Appendix D. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification (JNCC, 2010). The order of the habitat descriptions below reflects their ordering in the Phase 1 habitat survey manual and does not reflect habitat importance.

Table 3-6 - Phase 1 habitat Areas

Habitat	JNCC code	Area (ha)	Length (m)	% of Site Area
Broadleaved woodland - semi-natural	A1.1.1	2.14	-	2.64
Broadleaved woodland - plantation	A1.1.2	0.64	-	0.79
Dense scrub	A2.1	7.86	-	9.71
Scattered scrub (point data)	A2.2	-	-	-
Line of trees (broadleaved)	A3.1	-	85.5	-
Scattered trees – Broadleaved and Coniferous (point data)	A3.1/A3.2	-	-	-
Scattered trees/ neutral grassland - semi-improved	A3.3/B2.2	0.82	-	1.02
Neutral grassland - semi-improved	B2.2	8.02	-	9.90
Poor semi-improved grassland	B6	3.32	-	4.10
Other tall herb and fern - tall ruderal	C3.1	0.12	-	0.15
Other tall herb and fern - tall ruderal/ scattered scrub	C3.1/ A2.2	0.27	-	0.34
Swamp	F1	0.07	-	0.09
Sub-tidal water	G1	7.10	-	8.77
Running water	G2	<0.01	-	<0.01
Intertidal - mud/sand	H1.1	37.64	-	46.45
Intertidal - shingles/ cobbles	H1.2	1.86	-	2.30
Intertidal - boulders/ rocks	H1.3	0.32	-	0.39
Saltmarsh - scattered plants	H2.4	0.03	-	0.03
Coastal grassland	H8.4	0.45	-	0.56

Habitat	JNCC code	Area (ha)	Length (m)	% of Site Area
Hardstanding	HS	5.86	-	7.24
Amenity grassland	J1.2	1.04	-	1.28
Ephemeral/ short perennial	J1.3	0.24	-	0.30
Ephemeral/ short perennial / scattered scrub/ Tall ruderal	J1.3/ A2.2/ C3.1	0.23	-	0.28
Introduced shrub	J1.4	0.18	-	0.22
Fence	J2.4	-	4283.0	-
Wall	J2.5	-	247.6	-
Dry ditch	J2.6	-	95.2	-
Earth bank	J2.8	-	549.4	-
Buildings	J3.6	1.01	-	1.25
Bare ground	J4	1.79	-	2.21
Grand Total	**-**	**81.0**	**5260.6**	**100.00**

BROADLEAVED WOODLAND - SEMI-NATURAL (A1.1.1)

3.2.2. HIE supported four parcels of broadleaved woodland (BW1 – BW3 on Figure 8 and Photographs 1 – 3 in Appendix D) across the area.

3.2.3. BW1 was an unmanaged broadleaved semi-natural woodland in the south west of HIE. The canopy was dominated by mature hawthorn *Crataegus monogyna* with elm *Ulmus sp*. occurring rarely. Bramble *Rubus fructicosus* agg. was most frequent in the shrub layer, with occasional elder *Sambucus nigra* and dogwood *Cornus sanguinea*. The ground flora was sparse, with ivy *Hedera helix* locally abundant and the rare occurrence of lords and ladies *Arum maculatum*.

3.2.4. BW2 was an unmanaged woodland with occasional garden escapees such as cotoneaster *Cotoneaster* sp*.,* staghorn sumac *Rhus typhina* and rhododendron *Rhododendron* sp*.* (TN3) from dilapidated residence within. The woodland comprised an open structure with a mix of mature, semi-mature and dead/decaying trees. The canopy consisted of ash *Fraxinus excelsior*, silver birch *Betula pendula* and sycamore *Acer pseudoplatanus,* all reaching between 12m and 15m. To the east of the main abandoned building, a few apple *Malus domestica* trees occurred as an overgrown orchard (TN4 on Figure 8). The shrub layer comprised saplings of the aforementioned species, alongside mature bramble, elder, hawthorn, cherry species *Prunus* sp*.,* holly *Ilex aquifolium*. Ground flora was abundant with ivy and occasional stinking iris *Iris foetidissima*, lords and ladies and caper spurge *Euphorbia lathyris* rare.

3.2.5. BW3 was a small parcel of unmanaged semi-natural broadleaved woodland on the north-east boundary of HIE. The structure was open in places, with plenty of standing and fallen dead wood. The canopy was a mixture of oak *Quercus* sp. and ash, with the rare birch *Betula pubescens* and sycamore. Mature bramble was frequent in places within the understroy. Ivy was abundant as

ground flora, outcompeting the majority of other species, with rare butchers broom *Ruscus aculeatus*

3.2.6. Tipner Range supported two small parcels of semi-natural broadleaved woodland, both of the same composition (BW4 on Figure 8, Photograph 13 in Appendix D).

3.2.7. BW4 comprised two small parcels of semi-natural broadleaved woodland along sections of the northern and southern boundary of Tipner Range within TW. These were dominated by white poplar *Populus alba* with rare occurrences of ash and oak. The dominant species within the understory was bramble with rarely occurring elder.

BROAD-LEAVED WOODLAND – PLANTATION (A1.1.2)

3.2.8. Two parcels of plantation broadleaved woodland were present on HIE (PBW1 and PBW2 on Figure 8).

3.2.9. PBW1 comprised small parcel of plantation woodland within scrub east of HIE. The canopy was dominated by disease resistant elm, with a mature bramble understory that had begun encroaching and choking trees from the surrounding dense scrub. Little ground flora was present at the time of survey.

3.2.10. PBW2 was a small strip of woodland, approximately 5m to 8m in height, present on a landscaped bund adjacent to the hardstanding path south of HIE SINC. The canopy was made up of semi-mature ash, oak, hawthorn and elm. Bramble dominated the understory, which had a similar composition to DS4. Ground flora was largely absent due to being shaded out by the bramble dominated understory.

3.2.11. Two pockets of broad-leaved plantation woodland, PBW3 were present adjacent to the entrance of the firing range and to the north of the firing range car park (PBW3 on Figure 8 and Photograph 21 in Appendix D). These comprised young straight pole trees, approximately 8m in height. Ash, oak and white poplar were present with a bramble and hawthorn shrub layer.

SCRUB – DENSE/ CONTINUOUS (A2.1)

3.2.12. Dense continuous scrub, unmanaged and ranging from 1m to 3m, dominated the HIE area. Dense bramble dominated scrub was present along all boundaries with dog rose *Rosa canina* and hawthorn varying in frequency throughout. Ground flora was sparse, limited to the boundaries of the scrub due to shading (DS1, DS2 and DS4 on Figure 8 and Photographs 6 and 12 in Appendix D). Within one of the open areas of DS4, a few rarely occurring bee orchid rosettes *Ophrys apifera* were identified (TN1 on Figure 8, Photograph 30 and 31 in Appendix D). Few parcels were dominated by species other than bramble. Two parcels (DS5 and DS6 on Figure 8, Photograph 1 in Appendix D) of scrub surrounding BW1 comprised dominant hawthorn, with locally dominant stands of bramble. One parcel of scrub (DS3 on Figure 8, Photographs 4 and 5 in Appendix D), to the south of the swamp, consisted of only willow *salix* sp. scrub, approximately 4m high, within shallow standing water.

3.2.13. Parcels of dense bramble dominated scrub (DS7- DS11 on Figure 8, Photographs 14 – 19 in Appendix D)) were also present across TW. A stand of Japanese Knotweed *Reynoutria japonica* was identified within one of these parcels (TN7 on Figure 8, Photograph 36 in Appendix D).

3.2.14. The parcel of bramble dominant scrub to the south-west of Tipner Range (DS12) comprised a less dense structure and more species diversity, including willow, gorse *Ulex europaeus*, dog rose and

had a higher composition of ground flora, including yarrow *Achillea millefolium*, cleavers *Galium aparine* and ragwort *Jacobaea vulgaris*.

3.2.15. A parcel of mixed scrub (DS13 on Figure 8, Photograph 20 in Appendix D) to the east of the road leading to the park and ride. This comprised of a more open structure consisting of shrubs, approximately 2m in height, including blackthorn *Prunus spinosa*, hazel, hawthorn, silver, oak and willow. Ground flora included teasel *Dipsacus fullonum*, perennial rye grass *Lolium perenne* and butterbur *Petasites species*.

SCATTERED SCRUB (A2.2)

3.2.16. A single parcel of scattered scrub was present on the western border of HIE (see TR/SS1 on Figure 8, Photograph 7 in Appendix D) amongst tall ruderal. Butterfly bush *Buddleja davidii* was the dominant species occurring with occasional bramble.

3.2.17. Scattered bramble scrub is present on the less managed poor semi-improved grassland to the south and east of Tipner Range within TW.

SCATTERED TREES (A3.1/ A3.2) – BROADLEAVED AND CONIFEROUS

3.2.18. Broadleaved and coniferous scattered trees were present on the amenity grassland to the east of the M275 slipway and on the roundabout adjacent. Newly planted broadleaved trees were also present in parcels across the country park. Species within these parcels including wild cherry *Prunus avium*, sessile oak, buckthorn *Frangula alnus*, elm species, field maple *Acer campestre*, silver birch, gorse, common dogwood.

SEMI-IMPROVED NEUTRAL GRASSLAND (B2.2)

3.2.19. Three parcels of semi-improved neutral grassland were present across HIE (SNG 1- 3 on Figure 8, Photographs 8 – 10 in Appendix D).

3.2.20. SNG1 was a thin parcel of semi-neutral grassland surrounding the M275 balancing pond (present outside of the Site boundary). This was a short unmanaged grassland, with evidence of rabbit grazing, facing invasion from ruderal and scrub species such as blackthorn and bramble which were locally dominant and abundant respectively. Frequent species included common daisy *Bellis perennis*, spotted meddick *Medicago arabica* abundant, ribwort plantain *Plantago lanceolata*, willowherb species *Epilobium* sp*.*, yarrow with occasional cocksfoot *Dactylis glomerata*, fescue species *Festuca sp.*, vetch species *Vicia sp.* and ragwort. Butterburr was identified as locally abundant on the north-facing bank of the balancing pond.

3.2.21. SNG2 comprised of several parcels of unmanaged semi-improved grassland within the dense scrub. These grassland parcels were tussocky in places with short rabbit grazed areas. The grassland was facing encroachment by bramble and hawthorn. The dominant species was common bent *Agrostis capillaris*, with abundant ragwort and frequent perennial rye grass and fescue species. Ruderal species such as teasel, common nettle *Urtica dioica* and thistle species *Cirsium* sp. were also occasionally present. Stinking iris and hawthorn were rare within the plant community.

3.2.22. Semi-neutral grassland (SNG3) was present across the majority of the former landfill site, only parts of this grassland was present within the Site adjacent to the access road. The grassland was somewhat managed, with sward height reaching 10cm in places. Some parcels of grassland have been planted with immature trees, currently no more than 1m tall, the planting list for these has been included within Appendix B. Grassland species frequently identified included creeping buttercup

Ranunculus repens, white clover *Trifolium repens* , cocksfoot, dove's-foot crane's-bill *Geranium molle*, dock species *Rumex* sp*.,* meddick species *Medicago* sp*.,* bristly ox-tongue *Helminthotheca echioides*, ragwort, yarrow and Yorkshire fog *Holcus lanatus*.

3.2.23. Several parcels of semi-neutral grassland are present across Tipner West (SNG4 – 7, Photographs 21 – 23 in Appendix D).

3.2.24. SNG4 was a short sward, approximately 5cm, regularly managed as a path through the rough grassland (SNG5) in the northern section of Tipner Range. Another parcel, less managed of similar composition was also present to the north of Tipner Range and to the west of the main buildings. Both parcels comprised common bent, red clover *Trifolium pratense* and perennial rye grass abundant, cocksfoot, dove's-foot crane's-bill, common daisy and yarrow frequent. Mouse-ear chickweed *Stellaria media*, dandelion species *Taraxacum* sp*.,* ribwort plantain and ragwort were found occasional.

3.2.25. SNG5 occurred as several parcels within the north of Tipner Range. The sward was unmanaged, reaching heights of 30cm in places, and faced encroachment from bramble scrub, occurring occasionally. Species composition was richer than SNG4, most likely due to the lack of management SNG5 receives. Common bent, dove's-foot crane's-bill, fescue species and yarrow were abundant, cocksfoot frequent, creeping buttercup, creeping cinqfoil, red clover, goats rue *Galega officinalis*, meddick species, buckshorn plantain *Plantago coronopus*, ribwort plantain, timothy *Phleum pratense* and vetch species were found occasionally.

3.2.26. SNG6 was a regularly managed short sward <5cm, formally used as the main firing range of Tipner Range. During the time of survey, a large portion of the grassland to the east was covered with standing water. Common bent, common daisy, perennial rye grass and yarrow was abundant, mouse-ear chickweed, red clover, cocksfoot, dove's-foot crane's-bill, dandelion species and ribwort plantain was recorded as frequent. Meddick species and bee orchid (TN1 on Figure 8, Photograph 31 in Appendix D) were also recorded as locally frequent. Creeping buttercup, red deadnettle *Lamium purpureum*, bristly ox-tongue and ragwort were recorded as occasional.

3.2.27. The grassland immediately south of Tipner Range (SNG7), that forms part of the Portsmouth Harbour SSSI, was a short, managed sward, and had recently been cleared of bramble. It is often accessed by the public and used for dog walking. Common bent, meddick species and perennial rye grass were the most abundant species, with cocksfoot, dove's-foot crane's-bill, fescue species and bristly ox-tongue, ribwort plantain and yarrow recorded as frequent. The following were identified as occurring occasionally. Creeping buttercup, creeping cinqfoil, cleavers, white clover, red deadnettle, dock species, goats rue, buckshorn plantain, rush and vetch species.

POOR SEMI-IMPROVED GRASSLAND (B6)

3.2.28. One very small parcel of rabbit grazed poor semi improved grassland (SI(P)1 on Figure 8), approximately 5cm in height, was present in the south west section of HIE. This was dominated by perennial rye grass with frequent common daisy, stinking iris, creeping bent and yarrow.

3.2.29. Two large parcels of unmown long, coarse grassland were present on Tipner Range to the east and to south of the main access road (SI(P)2 and SI(P)3 on Figure 8, Photographs 25 - 27 in Appendix D). Both swards were dominated by perennial rye grass. Rarely occurring bee orchid rosettes (TN1) were also identified in SI(P)2.

OTHER TALL HERB AND FERN – RUDERAL (C3.1)

3.2.30. Two parcels of tall ruderal were present on HIE. One to the east of HIE, adjacent to the access road (TR1 on Figure 8, Photograph 11 in Appendix D)) and on parcel in the centre of HIE (TR2 on Figure 8, Photograph 12 in Appendix D).

3.2.31. TR1 comprised abundant teasel, frequent dock species, common nettle and willowherb species, occasional lesser burdock and rare hemlock *Conium maculatum* and ragwort.

3.2.32. TR2 comprised abundant teasel, frequent lesser burdock *Arctium minus*, common nettle, bristly ox-tongue and ragwort, occasional ivy and willowherb species and rare stinking iris.

OTHER TALL HERB AND FERN – RUDERAL/ SCATTERED SCRUB (C3.1/A2.2)

3.2.33. A thin parcel of mosaic of tall ruderal and scattered scrub on the western boundary of HIE (TR/SS1 on Figure 8, Photograph 7 in Appendix D)). Height of the scattered scrub varied across the parcel, with buddleia bushes reaching approximately 2m in height. Species included green alkanet *Pentaglottis sempervirens*, bracken *Pteridium aquilinum*, bramble, lesser burdock, cleavers, dogwood, elder, foxglove *Digitalis* sp., hemlock, hawthorn and stinking iris.

SWAMP (F1)

3.2.34. A small waterlogged area was present within HIE, bounded by willow scrub and marshy grassland (outside of the Site boundary). The parcel, SP1, was dominated sedge *Carex sp.* and had open water present (Photograph 5 in Appendix D).

RUNNING WATER (G2)

3.2.35. A ditch was present around the former landfill site on HIE, crossing under the access road and draining through to the M275 balancing pond. This was holding approximately 10 – 20cm of water at the time of survey.

INTERTIDAL – MUD/SAND (H1.1)

3.2.36. The majority of the intertidal area comprises mudflats. These were not assessed in detail during the Phase 1 survey, which covered terrestrial habitats only.

INTERTIDAL – SHINGLES/COBBLES (H1.2)

3.2.37. Shingle foreshore was present around TW and on the southern side of HIE, in both instances lying in front of rock gabion flood defences. The remains of World War II slipways were also present on the foreshore to the south of HIE (TN5 on Figure 8, Photograph 34 in Appendix D). These were not assessed in detail during the Phase 1 survey, which covered terrestrial habitats only.

INTERTIDAL – BOULDERS/ROCKS (H1.3)

3.2.38. Boulders/rocks were present as part of the sea defences around the inlet to the west of the M275 and behind the HIE World War II slipways. These were not assessed in detail during the Phase 1 survey, which covered terrestrial habitats only.

SALTMARSH – SCATTERED PLANTS (H2.4)

3.2.39. An area of scattered saltmarsh plants lies within the small shingle spur on the southern side of the Tipner peninsula (Photograph 28 in Appendix D). This area was not accessible during the survey in 2021, due to public presence and Covid-19 restrictions. However, the previous Phase 1 survey

identified sea purslane *Atriplex portulacoides*, annual sea-blite *Suaeda maritima*, cord-grass *Spartina* sp. and common reed *Phragmites australis*.

STRANDLINE VEGETATION (H5)

3.2.40. Strandline vegetation was present on the shingle spur to the south of Tipner Range and along the rock gabions which surround the Tipner peninsula. Sea beet and sea purslane were abundant and sea couch *Elytrigia atherica* frequent. Golden-samphire *Inula crithmoides* (TN8 on Figure 8, Photograph 37 in Appendix D) plants were recorded as locally abundant.

COASTAL GRASSLAND (H8.4)

3.2.41. The grassland west of TW (G1 on Figure 8, Photograph 24 in Appendix D lay on a flat area close to sea level and included some maritime species; this was therefore mapped as coastal grassland. Maritime species became more common on the interface between this grassland and the rock gabions leading down to the shore. Sea purslane, creeping bent, fescue sp. and yarrow were abundant within the grassland with creeping cinqfoil, goats rue, dove's-foot crane's-bill, thistle sp. occurring occasionally. Sea couch, sea beat, bristley ox-tongue, meddick sp. and white clover *Trifolium repens* occurring frequently. Mouse-ear chickweed and buckshorn plantain were recorded as locally abundant

3.2.42. Species present along the top of the rock gabions, at the interface with this grassland are described under strandline vegetation above.

AMENITY GRASSLAND (J1.2)

3.2.43. Small areas of amenity grassland which are close mown were also present within Tipner Range and the road verges on the Tipner peninsula.

EPHEMERAL/SHORT PERENNIAL (J1.3)

3.2.44. A parcel of ephemeral vegetation was present within the dense scrub north of the access road in the southern area of HIE. This has previously been mapped as semi-improved neutral grassland. However, at the time of survey, vegetation was very short, likely grazed by rabbits and comprised more of an ephemeral community dominated by bryophytes. Frequent species included: creeping bent, ragwort, bristley ox-tongue, creeping buttercup, fescue sp, teasel, meadow buttercup and thistle species.

3.2.45. Other ephemeral vegetation was present on the gravel area to the west of the Tipner Range firing wall (Photograph 29 in Appendix D). In this area sea couch was occasional to locally abundant, buckshorn plantain was locally frequent, mouse-ear chickweed, bent species *Agrostis sp.* and bristly ox-tongue frequent, daisy, yarrow, St John's wort *Hypericum sp.*, common chickweed *Stellaria media* and dandelion occasional. Bramble was abundant on the perimeter of this area, with buddleia also frequent along the boundary fence

LINE OF TREES – BROADLEAVED (A3.1)

3.2.46. A line of broadleaved trees ran adjacent to the road leading to the Harbour School. This comprised a linear feature of semi-mature ash and horse chestnut trees with a very short bramble understorey.

FENCE (J2.4)

3.2.47. Fences are present across the Site, as boundary features to Tipner Range and the M275.

WALL (J2.5)

3.2.48. Walls are present behind two of the shooting ranges within the Tipner Range. These are substantial structures designed to prevent bullets leaving the range.

EARTH BANK (J2.8)

3.2.49. Earth banks, supporting similar vegetation to the adjacent grassland, are present on the Tipner Range as part of the MOD infrastructure.

BUILDINGS AND HARDSTANDING (J3.6)

3.2.50. Buildings were also present within HIE, these included an old derelict farmhouse and a number of sheds and outbuildings buried in dense scrub. A couple of old boats were also present within this scrub. The buildings within HIE are all derelict or in disrepair.

3.2.51. Buildings were present on the Tipner Range, comprising a range of buildings including single storey buildings with tiled roofs or flat felt roofs and sheds and open sided shelters. A concrete searchlight plinth is also present on the northern side, within dense scrub.

BARE GROUND (J4)

3.2.52. Small areas of bare ground were present within HIE and Tipner Range, associated with tracks, car parks and ranges.

3.3 PROTECTED AND NOTABLE SPECIES ASSESSMENT

3.3.1. The field survey and desk study have identified the presence of the following designated sites or habitats within the Site; please see Section 3.1 for further details:

- SPA, Ramsar and SSSI; and
- HPI.

3.3.2. In addition, the field survey, desk study and review of earlier project reports have confirmed the presence or potential presence of the following protected or notable species groups:

- Bats;
- Badgers;
- Other Mammals
- Birds (wintering and breeding);
- Reptiles;
- Terrestrial invertebrates;
- Terrestrial plants;
- Marine mammals;
- Fish;
- Marine invertebrates; and
- Marine plants and algae;

3.3.3. The water bodies present were marine/brackish and therefore not considered to provide suitable breeding habitat for great crested newt. In addition, though rough grassland, scrub and woodland provided suitable terrestrial habitat, the Site is isolated from potential source populations by the urban area of Portsmouth, the nearest record is approximately 2.5km north west of the Site boundary. This assessment aligns with the conclusion Atkins (2015a) made that great crested newt were likely absent, based on a combination of habitat suitability assessment and presence/likely absence survey of one water body.

3.3.4. The nearest hazel dormouse record to the Site is 3.5km north of the Site boundary. Although scrub and woodland throughout the Site could provide suitable habitat for hazel dormouse, it is considered that hazel dormouse are likely absent due to developments surrounding the Site and isolation from other habitat by the M275/M27 and built areas. This assessment aligns with the conclusion Atkins (2015) made.

3.3.5. The nearest European water vole record to the Site was 3.7km east of the Site boundary. European water vole is considered absent from the Site. The habitat was not considered suitable to support water vole as it was isolated from other habitat and potential source populations by the tidal waters of Portsmouth Harbour and the built development of Portsmouth.

3.3.6. Otter could use the coastal habitats as part of a wider range, but no records were identified within 5km and this species was not considered to place constraints on the Site.

BATS

3.3.7. The desk study returned nine species of bats within 5km of the Site boundary and four sets of records where bats were identified to genus level. The closest of these records was for an unidentified pipistrelle species *Pipistrellus sp.* approximately 0.7km west of the Site boundary.

3.3.8. The majority of records were for common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* which together formed over half the records for bats returned.

3.3.9. Atkins surveys in 2015 (Atkins, 2016) identified potential roost features on several buildings and trees, but no roosts were identified after a combination of external and internal inspection surveys, emergence and re-entry surveys.

3.3.10. The Phase 1 survey undertaken on several dates in 2015 and 2016 by WSP (WSP, 2018a) identified buildings within Tipner Range and HIE as having potential roost features for bats during the active season; features included potential entry points under soffits, missing cladding and cracks or open windows enabling entry to disused buildings. The majority of trees present within the semi-natural broad-leaved woodland, broad-leaved plantation woodland and scrub were young or semi-mature and lacked rot cavities or splits at the time of survey.

3.3.11. A detailed external inspection of the search light plinth within Tipner Range was completed in March 2016 (WSP, 2016). The structure was previously assessed as having moderate potential to support hibernating bats but an inspection using an endoscope confirmed no prior or current use of roosting bats.

3.3.12. A ground level preliminary bat roost assessment (PBRA) undertaken in November 2020 identified a total of 25 buildings, one structure and 18 trees as having suitability to support roosting bats. (WSP, 2022c)

3.3.13. The woodland, scrub and grassland habitats present provided suitable foraging habitat for bats; but the exposed coastal location is likely to limit the value of these, combined with the relative isolation from other substantial areas of suitable habitat by the built development of Portsmouth. It is considered likely that only common species of bats which are well adapted to urban areas and not light-sensitive such as common pipistrelles and soprano pipistrelles are able to utilise the Site.

3.3.14. Bat emergence/re-entry surveys were undertaken of 20 built structures and nine trees across the Site from May 2021 to July 2021, no evidence of bat roosting activity was identified during these surveys. However, five structures within Tipner West could not be surveyed as a result of access issues (WSP, 2022d).

BADGER

3.3.15. Thirty records of badger within 5km of the Site boundary were returned by the desk study, the nearest of these records was recorded in 2012 approximately 0.4km northeast of the Site, specifically the Site access road. Scrub and woodland habitat present on HIE was suitable for badgers and TW also provided potential foraging habitat for this species, with rough grassland and scrub present. Sett construction suitability may have increased since, particularly on Tipner Range, since the site has become disused by the MOD, particularly on the spoil piles and bunds in the northwest. However, the entirety of the Site is relatively isolated by the M275 and urban development.

3.3.16. Badgers were considered to be absent in 2015 (Atkins, 2016a) and no evidence of presence was noted during the 2015-16 field surveys either. An updated badger survey walkover was undertaken in March 2021, which concluded that badgers were absent from Site (WSP, 2022e).

OTHER MAMMALS

3.3.17. The desk study returned records of four species listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act as Species of Principal Interest (SPI) within 5km of the Site Boundary. These species included brown hare, *Lepus europaeus*, harvest mouse *Micromys minutus* and West European Hedgehog *Erinaceus europaeus*. The Site is most likely too isolated to support populations of brown hare and harvest mice, given the nearest records are over 2km north/northwest of the Site and separated by built areas and the M275. The nearest record for hedgehog is approximately 0.1km southeast of the Site. Suitable scrub, woodland and grassland habitat is present across TW and HIE. Due to the proximity of the records, it is likely that hedgehog could be present on the Site.

3.3.18. Red foxes *Vulpes vulpes* have been identified on Tipner Range during the Phase 1 Habitat survey, and two fox dens have been recorded (TN6 on Figure 8, Photograph 35 in Appendix D). Rabbit activity has also been recorded across both sites with droppings found within many of the grasslands across TW and HIE.

BIRDS

3.3.19. Portsmouth Harbour (comprising intertidal, subtidal and shoreline habitats) was suitable for a range of water birds both within and adjoining the Site. It is a designated internationally and nationally important for a range of water bird species (see Section 4.1).

3.3.20. One hundred and forty-three species of protected and/or notable bird within 5km of the Site boundary were returned by HBIC. Of these, 54 species are listed on Annex 1 of the Birds Directive and an additional 30 species are listed on WCA Schedule 1.

3.3.21. Multiple wintering bird surveys have been undertaken in the past 11 years: 2009/10 (Environmental Gain Ltd, 2010), 2014/15 (Atkins, 2016b), 2015/16, 2016/17, 2017/18 (WSP, 2018b), 2019/20 (WSP, 2020) and 2021/22 (WSP, 2022f). During these surveys, all five species which form reasons for designation of Portsmouth Harbour SPA were recorded within the Wintering Bird Survey Area. Brent geese, in particular, have been repeatedly recorded roosting on Tipner Range throughout all these surveys and incidentally during other species surveys.

3.3.22. The Site is also situated within the Solent and Dorset Coast SPA designated for foraging terns. As such, WSP undertook tern foraging surveys in 2020 and 2021 (WSP, 2022a). These surveys identified common terns and sandwich terns foraging within the waters of the Site.

3.3.23. Scrub, woodland and grassland across the site is suitable for widespread species of breeding bird, such as robins, wrens and including species of conservation concern such as skylark. The habitat assessment confirmed the habitats continued to be suitable to support a similar range and number of breeding birds as the assemblage recorded within the 2015 breeding bird survey (Atkins, 2016c).

3.3.24. A breeding pair of Cetti's warbler *Cettia cetti*, listed on WCA Schedule 1 have been identified on the 2015 breeding bird survey (Atkins, 2016c) and incidentally recorded on surveys as recently as 2021. Atkins also identified peregrine *Falco peregrinus*, another species listed on WCA Schedule 1, offsite on their breeding bird surveys. Since these surveys, a pair of peregrines have been incidentally recorded within the Site, specifically TW and performing territorial behaviour in response to a third individual.

3.3.25. Sixty-four records for black redstart *Phoenicurus ochruros* within 5km of the Site boundary were returned by the desk study, the most recent of which was in 2018. There is likely suitable habitat for breeding black redstart within TW, notably within Tipner Range and Pounds Marine.

3.3.26. Breeding bird surveys were undertaken in Spring 2021, and a total of 61 species were recorded on or over the Site during the breeding bird surveys, of these 37 have further legal protection or are species of conservation concern. A total of 39 species are considered confirmed, probable or possible breeders on the Site, of which 21 have further legal protection or are species of conservation concern. Barn owl, peregrine and Cetti's warbler, species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were probable breeders on Site (WSP, 2022g).

3.3.27. Barn owl pellets were identified in one of the structures on Tipner Range by Atkins and WSP on several surveys. Stage 1, 2 and 3 Barn Owl surveys undertaken by WSP in 2020 and 2021 which identified two potential nesting sites (one of which is an active roost site and the other classed as a precaution), as well as nine built structures and one mature tree and a telegraph pole that offer potential temporary resting sites (WSP, 2022b). Inspection of the active roosting site by Atkins in 2015 suggested that the barn was not used for breeding (Atkins, 2016b).

REPTILES

3.3.28. Two reptile species were identified within 5km of the Site boundary by the desk study. Common lizard *Zootoca vivipara* was recorded approximately 1.7km north of the Site boundary and slow worm *Anguis fragilis* was recorded approximately 1.1km west of the Site boundary.

3.3.29. Rough grassland with associated scrub could provide suitable foraging and refuge habitat for widespread species of reptile such as common lizard, slow worm and grass snake *Natrix helvetica* the Tipner peninsula, within and adjoining the fenced firing range. HIE also provided a matrix of scrub and grassland which is seasonally waterlogged and suitable for reptiles. Areas of marshy grassland and swamp could also provide suitable foraging for grass snake. The former landfill area also comprised suitable rough grassland. Both sites had rubble piles or woodpiles within suitable reptile habitat that could serve as reptile refugia (TN2 on Figure 8, Photograph 32 in Appendix D)

3.3.30. Previous surveys have recorded discrete populations of common lizard on Tipner Range and slow worm on HIE (Atkins, 2015b).

3.3.31. Surveys were undertaken between March and May 2021 to assess the current distribution of reptiles across the Site reptiles on TW and HIE. A population of common lizard was found on TW and a population of slow worm was recorded on HIE. A range of ages (juvenile, subadult and adult) were found for both species; indicating breeding populations were present on Site. As estimated from peak adult counts, a 'good' population of slow worms are expected at HIE and an 'exceptional' population of common lizard at TW (WSP, 2022h).

TERRESTRIAL INVERTEBRATES

3.3.32. The matrix of scrub, grassland, woodland, ruderal, coastal shingle and disturbed ground habitats within the terrestrial component of the Site was suitable to support a variety of terrestrial invertebrates; including SPI and nationally scarce species. Three hundred and seven records of invertebrates were identified (see Appendix B), 64 of which are listed as SPI and one, swallowtail *Papilio machaon,* are protected by the WCA (1981). Surveys undertaken by Conops Entomology Ltd (2016) on behalf of Atkins in 2015 identified many invertebrate species, including species of District interest and SPIs.

3.3.33. A report prepared by Conops Entomology Ltd (2021), identified that surveys at TW recorded 205 species, with 17 being of national significance and surveys at HIE recorded 213 species, 14 of which are listed as scarce or threatened. Some of the species recorded at the sample locations are also significantly scarce or noteworthy. For TW, the stiletto fly *Thereva fulva* is an important species, as it is not only Nationally Rare but also listed as being Nationally Threatened. HIE has been shown to hold a colony of the white-letter hairstreak (WLH), an SPI. The presence of WLH is significant, as the larval foodplant for this species is elm (*Ulmus spp*.) and as such it is only recorded where semi-mature to mature elms are present.

PLANTS

3.3.34. The desk study returned records for 126 species of protected and notable plant species within 5km of the Site boundary.

3.3.35. Several notable plants were recorded within the Site during targeted botanical surveys (Atkins, 2016e). These remained present in the locations specified during fieldwork completed in 2016 (WSP, 2018a) and included annual beard grass, divided sedge and golden-samphire.

3.3.35.1 Surveys undertaken by HBIC of the Horsea Island SINC (HBIC, 2018), identified divided sedge, annual beard grass and purple small-reed on the Site. Several coastal species were identified on the survey, including sea beat, sea purslane and buck's horn-plantain.

3.3.36. During the habitat survey in 2021, golden samphire was observed at TW (TN8 on Figure 8). Bee orchid rosettes were also identified throughout Tipner Range and on HIE (TN1 on Figure 8). The other notable plants previously identified are likely still present but may not have been identified due to the timing in which the Phase 1 survey took place.

3.3.37. The habitat survey in 2021 also located a parcel of elm trees (PBW1). These elms are cultivars, resistant to Dutch elm disease, have been planted at HIE over the last 20 years and some are now semi-mature. More of these trees are scattered central and north-east parts of HIE. There is also some natural regen of native elms (likely *Ulmus procera*) to the southern edge.

3.3.38. Further botanical surveys were undertaken in May 2021 following NVC guidance. Three nationally scarce and Hampshire BAP plants were recorded during the botanical survey; divided sedge (also an SPI), annual beard-grass within HIE and golden samphire within TW. The county scarce purple small-reed was also recorded within HIE (WSP, 2022i).

MARINE MAMMALS

3.3.39. The desk study returned records for unidentified seal species *Phocidae spp.*, harbour seal *Phoca vitulina*, grey seal *Halichoerus grypus* and fin whale *Balaenoptera physalus* (deceased) within 5km of the Site boundary. The nearest of these records was for a grey seal in 2017, within 100m from the Site boundary in Tipner Lake.

3.3.40. Wintering bird surveys (WSP, 2018b) and a marine mammal survey (WSP, 2022j) undertaken by WSP identified individual harbour seals foraging within the Site within Tipner Lake and under the M275 bridge.

3.3.41. Dolphins and porpoises are likely uncommon in Portsmouth Harbour, with no records returned by the desk study within 5km of the Site in the last 10 years and only three records returned for bottlenose dolphin *Tursiops truncates* outside of this period. Portsmouth Harbour is likely unsuitable

for regular foraging by small cetaceans, such as dolphins and porpoises, due to shallow depth of the harbour and near constant boat traffic, particularly at the narrow entrance.

FISH

3.3.42. Portsmouth Harbour has potential to support a variety of species of fish that use estuarine habitats or migrate through these. The harbour serves a nursery area for a range of commercially important fish including: European sea bass *Dicentrarchus labra*, bream species *Abrumis sp.*, mullet species, herring *Clupea sp*., sprat *Sprattus sp.* and wrasse species *Labridae sp.*. The area has been identified as especially important for European sea bass and is a designated bass nursery protected under the Bass Order (HMSO, 1999). The Harbour is also used by a range of migratory species, including sea/brown trout *Salmo trutta* and European eel *Anguilla anguilla*. Both of which are listed as NERC SPI and the later protected by The Eels (England and Wales) Regulations 2009 (HMSO, 2009).

3.3.43. Ecospan surveys undertaken in 2017 (Ecospan Environmental Ltd, 2017) identified the following fish species within the Site boundary: European sea bass, thick lipped mullet *Chelon labrosus*, thin lipped mullet *Liza ramada*, golden grey mullet *Liza aurata*, sand smelt *Atherina presbyter*, greater pipefish *Syngnathus acus*, long spined bullhead *Taurulus bubalis*, cod *Gadus morhua*, five bearded rockling *Ciliata mustela*, black goby *Gobius niger* and sand goby *Pomatoschistus minutus*. A short snouted seahorse *Hippocampus hippocampus* was also captured during one of the surveys. This species is protected under WCA Schedule 5 and is also a UK BAP species.

3.3.44. Additional marine ecological surveys were undertaken in 2021 to specifically identify species in the inter-tidal area around Tipner West and the adjacent channels. The inter-tidal areas are used by a variety of pelagic fish and several fish species of conservation importance including European eel (EcoSpan Environmental Ltd, 2021).

MARINE INVERTEBRATES

3.3.45. The mudflats support a diverse benthic community of marine invertebrates. Two species listed as threatened or declining by OSPAR were encountered during Ecospan surveys in 2017 (Ecospan Environmental Ltd, 2017). Ocean quaghog *Arctica islandica* and the European oyster *Ostrea edulis* (also UK BAP species). Oysters were distributed fairly widely across the mid to low part of the inter-tidal particularly in the vicinity of Portchester Lake and in front of the range at Tipner. Ocean quahog was found in a small area on the low shore south of HIE, although is probably more widespread.

3.3.46. Other invertebrates such as cockles *Cerastoderma edule,* mud-snail *Peringia ulvae,* nematode species and polychaete species were also identified by Ecospan throughout the Marine Survey Areas. These are particularly notable as they form an important food source for many of the birds species that Portsmouth Harbour SPA, SSSI and Ramsar is designated for. For a comprehensive list of the species identified, please see the Ecospan report (Ecospan Environmental Ltd, 2017)

3.3.47. Additional marine ecological surveys were undertaken in 2021 to specifically identify marine invertebrate species in the inter-tidal area around Tipner West and the adjacent channels. For detailed results please refer to the marine ecology report (Ecospan Environmental Ltd, 2021).

MARINE PLANTS AND ALGAE

3.3.48. The desk study returned records of eelgrass *Zostera (Zostera) marina* and dwarf eelgrass *Zostera (Zosterella) noltei* within 5km of the Site boundary. The presence of these plants was confirmed by

Ecospan (Ecospan Environmental Ltd, 2017) in reporting inter-tidal seagrass habitat within the Site boundary. Eelgrass beds are important nursery habitats for a range of marine fish species.

3.3.49. It was noted that extensive macroalgal mats were observed within Tipner Lake, which borders the east of Site. Although this is a sign of eutrophication, the surveys identified an abundance of prey items such as mud-snail *Peringia ulvae,* crustaceans and cockles which would serve as a prey source for birds in the area.

3.3.50. Additional marine ecological surveys were undertaken in 2021 to specifically identify marine plant species in the inter-tidal area around Tipner West and the adjacent channels. The extent of macroalgal mats observed in 2021 had grown when compared to that observed in 2017. For detailed results please refer to the marine ecology report (Ecospan Environmental Ltd, 2021).

NON-NATIVE INVASIVE PLANT SPECIES

3.3.51. The data search returned records of 50 plant species listed as invasive and/or non-native within 5km of the Site boundary. Of these, 17 species are listed on WCA Schedule 9 as invasive species. The nearest records were recorded within in the Site boundary and comprised Giant Hogweed *Heracleum mantegazzianum,* Japanese Knotweed and Nuttall's Waterweed *Elodea nuttallii.*

3.3.52. Stands of Japanese knotweed were identified during the Phase 1 habitat survey on TW, in the grassland south of Tipner Range (TN7 on Figure 8, Photograph 37 in Appendix D).

3.3.53. Several introduced plants species were identified on HIE within the vicinity of the derelict house (TN3 on Figure 8, Photograph 33 in Appendix D), these included cotoneaster species *cotoneaster* sp*.* Rhododendron *Rhododendron* sp*.* and staghorn sumac *Rhus typhina.*

ANIMAL SPECIES LISTED ON SCHEDULE 9 OF THE WILDLIFE AND COUNTRYSIDE ACT

3.3.54. The data search returned records of six animal species listed on WCA Schedule 9, within 5km of the Site boundary. These included grey squirrel *Sciurus carolinensis,* muntjac *Muntiacus reevesi,* bar-headed goose *Anser indicus,* Canada goose *Branta canadensis,* mandarin duck *Aix galericulata* and signal crayfish *Pacifastacus leniusculus.* The nearest of these species Canada goose, was recorded on site in 2019. This species has also been recorded incidentally roosting on Tipner Range on many occasions.

3.3.55. The Ecospan marine surveys undertaken in 2017 and 2021 (Ecospan Environmental Ltd, 2017 & Ecospan Environmental Ltd, 2021) identified several invasive non-native species throughout the Site. These included the slipper limpet *Crepidula fornicata,* Pacific oyster *Magallana gigas,* Manila clam *Ruditapes phillippinarum,* Australasian barnacle *Austriminius modestus,* leathery sea squirt *Styela clava* and the San Diego sea squirt *Botrylloides diegensis.*

4 CONCLUSIONS

4.1.1. The ecological desk study identified nine statutory designated sites of European or international importance within 10km of the Site boundary. Two further statutory designated sites of national importance and nine non-statutory designated sites were identified within 2km. Four of the statutory designated sites occur within the Site boundary, as Portsmouth Harbour Ramsar, SPA and SSSI and Solent and Dorset Coast SPA. Six sites listed within the Solent Wader and Brent Goose Strategy 2020 (HIWWT, 2020) also lie within the Site boundary.

4.1.2. Four habitats listed as HPI occur within the Site boundary, these were deciduous woodland, coastal and floodplain grazing marsh, lowland calcareous grassland and mudflats. Surveys undertaken in 2017 also identified intertidal seagrass within Tipner Lake.

4.1.3. Previous surveys have identified wintering birds, breeding birds, foraging bats, reptiles, invertebrates (terrestrial and benthic), notable plants, fish and marine mammals on the Site. Surveys are currently ongoing to better understand the species use of this Site.

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6 FIGURES

Figure 1- Site Location Plan

Figure 2- Internationally Designated Statutory Sites within 10km

Figure 3- Nationally Designated Statutory Sites within 2km

Figure 4- Non-statutory Designated Sites within 2km

Figure 5- Solent Wader and Bent Goose Strategy Sites within 2km

Figure 6- Habitats of Principal Importance within 2km

Figure 7- Waterbodies within 500m

Figure 8- Phase 1 Habitat Map

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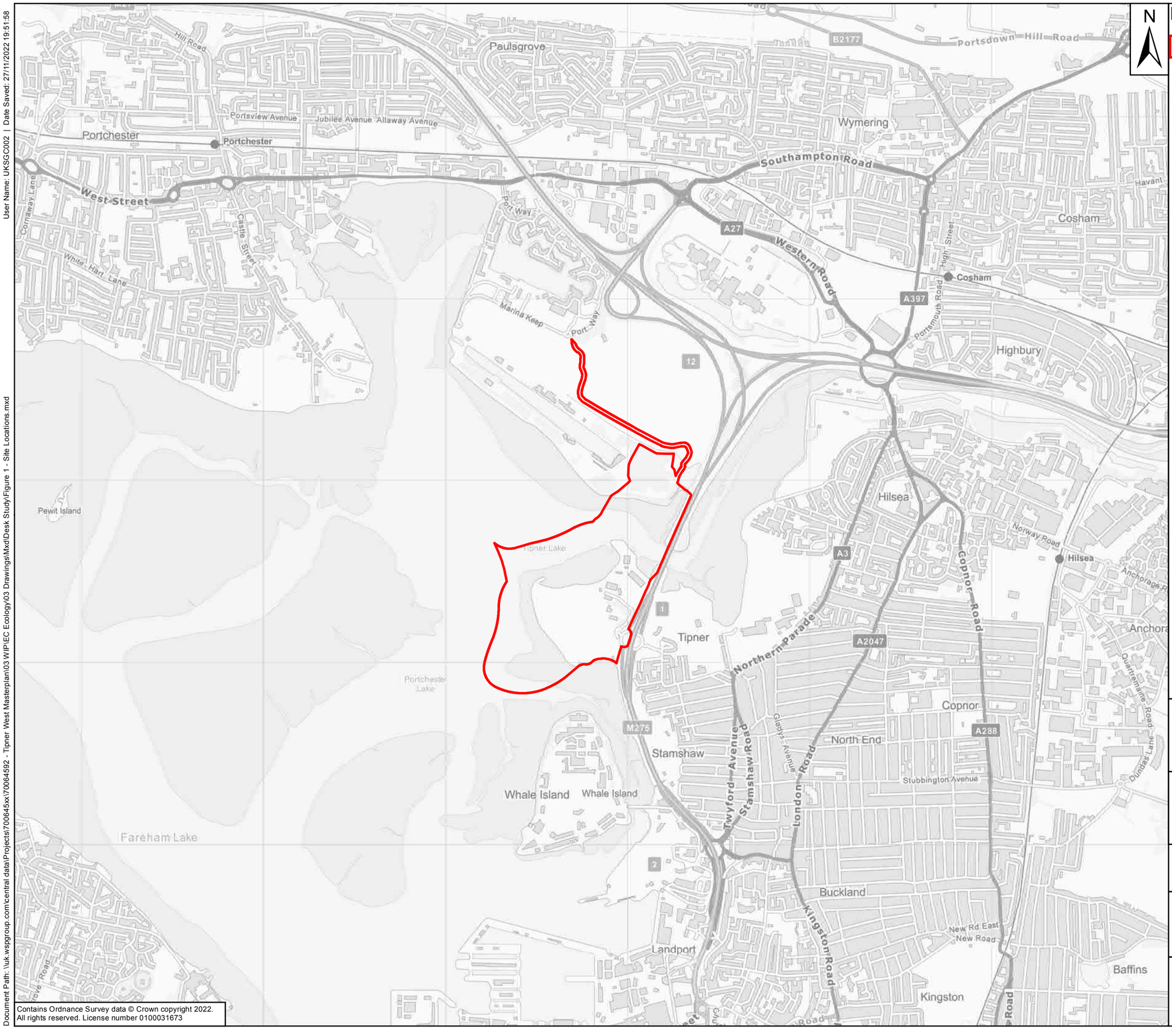

N

Key

Tipner West Indicative Boundary

0 0.35 0.7 1.05 Kilometers

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Site Location Plan

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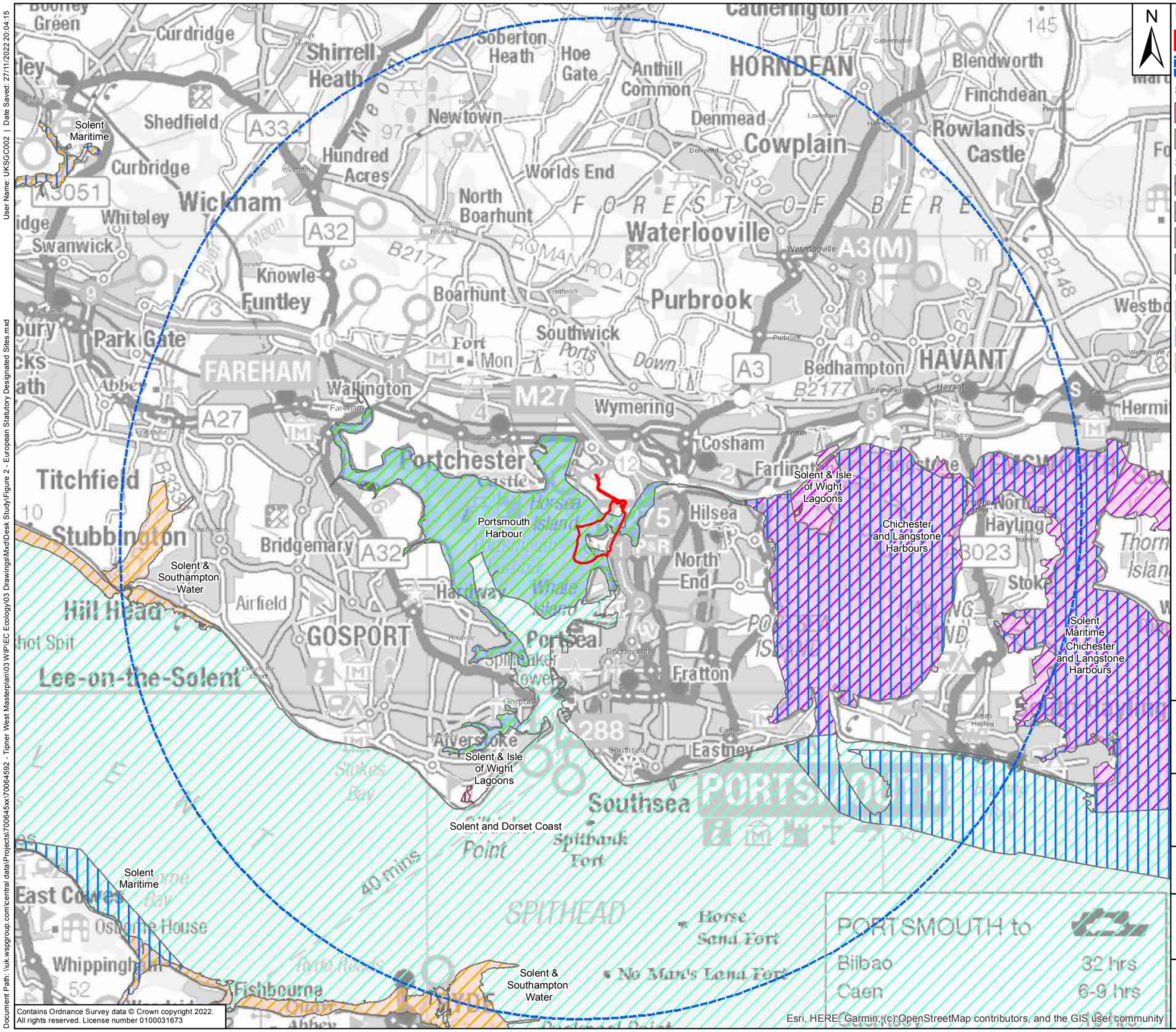

N

Key

- Tipner West Indicative Boundary
- 10km Search Area

Special Area of Conservation (SAC)

- Solent & Isle of Wight Lagoons
- Solent Maritime

Special Protection Area (SPA)

- Chichester and Langstone Harbours
- Portsmouth Harbour
- Solent & Southampton Water
- Solent & Dorset Coast

Ramsar Site - Wetland of International Importance

- Chichester and Langstone Harbours
- Portsmouth Harbour
- Solent & Southampton Water

0 1 2 3 Kilometers

wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Internationally Designated Statutory Sites within 10km

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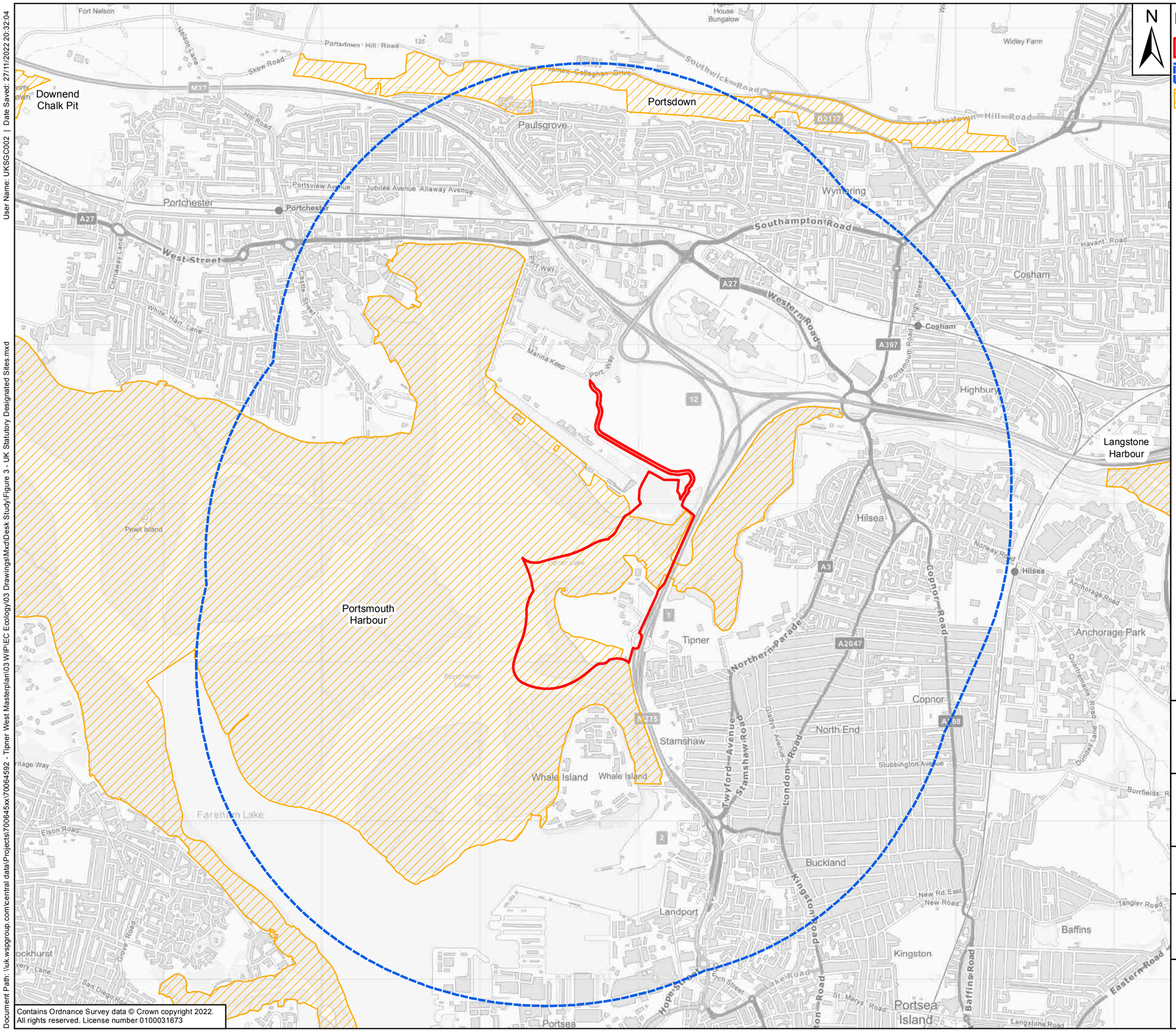

N

Key

- Tipner West Indicative Boundary
- 2km Search Area
- Site of Special Scientific Interest (SSSI)

0 0.4 0.8 1.2 Kilometers

wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Nationally Designated Statutory Sites within 2km

Drawing No:	Figure 3	Drawn:	RD
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James Callaghan Drive

Paulsgrove Chalk Pit

Castle Shore Park

Portchester Paddock

Urchins Copse

East of Lakeside

Hilsea Lines

Horsea Island

Tipner Ranges (part)

N

Key

- Tipner West Indicative Boundary
- 2km Search Area
- Site of Importance for Nature Conservation (SINC)

0 0.4 0.8 1.2 Kilometers

wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Non-statutory Designated Sites within 2km

Drawing No:	Figure 4	Drawn:	RD
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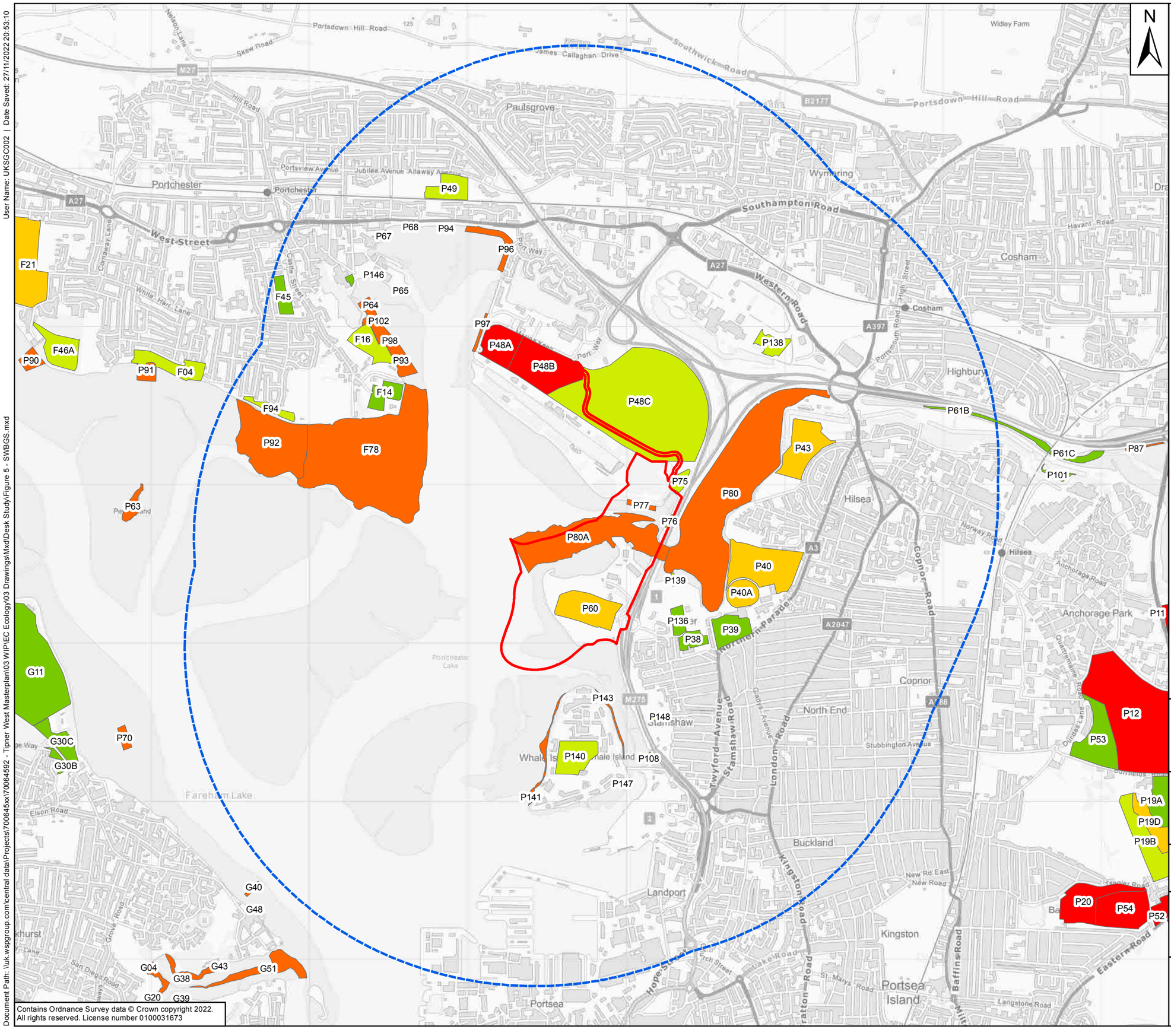

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wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Solent Wader and Brent Goose Sites within 2km

Drawing No: Figure 5
Date: November 2022
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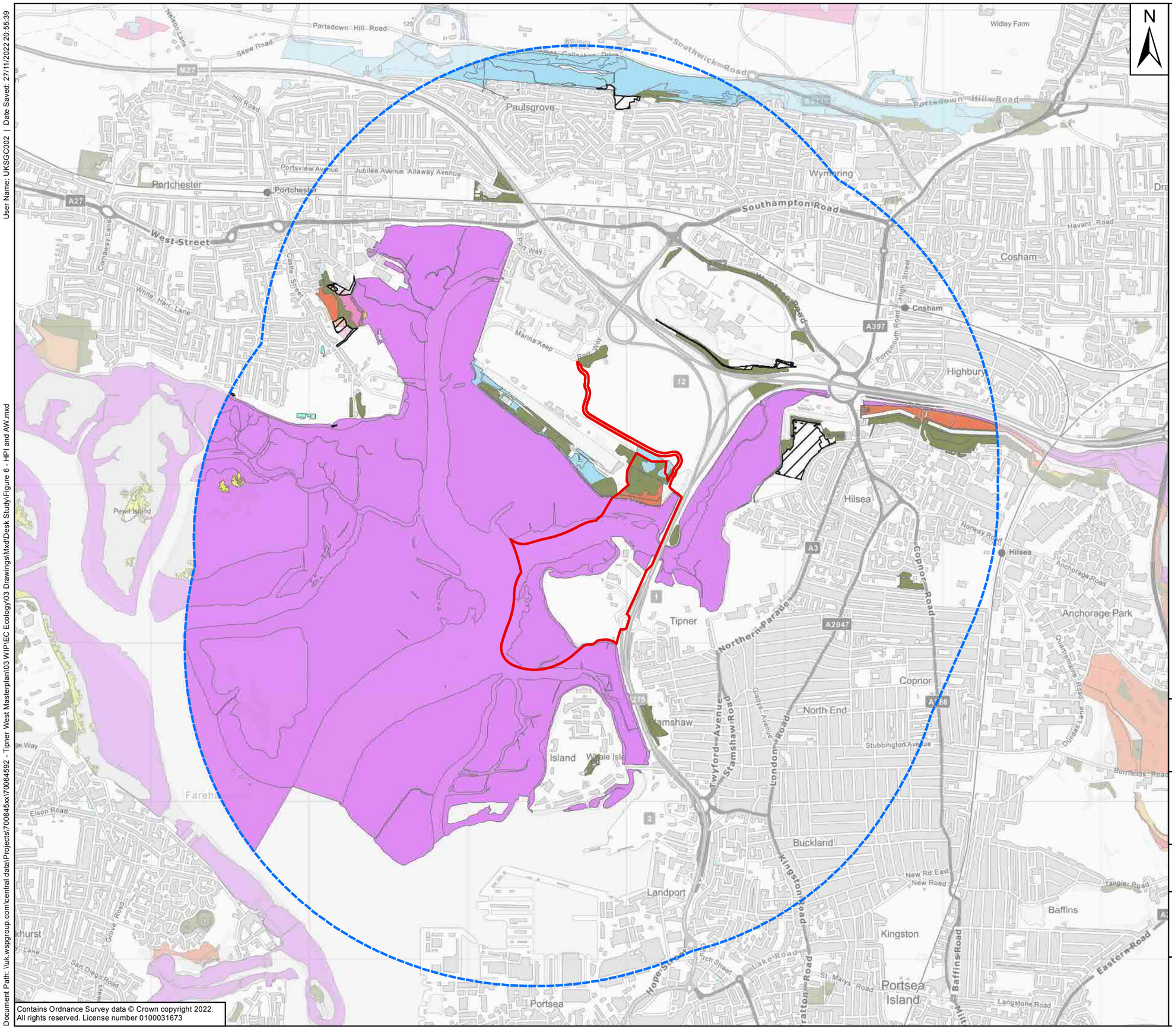

Key

- Tipner West Indicative Boundary
- 2km Search Area

Habitats of Principal Importance

- Coastal and floodplain grazing marsh
- Coastal saltmarsh
- Deciduous woodland
- Good quality semi-improved grassland (Non-priority)
- Lowland calcareous grassland
- Mudflats
- Traditional orchard
- No main habitat but additional habitats

0 0.4 0.8 1.2 Kilometers

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wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Habitats of Principal Importance within 2km

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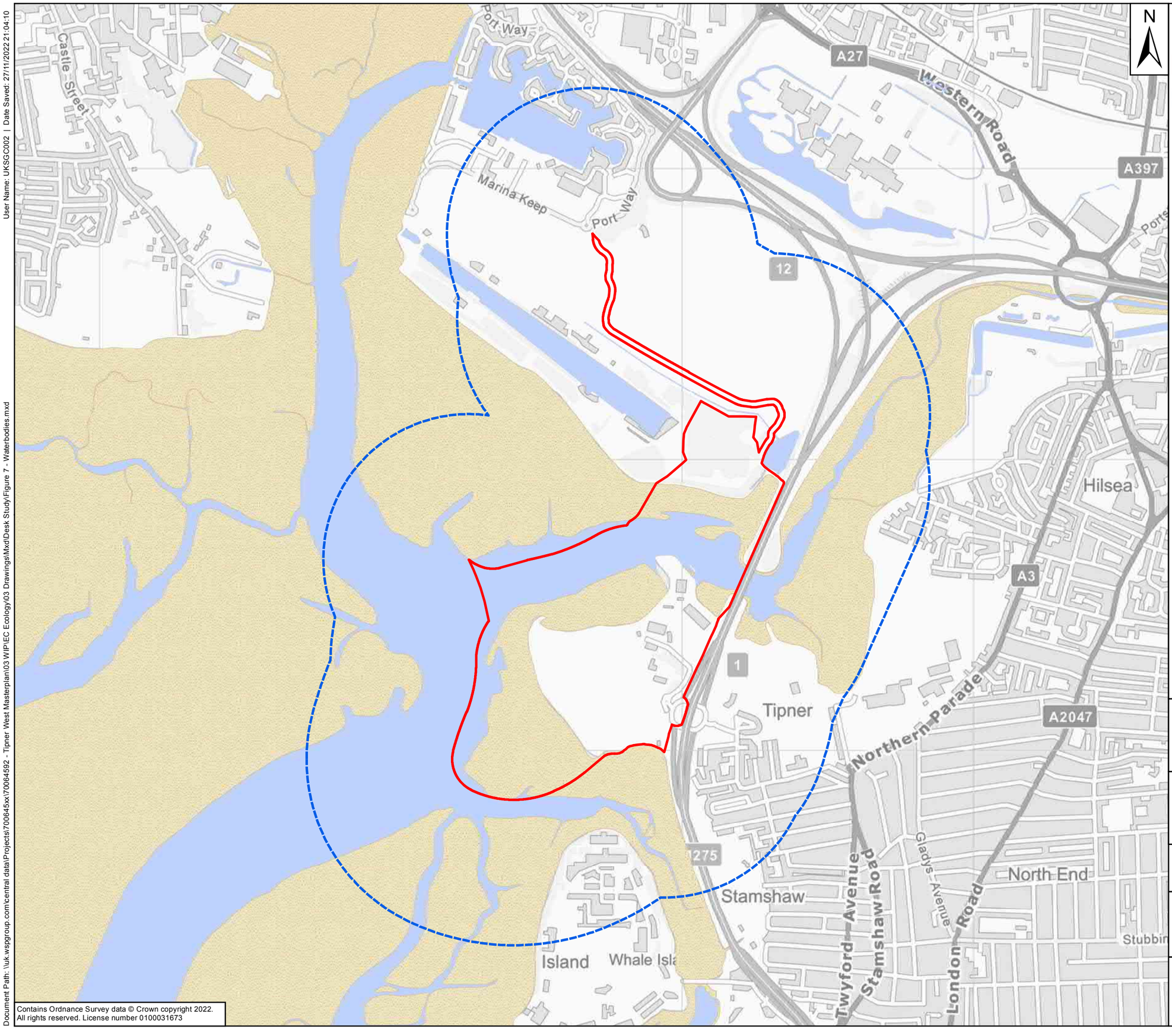

N

Key

- Tipner West Indicative Boundary
- 500m Search
- River Lines
- Foreshore
- Water

0 0.2 0.4 0.6 Kilometers

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wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Waterbodies within 500m

Drawing No:	Figure 7	Drawn:	RD
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N

Key

- Tipner West Indicative Boundary

Phase 1 Habitats

- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Scrub - dense/continuous
- Neutral grassland - semi-improved/ Broadleaved Parkland/scattered trees
- Neutral grassland - semi-improved
- Poor semi-improved grassland
- Other tall herb and fern - ruderal
- Other tall herb and fern - ruderal / Scrub - scattered
- Swamp
- Sub-tidal water
- Running water
- Intertidal - mud/sand
- Intertidal - shingles/cobbles
- Intertidal - boulders/rocks
- Saltmarsh - scattered plants
- Coastal grassland
- Hardstanding
- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - ephemeral/short perennial
- Cultivated/disturbed land - ephemeral/short perennial / Scrub - Scattered scrub/ Other tall herb and fern - ruderal
- Introduced shrub
- Buildings
- Bare ground
- Land not accessed but mapped from aerial
- Line of trees - broadleaved
- Fence
- Wall
- Dry ditch
- Earth bank
- Target Note
- Coniferous parkland/scattered trees
- Broadleaved parkland/scattered trees
- Scrub - scattered

Subtidal

0 150 300 Metres

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Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Phase 1 Habitat Map

Drawing No:	Figure 8	Drawn:	RD
Date:	November 2022	Checked:	BW
Scale:	7,300 @ A3	Approved:	OP

N

Key

- Tipner West Indicative Boundary

Phase 1 Habitats

- Broadleaved woodland - semi-natural
- Broadleaved woodland - plantation
- Scrub - dense/continuous
- Neutral grassland - semi-improved/ Broadleaved Parkland/scattered trees
- Neutral grassland - semi-improved
- Poor semi-improved grassland
- Other tall herb and fern - ruderal
- Other tall herb and fern - ruderal / Scrub - scattered
- Swamp
- Sub-tidal water
- Running water
- Intertidal - mud/sand
- Intertidal - shingles/cobbles
- Intertidal - boulders/rocks
- Hardstanding
- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - ephemeral/short perennial
- Cultivated/disturbed land - ephemeral/short perennial / Scrub - Scattered scrub/ Other tall herb and fern - ruderal
- Buildings
- Bare ground
- Land not accessed but mapped from aerial
- Fence
- Dry ditch
- Target Note

wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Phase 1 Habitat Map

Drawing No:	Figure 8	Drawn:	RD
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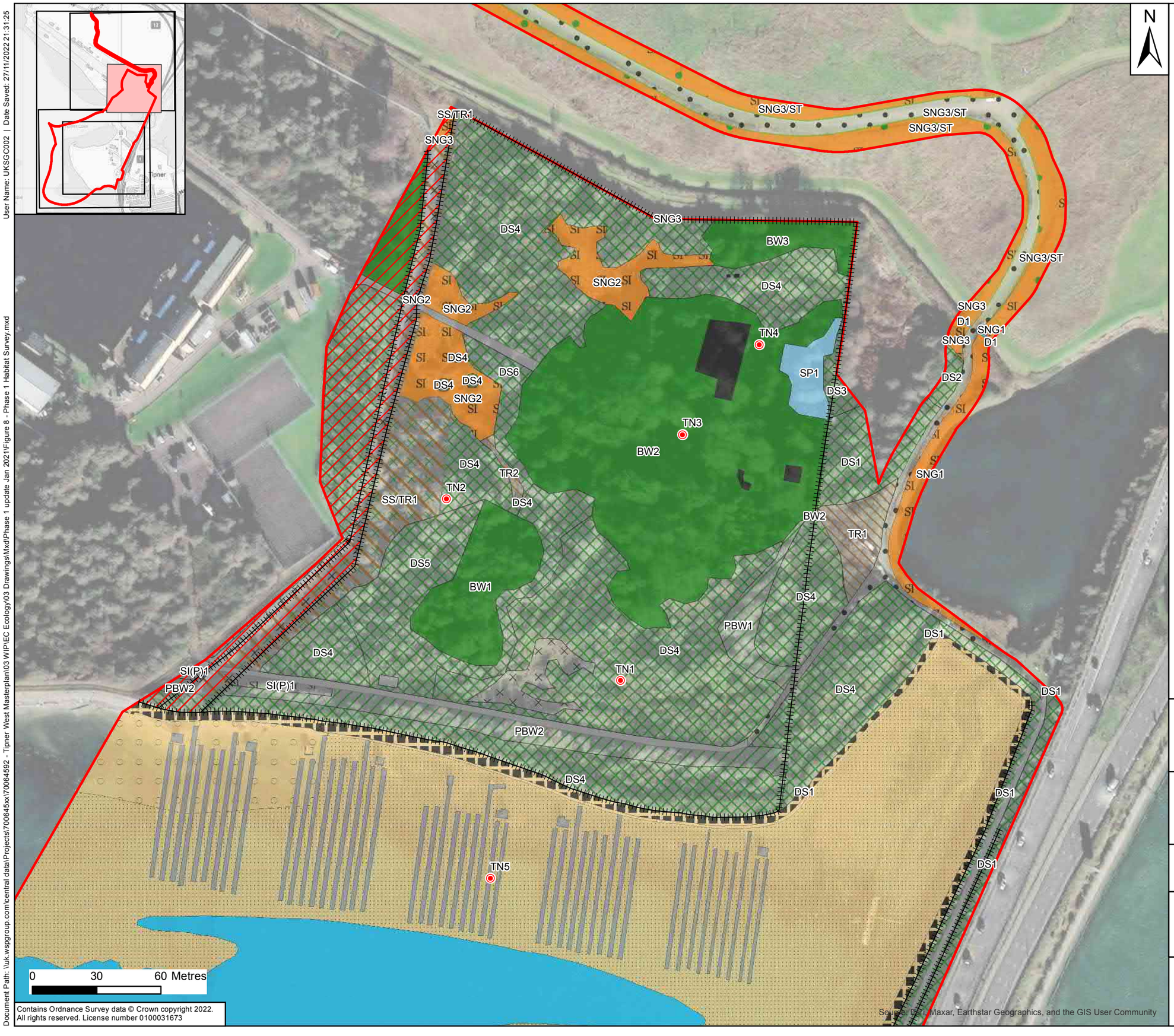

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Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

N

Key

- Tipner West Indicative Boundary

Phase 1 Habitats

- Broadleaved woodland - semi-natural
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- Poor semi-improved grassland
- Other tall herb and fern - ruderal
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- Intertidal - shingles/cobbles
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- Cultivated/disturbed land - amenity grassland
- Cultivated/disturbed land - ephemeral/short perennial
- Cultivated/disturbed land - ephemeral/short perennial / Scrub - Scattered scrub/ Other tall herb and fern - ruderal
- Buildings
- Bare ground
- Land not accessed but mapped from aerial
- Fence
- Target Note

wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Phase 1 Habitat Map

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wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Phase 1 Habitat Map

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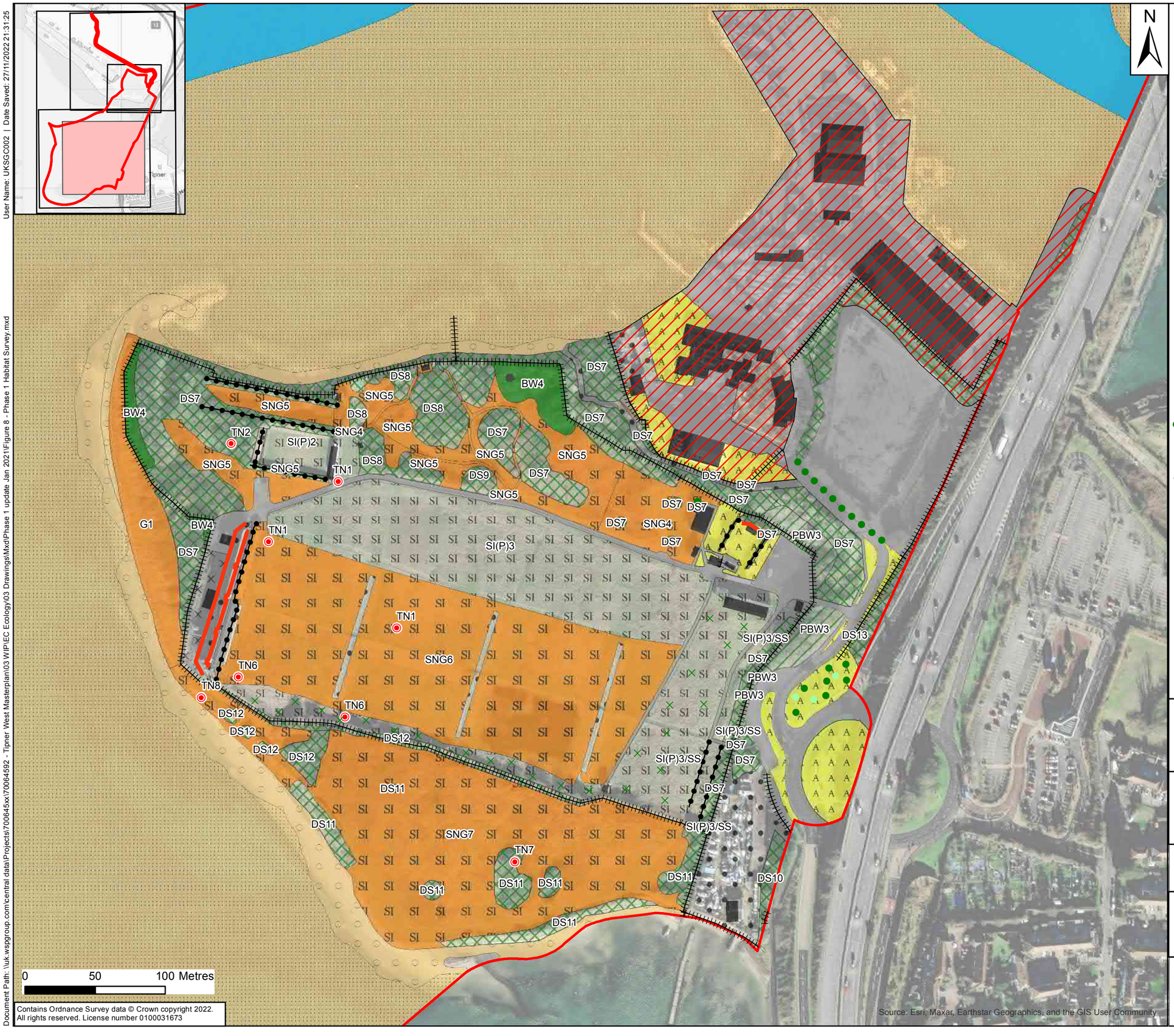

wsp

Client: Portsmouth City Council

Project: Tipner West Regeneration

Title: Phase 1 Habitat Map

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Appendix A

PREVIOUS SURVEYS

Species/ Species Group	Summary of methods	Summary of results
Extended Phase 1 habitat survey (Atkins, 2016)	An extended Phase 1 habitat survey, including an ecological desk study, was completed for the City Deal project[11] in 2015 (Atkins, 2016). The survey was completed over multiple survey visits in 2015 (including in October and November), as access to different areas became available. The habitat survey was extended to include the following: ▪ assessment of potential roost sites for bats; ▪ survey for badger *Meles meles* activity; ▪ survey for evidence of some invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); and ▪ assessment of habitat potential to support great crested newt *Triturus cristatus*, birds, reptiles, dormice *Muscardinus avellanarius* and notable invertebrates.	A variety of habitats were identified including grasslands, woodland, scrub and coastal habitats (see below for an updated list collated during WSP extended Phase 1 habitat survey 2018). No records of dormice were identified, and the habitats present were not considered suitable to support this species due to recent establishment and isolation from other habitat by the M275/M27 and built areas. Records of hedgehog *Erinaceus europaeus* were identified within 2km. Badgers were considered to be absent in 2015 (Atkins 2016) and no evidence of presence was noted during the 2015-16 field survey either. The survey also identified Japanese knotweed on Tipner Range. This species is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), meaning it is an offence to cause this species to spread in the wild. Habitat was considered suitable for other protected or notable species and a summary of relevant results is included under the species-specific surveys also summarised within this table.

[11] Prior to 2020, the Proposed Development was referred to as City Deal and had differing survey areas and site boundaries which may be referred to as the 'Developmental Envelope'.

Species/ Species Group	Summary of methods	Summary of results
Extended Phase 1 habitat survey (WSP, 2018)	An update to the extended Phase 1 habitat survey that was undertaken in 2016. The report, including an ecological desk study, was completed in 2018.	The following habitats were recorded during the updated WSP survey: ▪ broad-leaved woodland - semi-natural (HPI); ▪ broad-leaved plantation; ▪ dense scrub; ▪ scattered scrub; ▪ scattered broadleaf trees; ▪ neutral grassland - semi-improved; ▪ poor semi-improved grassland; ▪ other tall herb and fern – ruderal; ▪ swamp (HPI); ▪ standing water (HPI); ▪ running water (HPI); ▪ intertidal - mud/sand; ▪ intertidal - shingles/cobbles; ▪ intertidal - boulders/rocks; ▪ saltmarsh scattered plants; ▪ strandline vegetation; ▪ coastal grassland (HPI); ▪ amenity grassland; ▪ ephemeral/short perennial; ▪ defunct hedgerow - species poor (HPI); ▪ fence; ▪ wall; ▪ dry ditch; ▪ earth bank; ▪ buildings; ▪ bare ground; ▪ other habitat; and ▪ hard standing. In addition, the field survey, desk study and review of earlier project reports confirmed the presence or potential presence of the following protected or notable species groups: ▪ birds (wintering and breeding);

Species/ Species Group	Summary of methods	Summary of results
		▪ bats (roosting, foraging and commuting); ▪ reptiles; ▪ invertebrates (terrestrial and benthic); ▪ plants; ▪ fish; and ▪ marine mammals.
Wintering Birds (Environmental Gain Ltd, 2010)	A wintering bird survey was completed by Environmental Gain Ltd between December 2009 and March 2010 to inform the Tipner Regeneration Area (which included parts of the Development Envelope and adjacent land). This comprised fourteen surveys, covering high, low, rising and falling tides.	This survey recorded thirty species and a summary of the numbers, location and activity of all water birds recorded is included within the report (Environmental Gain Ltd, 2009). Key results were as follows: ▪ Little grebe *Tachybaptus ruficollis* favoured foraging under/close to the M275 bridge and red-breasted merganser were occasionally recorded passing beneath it to access Tipner Lake. ▪ Dark bellied Brent geese *Branta bernicla bernicla* used all amenity grassland within survey area, particularly Tipner Range (up to 500 birds), which was also used by oystercatcher *Haematopus ostralegus* and gulls. Brent geese were also present throughout the intertidal and considered relatively tolerant of human presence by the authors. ▪ Up to 200 redshank *Tringa totanus*, and some other waders and wildfowl roost on the jetty at the southern end of Tipner Lake; this redshank roost is described as previously favouring the seawall on the northern side beneath the M275 but displaced by wall replacement works at the time of survey. ▪ Greater densities of birds were recorded on Tipner Lake than the intertidal west of the M275.
Wintering Birds (Atkins, 2016)	Wintering bird surveys were completed of terrestrial habitats within Horsea Island East and Tipner Range and surrounding intertidal habitats between October 2014 and March 2015. Surveys comprised monthly high tide surveys (six surveys, October 2014 to March 2015) and monthly low tide surveys (five surveys, November 2014 to March 2015).	Ten waders (black tailed godwit *Limosa limosa*, common sandpiper *Actitis hypoleucos*, curlew *Numenius arquata*, dunlin *Calidris alpina*, grey plover *Pluvialis squatarola*, lapwing *Vanellus vanellus*, oystercatcher, redshank, snipe *Gallinago gallinago* and turnstone *Arenaria interpres*) and eleven wildfowl/waterbirds (Canada goose *Branta canadensis*, dark bellied brent goose, great crested grebe *Podiceps cristatus*, goldeneye *Bucephala clangula*, mallard *Anas platyrhynchos*, mute swan *Cygnus olor*, red breasted merganser *Mergus serrator*, shelduck *Tadorna tadorna,* shoveler *Anas clypeata*, teal *Anas*

Species/ Species Group	Summary of methods	Summary of results
	In addition, one vantage point survey of flight patterns around the M275 bridge was completed, in March 2015.	*crecca* and tufted duck *Aythya fuligula*) species were recorded. This included all species which form part of the reasons for designation of the Portsmouth Harbour SPA/Ramsar/SSSI, see Section 4. Wader roost sites were identified on: ▪ The remains of the World War II slipways to the south of Horsea Island East; ▪ a shingle beach to the south of Tipner Range; and ▪ a concrete jetty to the north of Tipner East Park and Ride. Brent goose, curlew, oystercatcher and lapwing were observed foraging on terrestrial grass habitats in Tipner Range, with Brent goose also using fields near Port Solent.
Wintering Birds (WSP, 2018)	Wintering bird surveys were completed on seven occasions between December 2015 and March 2016, covering the Development Envelope and suitable intertidal and terrestrial habitat around Tipner West and Horsea Island East, including Tipner Lake (known as the Main Site Survey Area). In addition, seven vantage point surveys of the M275 bridge were completed.	All five species which form reasons for designation of Portsmouth Harbour were recorded within the Survey Area during the 2015-16, 2016-17 and 2017-18 surveys. In addition, a further eleven waders, ten waterfowl and nineteen other water birds[12] were recorded. Of these species Brent geese, curlew, oystercatcher, lapwing, snipe and little egret were recorded using terrestrial habitat within the Development Envelope, with all other species recorded in estuarine habitat. The report considered the proportion of the population of each species using the various parts of the survey area and frequency of use. In terms of movement of birds around the surveyed areas, Brent geese overfly

[12] 'Water birds' are defined by the Ramsar convention as synonymous with waterfowl 'birds which are ecologically dependent on wetlands'. This definition includes birds from the following families; divers, grebes, cormorants, herons, bitterns, swans, geese, ducks, wetland raptors, rails, waders, gulls and terns (only families from which representatives occur within Portsmouth Harbour have been listed).

Species/ Species Group	Summary of methods	Summary of results
	Wintering bird surveys of the Main Site Survey Area were also completed twice per month between November 2016 and March 2017 and between December 2017 and March 2018. During these winter seasons survey of a large area in the centre of Portsmouth Harbour (Central Harbour Survey Area) was also completed twice per month.	terrestrial areas, but waders move around Portsmouth Harbour following the coast of deep-water channels, apart from those flying inland to forage on terrestrial areas (curlew, snipe and oystercatcher). Wader roost locations were identified in the following areas: World War II slipways to the south of Horsea Island East; ▪ Dilapidated concrete jetty in Tipner Lake; ▪ Exposed shingle on the southern side of Tipner Range; ▪ M275 revetment in Tipner Lake; ▪ Seawall to the west of Port Solent; and ▪ Peewit Island in the central harbour. ▪ Waterfowl were recorded roosting on the water on Tipner Lake and on the western harbour areas. The vantage point surveys of the M275 Bridge recorded the passage of eighteen species of water bird below or above the M275. These included those which preferentially fly above the bridge (geese and larger waders such as curlew) and species which were almost always recorded crossing below the bridge only (small waders such as redshank and species such as red-breasted merganser).
Wintering Birds (WSP, 2020)	Wintering bird surveys of the main site survey area were repeated, completed twice per month between November 2019 and March 2020. The surveys replicated the methods of the WSP 2018 winter bird surveys.	All five species which form reasons for designation of Portsmouth Harbour SPA, Ramsar and SSSI were recorded within the Survey Area. In addition, thirteen waders, ten waterfowl, ten other water birds, six species of gull and one species of tern were also recorded. Of these species brent geese, curlew, oystercatcher, snipe and little egret were recorded utilising terrestrial habitat within the Site, with the other species recorded in estuarine/intertidal habitats. Wader roost locations were identified within the Main Site Survey Area as follows: ▪ World War II slipways to the south of Horsea Island East; ▪ dilapidated concrete jetty in Tipner Lake; ▪ exposed shingle on the southern side of Tipner Range; ▪ Horsea Island East slipway; ▪ M275 revetment in Tipner Lake; and

Species/ Species Group	Summary of methods	Summary of results
		▪ seawall to the west of Port Solent. Within the Central Harbour Survey Area a key wader roost location was identified on Pewit Island. In addition, waterfowl were recorded roosting on the water on Tipner Lake, south of Tipner Range and within the western harbour areas. The vantage point surveys of the M275 Bridge recorded the passage of 23 species of water bird below or above the M275. These included those which preferentially fly above the bridge (geese and larger waders such as curlew) and species which were almost always recorded crossing below the bridge only (small waders such as redshank *Tringa totanus*).
Breeding Birds (Atkins, 2016)	Four surveys of Horsea Island East (excluding landfill site area) and Tipner Range (excluding other areas of Tipner West) were completed. These utilised an adapted Common Bird Census methodology and two surveyors completed each survey. Surveys lasted between 2.5 and 3 hours and commenced shortly after sunrise.	Thirty-three species were recorded, of which twenty-four were confirmed, probable or possible breeders. These breeding species included six which are subject to additional legal protection or which are of conservation concern (Cetti's warbler *Cettia cetti* (Schedule 1), dunnock *Prunella modularis* (SPI, amber list), linnet *Linaria cannabina* (SPI, red list), skylark *Alauda arvensis* (SPI, red list), song thrush *Turdus philomenos*) (SPI, red list), and bullfinch *Pyrrhula pyrrhula (*SPI, amber list).
Bats – Foraging and Commuting (Atkins, 2016)	Two walked transect surveys were completed once per month from May to October. All surveys were completed at dusk, lasting for 1.5 hours after dusk, with the exception of the August survey, which comprised both a dusk and dawn survey (from 2hrs prior to dawn to dawn). Each transect was walked twice and included static point counts. Automated detectors (SM2+) were deployed for periods of five consecutive nights in two locations per transect each month from May to October 2015; recording from 30 minutes prior to sunset to 30 minutes post sunrise.	At least six bat species and two genus's were recorded foraging/commuting within the City Deal Development Envelope; these were common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Nathusius pipistrelle *Pipistrellus nathusii*, Myotis sp. *Myotis sp*, long eared sp. *Plecotus* sp., serotine *Eptesicus serotinus*, Leisler's *Nyctalus leislerii* and noctule *Nyctalus noctula.*

Species/ Species Group	Summary of methods	Summary of results
	Additional automated detectors were used overnight at the National Seamanship Nautical Training Corps (one detector) in July 2015 and The Harbour School (three detectors) in August 2015.	
Bats – Roosting (Atkins, 2016)	Buildings within Horsea Island East (derelict house and outbuildings) and Tipner (firing range buildings, The Harbour School, National Seamanship Nautical Training Corps Building and Portsmouth Harbour Cruising Club) were subject to a combination of external and internal inspections and emergence surveys during 2015. No surveys of buildings on Tipner Wharf were completed as access was not possible. Trees were subject to ground level inspections for suitability to support roosts, some trees were then subject to at-height inspections.	Potential roost features were present, but no roosts were identified within these. Records of eight species were identified within 5km (common pipistrelle, soprano pipistrelle, Daubenton's *Myotis daubentonii,* brown long-eared *Plecotus auritus*, whiskered *Myotis mystacinus*, Natterer's *Myotis nattereri*, noctule and serotine).
Bats -Roosting (WSP, 2016)	A detailed external inspection of the search light plinth within Tipner Range was completed.	The structure was assessed as of moderate potential to support hibernating bats.
Badger (Atkins, 2016)	Signs of badger were searched for during the extended Phase 1 habitat survey and other protected species surveys completed by Atkins in 2015.	No evidence of badgers was recorded, four records of badgers were identified within 2km.

Species/ Species Group	Summary of methods	Summary of results
Reptiles (Atkins, 2016)	Presence/likely absence surveys comprising seven surveys of artificial refugia and natural habitat features between May and September 2015.	Slow worm *Anguis fragilis* (Horsea Island East) and common lizard *Zootoca vivipara* (Tipner Range) are present; with at least 'good' populations of each species[13]. The desk study also identified records of these species within 2km.
Great crested newts (Atkins, 2015)	A desk study was completed to identify ponds within 500m; this identified three water bodies, which were subject to a Habitat Suitability Index assessment. Two were of poor suitability and saline and a third was considered of excellent suitability (Pond 3). This water body was subject to four presence/likely absence surveys, each utilising at least three survey methods (torching, bottle trapping, egg searching or netting).	No great crested newts or other amphibians were recorded. The desk study did not identify records of great crested newts within 2km.
Terrestrial invertebrates (Conops Entomology, 2016)	Tipner Range and surrounds, terrestrial habitat within Portsmouth Harbour SSSI (south of firing range) and Horsea Island East and proposed road location were subject to surveys on five dates between May and September 2015.	The desk study identified numerous records of invertebrates within 2km. All areas sampled had value for invertebrates; Tipner Range in particular had a range of habitat assemblages that provided opportunities for invertebrates. The assemblage present included species which are SPI and/or nationally scarce and overall was considered of District (Low) importance[14]. The report highlighted populations of the following species as of interest:

[13] Population size class classification using Froglife (1999).

[14] Using surveyor expertise and guidance notes prepared by Colin Plant Associates for CIEEM to aid evaluating invertebrate populations.

Species/ Species Group	Summary of methods	Summary of results
	Surveys utilised sweep netting for aerial invertebrates and those in vegetation, and grubbing for surface beetles and ground bugs. All captured invertebrates were held for later identification, except for easily identifiable species, which were released in the field. A desk study was also completed, with records obtained from HBIC.	black headed mason wasp *Odynerus melanocephalus*; and brown banded carder bee *Bombus humilis*.
Vegetation/notable plants (Atkins, 2016)	Horsea Island East was surveyed in July 2014 and May 2015 and Tipner Range was surveyed in July and September 2015. Survey methods were based on those recommended for National Vegetation Classification (NVC) surveys.	Horsea Island East was identified to contain dense scrub, mesotrophic (neutral) grassland and swamp communities. Tipner Range was considered to contain grassland, coastal shingle/strandline vegetation and dense scrub/woodland communities. Three nationally scarce species were recorded: Divided sedge *Carex divisa* (SPI, Nationally Scarce, Horsea Island East); Annual beard grass *Polypogon monspeliensis* (Nationally Scarce, Horsea Island East, National Seamanship Training Centre); and Golden-samphire (Nationally scarce, Tipner Range). The report concludes coastal vegetated shingle is present to the south of the Tipner Range, this is considered a Habitat of Principal Importance (HPI). Other grasslands are not heavily influenced by agricultural improvement and are therefore considered Hampshire Biodiversity Action Plan Priority Habitat (neutral grassland). The desk study identified records of one SPI, eight nationally scarce and nine county scarce plants within 2km.
Marine surveys (Ecospan Environmental Ltd, 2017)	Suite of marine ecological surveys were undertaken in the summer and autumn of 2017. Included: Phase 1 and 2 Habitat Survey of subtidal and intertidal seagrass, macroalgal mat assessments and fish surveys.	Vast majority of the area was found to be comprised of muddy or mixed sediments with rocky habitat types. Two habitats considered HPI as mudflats. Two small areas of inter-tidal seagrass within Tipner Lake. These qualify as an HPI and are also listed on OSPAR list of threatened and/or declining species Macroalgal mats were observed within Tipner Lake, with less dense areas observed around Whale island.

Species/ Species Group	Summary of methods	Summary of results
		Two invertebrate species listed as threatened of declining by OSPAR were identified: Ocean quaghog, *Arctica islandica* and the European oyster *Ostrea edulis* (also UK BAP species). Fish surveys identified the following: bass *Dicentrarchus labrax*, thick lipped *mullet Chelon labrosus*, thin lipped mullet *Liza ramada*, golden grey mullet *Liza aurata* and sand smelt *Atherina presbyter*, greater pipefish *Syngnathus acus*, long spined bullhead *Taurulus bubalis*, cod *Gadus morhua*, five bearded rockling *Ciliata mustela*, black goby *Gobius niger* and sand goby *Pomatoschistus minutus*. A short snouted seahorse was also captured during one of the surveys. This species is protected under schedule 5 of the Wildlife and Countryside Act 1981 and is also a UK BAP species. Several non-native species were identified throughout the survey area. The included the slipper limpet *Crepidula fornicata*, the Pacific oyster *Magallana gigasm*, the Manilla clam *Ruditapes phillippinarum*, the Australasian barnacle *Austriminius modestus*, the leathery sea squirt *Styela clava* and the San Diego sea squirt *Botrylloides diegensis.*

Appendix B

SUMMARY OF DESK STUDY DATA

SUMMARY OF ECOLOGICAL DESK STUDY DATA

Table 7 - Protected and notable species (excluding birds and invertebrates) for which records have been identified within 5km

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Bats						
Brown Long-eared Bat	*Plecotus auritus*	6	2017	0.9	100	HabRegs. NERC SPI. WCA. IUCN.
Common Pipistrelle	*Pipistrellus pipistrellus*	121	2019	0.9	10	HabRegs. WCA. IUCN.
Daubenton's Bat	*Myotis daubentonii*	4	2019	2.7	10	HabRegs. WCA. IUCN.
Nathusius's Pipistrelle	*Pipistrellus nathusii*	10	2019	2.5	100	HabRegs. WCA. IUCN.
Natterer's Bat	*Myotis nattereri*	2	2016	3.9	100	HabRegs. WCA. IUCN.
Noctule Bat	*Nyctalus noctula*	12	2019	2.3	100	HabRegs. NERC SPI. WCA. IUCN.
Serotine	*Eptesicus serotinus*	8	2019	2.4	10	HabRegs. WCA. IUCN.

[15] HabsRegs = Conservation of Habitats and Species Regulations (2017), WCA = Wildlife and Countryside Act (1981), NERC SPI = Schedule 41 Natural Environment and Rural Communities Act (2006), NR = Nationally Rare, NS = Nationally scarce, NN = Nationally notable, CR = county rare, CS = County scarce, CI = Species listed as county of other interest, nHR – North Hampshire Rare, sNR = South Hampshire Rare, nHS = North Hampshire Scarce, sNS = South Hampshire Scarce, IUCN = species listed on the IUCN GB and/or England red list. More information available at https://documents.hants.gov.uk/HBIC/HBICProtectedandNotableSpeciesStatusesNovember2016.pdf

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Soprano Pipistrelle	*Pipistrellus pygmaeus*	43	2019	1.2	10	HabRegs. NERC SPI. WCA. IUCN.
Unidentified bat species	*Chiroptera spp.*	10	2018	1.3	100	HabRegs. NERC SPI. WCA. CI. IUCN.
Unidentified long-eared species	*Plecotus sp.*	2	2017	2.5	100	HabRegs. NERC SPI. WCA. CI. IUCN.
Unidentified *Myotis* species	*Myotis sp.*	16	2019	1.5	100	HabRegs. NERC SPI. WCA. CI. IUCN.
Unidentified Pipistrelle species	*Pipistrellus sp.*	28	2019	0.7	10	HabRegs. NERC SPI. WCA. IUCN.
Whiskered Bat	*Myotis mystacinus*	3	2018	1.9	100	HabRegs. WCA. IUCN.
Whiskered/Brandt's Bat	*Myotis mystacinus/brandtii*	2	2016	3.9	100	HabRegs. WCA. IUCN.
Terrestrial Mammals						
Brown Hare	*Lepus europaeus*	2	2017	2.1	100	NERC SPI.
Eurasian Badger	*Meles meles*	30	2019	0.4	100	BadgerAct. IUCN.
European Water Vole	*Arvicola amphibius*	2	2012	3.7	10	NERC SPI. WCA. IUCN.CI
Harvest Mouse	*Micromys minutus*	4	2016	2.0	100	NERC SPI. IUCN.
Hazel Dormouse	*Muscardinus avellanarius*	9	2018	3.5	100	HabRegs. NERC SPI. WCA. CI. IUCN.
West European Hedgehog	*Erinaceus europaeus*	51	2019	0.1	10	NERC SPI. IUCN.
Marine Mammals						
Common Seal	*Phoca vitulina*	16	2019	1.1	100	NERC SPI. IUCN.

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Fin Whale	*Balaenoptera physalus*	1	2012	3.6	100	HabRegs. NERC SPI. WCA. IUCN.
Grey Seal	*Halichoerus grypus*	2	2017	<0.1	100	IUCN.
Reptiles						
Common Lizard	*Zootoca vivipara*	6	2018	1.7	100	NERC SPI. WCA. IUCN.
Slow-worm	*Anguis fragilis*	10	2017	1.1	1	NERC SPI. WCA. IUCN.
Amphibians						
Common Toad	*Bufo bufo*	1	2013	3.2	10	NERC SPI.
Great Crested Newt	*Triturus cristatus*	6	2015	2.5	10	HabRegs. NERC SPI. WCA. IUCN.
Flowering Plants						
Alexanders	*Smyrnium olusatrum*	30	2019	0.0	1000	IUCN. nHR
Annual Beard-grass	*Polypogon monspeliensis*	14	2018	0.0	1000	NS. IUCN. nHS
Autumn Gentian	*Gentianella amarella*	10	2018	0.0	1000	IUCN.
Autumn Lady's-tresses	*Spiranthes spiralis*	216	2019	1.2	1000	IUCN. nHS
Balm-leaved Figwort	*Scrophularia scorodonia*	1	2012	2.4	100	NS. CR. sHR
Basil Thyme	*Clinopodium acinos*	4	2018	1.4	1000	NERC SPI. IUCN.
Bastard-toadflax	*Thesium humifusum*	12	2017	1.9	100	NS. CS.
Beaked Tasselweed	*Ruppia maritima*	4	2019	3.9	100	CS. IUCN. sHS
Bee Orchid	*Ophrys apifera*	54	2019	0.0	1000	CR. IUCN. nHR. sHR

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Bermuda-grass	*Cynodon dactylon*	2	2019	3.9	100	NR. CR. sHS. nHR
Bird's-foot Clover	*Trifolium ornithopodioides*	10	2019	3.0	100	IUCN. nHS
Borrer's Saltmarsh-grass	*Puccinellia fasciculata*	2	2013	3.8	1000	NS. NERC SPI. CSIUCN.
Brackish Water-crowfoot	*Ranunculus baudotii*	2	2013	1.8	100	CS. sHS
Bulbous Foxtail	*Alopecurus bulbosus*	1	2013	3.7	1000	NS. CR. sHS
Burnet Rose	*Rosa spinosissima*	1	2017	1.3	1000	IUCN. nHS
Butcher's-broom	*Ruscus aculeatus*	52	2018	2.0	100	IUCN.
Carline Thistle	*Carlina vulgaris*	8	2019	1.4	1000	IUCN.
Chamomile	*Chamaemelum nobile*	4	2015	2.8	10	NERC SPI. IUCN.
Chicory	*Cichorium intybus*	2	2015	1.2	100	IUCN.
Chives	*Allium schoenoprasum*	1	2019	4.8	100	NS. CR. nHR. sHR
Common Calamint	*Clinopodium ascendens*	3	2019	4.4	100	nHR
Common Cow-wheat	*Melampyrum pratense*	1	2011	4.1	100	IUCN.
Common Cudweed	*Filago vulgaris*	6	2018	0.4	100	IUCN.
Common Glasswort	*Salicornia europaea*	2	2014	4.7	1000	CS.
Common Rock-rose	*Helianthemum nummularium*	1	2015	2.5	1000	IUCN.

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Common Sea-lavender	*Limonium vulgare*	10	2016	1.7	1000	IUCN.
Common Valerian	*Valeriana officinalis*	3	2012	2.4	100	IUCN.
Compact Brome	*Anisantha madritensis*	4	2013	3.1	100	CS. IUCN. sHS. nHR
Corky-fruited Water-dropwort	*Oenanthe pimpinelloides*	34	2019	0.0	100	nHS
Corn Marigold	*Glebionis segetum*	1	2017	2.8	1000	IUCN.
Corn Mint	*Mentha arvensis*	2	2012	3.9	100	IUCN.
Corn Spurrey	*Spergula arvensis*	5	2013	2.9	100	IUCN.
Cornflower	*Centaurea cyanus*	2	2017	1.2	1000	NERC SPI.
Crosswort	*Cruciata laevipes*	26	2019	1.4	100	IUCN.
Curved Hard-grass	*Parapholis incurva*	2	2012	3.9	100	NS. CS.
Devil's-bit Scabious	*Succisa pratensis*	2	2012	4.1	100	IUCN.
Distant Sedge	*Carex distans*	7	2018	0.0	1000	IUCN. nHR
Divided Sedge	*Carex divisa*	38	2019	0.0	1000	NS. NERC SPI. IUCN.
Dwarf Eelgrass	*Zostera (Zosterella) noltei*	2	2016	0.4	100	NS. CS. IUCN.
Dwarf Elder	*Sambucus ebulus*	1	2018	4.7	100	CS. sHS. nHS
Dwarf Spurge	*Euphorbia exigua*	6	2017	3.2	100	IUCN.
Dyer's Greenweed	*Genista tinctoria*	7	2018	3.1	100	IUCN.
Early Meadow-grass	*Poa infirma*	14	2019	0.5	100	NS. IUCN. nHR

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Eelgrass	*Zostera (Zostera) marina*	8	2016	0.4	100	CS. IUCN.
English Stonecrop	*Sedum anglicum*	2	2018	2.5	1000	nHR
Eyebright	*Euphrasia confusa*	1	2011	1.7	100	CS. IUCN. nHR
Eyebright	*Euphrasia nemorosa*	6	2013	0.0	1000	IUCN.
Eyebright	*Euphrasia pseudokerneri*	6	2016	1.8	1000	NS. NERC SPI. CSIUCN. sHS. nHS
Fat Duckweed	*Lemna gibba*	3	2017	2.3	100	IUCN. nHR
Fennel Pondweed	*Potamogeton pectinatus*	2	2015	0.0	1000	nHS
Few-Flowered Fumitory	*Fumaria muralis subsp. boraei*	7	2019	2.8	100	IUCN. nHS
Fiddle Dock	*Rumex pulcher*	13	2015	1.2	100	IUCN. nHR
Field Cow-wheat	*Melampyrum arvense*	3	2018	2.1	1000	NR. WCA. CR. IUCN. sHR
Field Pepperwort	*Lepidium campestre*	2	2012	2.2	100	IUCN. nHS
Field Scabious	*Knautia arvensis*	38	2019	1.1	100	IUCN.
Field Woundwort	*Stachys arvensis*	2	2011	2.9	100	IUCN.
Four-leaved Allseed	*Polycarpon tetraphyllum*	3	2019	3.0	100	NR. CR. nHR. sHR
Fringed Water-lily	*Nymphoides peltata*	3	2013	3.8	100	NS. CI. IUCN.
Glasswort	*Salicornia pusilla x ramosissima*	2	2019	4.1	100	CR. sHR

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Golden-samphire	*Inula crithmoides*	28	2019	0.0	1000	NS. CS. IUCN.
Great Burnet	*Sanguisorba officinalis*	1	2015	3.9	10	CS. sHS. nHS
Greater Duckweed	*Spirodela polyrhiza*	6	2017	4.1	10	CS. IUCN. sHS. nHS
Green-winged Orchid	*Anacamptis morio*	54	2016	3.5	100	IUCN. nHS
Grey Club-rush	*Schoenoplectus tabernaemontani*	3	2015	0.4	1000	nHR
Hairy Bird's-foot-trefoil	*Lotus subbiflorus*	2	2016	4.3	10	NS. nHR
Hairy Buttercup	*Ranunculus sardous*	7	2019	1.2	100	IUCN. nHR
Hairy Rock-cress	*Arabis hirsuta*	6	2012	2.0	100	CS. IUCN. sHS
Harebell	*Campanula rotundifolia*	11	2019	1.4	1000	IUCN.
Hawkweed	*Hieracium cheriense*	1	2016	1.8	100	CR. sHR
Heath Milkwort	*Polygala serpyllifolia*	2	2016	4.7	100	IUCN.
Heath Speedwell	*Veronica officinalis*	11	2016	0.0	100	IUCN.
Henbane	*Hyoscyamus niger*	1	2017	0.0	1000	CS. IUCN. sHR
Hoary Plantain	*Plantago media*	27	2019	1.2	100	IUCN.
Italian Catchfly	*Silene italica*	1	2013	3.5	100	CR. sHR
Ivy Broomrape	*Orobanche hederae*	5	2013	2.3	100	CS. nHR
Knotted Hedge-parsley	*Torilis nodosa*	17	2019	0.1	100	IUCN. nHR

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Lesser Pondweed	*Potamogeton pusillus*	1	2015	4.1	10	CS. sHS. nHS
Lesser Spearwort	*Ranunculus flammula*	9	2016	2.2	1000	IUCN.
Lesser Spearwort subsp. flammula	*Ranunculus flammula subsp. flammula*	1	2015	3.7	1000	IUCN.
Long-spiked Glasswort	*Salicornia dolichostachya*	6	2017	2.7	1000	CS.
Marsh Pennywort	*Hydrocotyle vulgaris*	1	2013	3.8	1000	IUCN.
Marsh Ragwort	*Senecio aquaticus*	2	2015	3.2	1000	IUCN.
Martin's Ramping-fumitory	*Fumaria reuteri*	2	2011	3.9	100	NR. WCA. CR. IUCN. nHR. sHR
Meadow Brome	*Bromus commutatus*	1	2017	3.2	100	nHS
Mossy Stonecrop	*Crassula tillaea*	4	2013	3.0	100	NS. IUCN.
Mousetail	*Myosurus minimus*	2	2018	0.1	100	CS. IUCN. nHR
Musk Stork's-bill	*Erodium moschatum*	14	2019	0.1	100	IUCN. nHR
Narrow-fruited Cornsalad	*Valerianella dentata*	2	2013	2.3	1000	IUCN. sHS
Narrow-leaved Bird's-foot-trefoil	*Lotus tenuis*	14	2019	0.0	1000	IUCN. nHS
Narrow-leaved Pepperwort	*Lepidium ruderale*	1	2014	2.6	100	CS. nHR
Nettle-leaved Goosefoot	*Chenopodium murale*	2	2015	2.9	100	CS. IUCN. nHR

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Oak-leaved Goosefoot	*Chenopodium glaucum*	2	2011	2.9	100	NS. CR. IUCN. sHS. nHS
One-flowered Glasswort	*Salicornia pusilla*	2	2011	4.1	100	NS. CS. sHS
Pale Flax	*Linum bienne*	25	2019	0.0	1000	IUCN. nHR
Pale Toadflax	*Linaria repens*	2	2011	3.4	100	CS. IUCN. nHS
Pale Willowherb	*Epilobium roseum*	1	2013	3.4	100	nHS
Parsley Water-dropwort	*Oenanthe lachenalii*	6	2015	3.8	10	CS. IUCN.
Perennial Glasswort	*Sarcocornia perennis*	10	2019	0.1	1000	NS.
Pink Water-Speedwell	*Veronica catenata*	4	2013	3.7	1000	IUCN. nHS
Prickly Poppy	*Papaver argemone*	1	2013	1.4	1000	IUCN.
Purple Small-reed	*Calamagrostis canescens*	4	2018	0.0	10	CR. IUCN. sHR
Quaking-grass	*Briza media*	24	2019	0.0	1000	IUCN.
Ragged-Robin	*Silene flos-cuculi*	7	2016	2.2	1000	IUCN.
Reflexed Saltmarsh-Grass	*Puccinellia distans*	4	2017	1.1	100	IUCN. nHS
Rough Clover	*Trifolium scabrum*	4	2015	2.5	1000	nHS
Rough Hawk's-beard	*Crepis biennis*	2	2013	4.8	100	CS. IUCN. sHS. nHS
Rye Brome	*Bromus secalinus*	4	2015	3.2	1000	NS. IUCN.
Sainfoin	*Onobrychis viciifolia*	16	2017	0.0	1000	IUCN.
Sanicle	*Sanicula europaea*	7	2014	2.2	1000	IUCN.

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Sea Barley	*Hordeum marinum*	8	2019	3.7	1000	NS. NERC SPI. CSIUCN. sHS
Sea Clover	*Trifolium squamosum*	2	2013	3.7	1000	NS. CR. sHR
Sea Mouse-ear	*Cerastium diffusum*	10	2019	0.3	100	nHS
Sea Rocket	*Cakile maritima*	1	2018	4.5	1000	CS.
Sea Sandwort	*Honckenya peploides*	1	2011	0.0	100	CS.
Sea Stock	*Matthiola sinuata*	1	2014	1.2	1000	NR. NERC SPI. IUCN.
Sea Stork's-bill	*Erodium maritimum*	1	2018	4.5	1000	CR. nHR. sHR
Sea Wormwood	*Seriphidium maritimum*	16	2019	2.7	1000	CS. IUCN.
Sea-buckthorn	*Hippophae rhamnoides*	8	2019	0.0	1000	NS. IUCN. nHR
Sheep's-bit	*Jasione montana*	1	2012	4.3	1000	IUCN. nHS
Sickle Medick	*Medicago sativa subsp. falcata*	1	2015	2.5	1000	NS. CR. nHR. sHR
Slender Hare's-ear	*Bupleurum tenuissimum*	7	2019	1.7	1000	NS. NERC SPI. CSIUCN.
Slender Thistle	*Carduus tenuiflorus*	2	2019	3.4	100	CS.
Small-flowered Buttercup	*Ranunculus parviflorus*	2	2018	0.0	100	CS. nHR
Smith's Pepperwort	*Lepidium heterophyllum*	2	2015	2.6	100	nHR
Spiny Restharrow	*Ononis spinosa*	4	2013	2.8	10	CS. IUCN. sHS. nHS

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Spreading Hedge-parsley	*Torilis arvensis*	1	2015	4.9	100	NS. NERC SPI. CSIUCN. nHR. sHR
Stiff Saltmarsh-grass	*Puccinellia rupestris*	12	2019	1.2	100	NS. CS.
Stinking Chamomile	*Anthemis cotula*	1	2014	4.7	1000	IUCN.
Strawberry Clover	*Trifolium fragiferum*	21	2019	0.0	1000	IUCN. nHR
Subterranean Clover	*Trifolium subterraneum*	16	2016	3.4	100	nHS
Suffocated Clover	*Trifolium suffocatum*	4	2017	0.4	100	NS. CS.
Sweet-flag	*Acorus calamus*	1	2013	3.6	100	CS. IUCN. sHS. nHS
Tall Ramping-fumitory	*Fumaria bastardii*	2	2011	4.9	100	CS. sHS. nHR
Thread-leaved Water-crowfoot	*Ranunculus trichophyllus*	1	2013	3.7	1000	CS. nHR. sHR
Toothed Medick	*Medicago polymorpha*	2	2018	0.4	100	NS. CS. nHR
Tormentil	*Potentilla erecta*	5	2014	3.2	1000	IUCN.
Upright Chickweed	*Moenchia erecta*	2	2011	4.6	100	IUCN.
Wall Bedstraw	*Galium parisiense*	4	2017	0.0	1000	NS. CS. IUCN. sHS. nHR
Water-violet	*Hottonia palustris*	1	2014	2.3	100	CS. IUCN. sHR. nHS
Weasel's-snout	*Misopates orontium*	2	2011	2.9	100	IUCN.
Whorled Water-milfoil	*Myriophyllum verticillatum*	2	2013	3.8	100	CR. IUCN. sHR
Wild Celery	*Apium graveolens*	6	2016	0.4	100	CS. nHR

Common Name	Latin Name	No. of Records	Most Recent Record	Nearest Record from Site (km)	Nearest Record Precision	Legislation/ conservation status[15]
Wild Clary	*Salvia verbenaca*	6	2016	1.1	10	CS. IUCN. sHS. nHS
Wild Strawberry	*Fragaria vesca*	8	2018	2.2	1000	IUCN.
Wood-sorrel	*Oxalis acetosella*	6	2016	3.1	100	IUCN.
Wormwood	*Artemisia absinthium*	2	2011	4.8	100	CS. sHS. nHR
Yellow Glasswort	*Salicornia fragilis*	4	2014	4.7	1000	NS. CS.
Yellow Horned-poppy	*Glaucium flavum*	2	2015	3.4	100	IUCN.
Yellow Vetchling	*Lathyrus aphaca*	5	2015	1.9	100	NS. CR. IUCN. sHS. nHR
Yellow-juiced Poppy	*Papaver dubium subsp. lecoqii*	1	2019	4.8	100	CS. sHS. nHS
Ferns						
Hay-scented Buckler-fern	*Dryopteris aemula*	1	2014	3.1	10	CS. sHS
Maidenhair Spleenwort	*Asplenium trichomanes*	12	2016	1.1	10	IUCN. nHR
Spleenwort	*Asplenium trichomanes subsp. quadrivalens*	1	2019	1.2	100	nHR.
Liverworts, Hornworts and Mosses						
Acaulon muticum var. muticum	*Acaulon muticum var. muticum*	1	2012	2.9	100	NR. CS. IUCN.
Glass-wort Feather-moss	*Scleropodium touretii*	1	2013	4.9	100	CS. IUCN.
Weissia controversa var. controversa	*Weissia controversa var. controversa*	1	2011	3.8	100	CS. IUCN.

Table 8 - Protected and notable birds for which records have been identified within 5km

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Aquatic Warbler	*Acrocephalus paludicola*	2	2018	BirdDir. BirdRed. NERC SPI.
Arctic Skua	*Stercorarius parasiticus*	12	2018	BirdRed.
Arctic Tern	*Sterna paradisaea*	11	2018	BirdDir.
Avocet	*Recurvirostra avosetta*	60	2018	BirdDir. WCA. CR.
Barn Owl	*Tyto alba*	18	2018	WCA.
Barnacle Goose	*Branta leucopsis*	38	2018	BirdDir.
Bar-tailed Godwit	*Limosa lapponica*	39	2018	BirdDir.
Bearded Tit	*Panurus biarmicus*	34	2018	WCA. CR.
Bewick's Swan	*Cygnus columbianus subsp. bewickii*	2	2014	BirdDir. NERC SPI. WCA.
Bittern	*Botaurus stellaris*	1	2014	BirdDir. NERC SPI. WCA.
Black Kite	*Milvus migrans*	2	2014	BirdDir.
Black Redstart	*Phoenicurus ochruros*	64	2018	BirdRed. WCA. CR.

[16] BirdDir = Species listed under Annexe 1 (A1) of the Birds Directive 79/409/EEC, WCA = Wildlife and Countryside Act (1981), NERC SPI = Schedule 41 Natural Environment and Rural Communities Act (2006), BirdRed = Birds on the Red list of the Birds of Conservation Concern 4 (Eaton et al., 2015), CR = county rare, CS = County scarce, CI = Species listed as county of other interest. More information available at https://documents.hants.gov.uk/HBIC/HBICProtectedandNotableSpeciesStatusesNovember2016.pdf

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Black Stork	*Ciconia nigra*	1	2015	BirdDir.
Black Tern	*Chlidonias niger*	19	2018	BirdDir. WCA.
Black-headed Gull	*Chroicocephalus ridibundus*	216	2018	CR.
Black-necked Grebe	*Podiceps nigricollis*	21	2018	WCA.
Black-tailed Godwit	*Limosa limosa*	126	2018	BirdRed. WCA. CI.
Black-throated Diver	*Gavia arctica*	5	2018	BirdDir. WCA.
Blue-headed Wagtail	*Motacilla flava subsp. flava*	1	2013	BirdRed. CR.
Bluethroat	*Luscinia svecica*	3	2018	BirdDir. WCA.
Brambling	*Fringilla montifringilla*	3	2016	WCA.
Cetti's Warbler	*Cettia cetti*	110	2018	WCA. CS.
Common Crossbill	*Loxia curvirostra*	3	2013	WCA. CS.
Common Scoter	*Melanitta nigra*	17	2018	BirdRed. NERC SPI. WCA.
Common Tern	*Sterna hirundo*	54	2018	BirdDir. CR.
Corn Bunting	*Emberiza calandra*	3	2015	BirdRed. CS.
Crane	*Grus grus*	2	2017	BirdDir.
Cuckoo	*Cuculus canorus*	14	2017	BirdRed. NERC SPI.
Curlew	*Numenius arquata*	124	2018	BirdRed. NERC SPI.
Dark-bellied Brent Goose	*Branta bernicla*	340	2018	NERC SPI.
Dartford Warbler	*Sylvia undata*	12	2018	BirdDir. WCA. CI.
Eurasian Eagle Owl	*Bubo bubo*	1	2012	BirdDir.

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Fieldfare	*Turdus pilaris*	41	2018	BirdRed. WCA.
Firecrest	*Regulus ignicapilla*	62	2018	WCA. CS.
Garganey	*Anas querquedula*	11	2018	WCA.
Glossy Ibis	*Plegadis falcinellus*	6	2017	BirdDir.
Golden Plover	*Pluvialis apricaria*	27	2018	BirdDir.
Goosander	*Mergus merganser*	10	2018	CR.
Goshawk	*Accipiter gentilis*	1	2018	WCA. CR.
Grasshopper Warbler	*Locustella naevia*	9	2018	BirdRed. NERC SPI. CR
Great Black-backed Gull	*Larus marinus*	70	2018	CR.
Great Crested Grebe	*Podiceps cristatus*	51	2018	CI.
Great Northern Diver	*Gavia immer*	39	2018	BirdDir. WCA.
Green Sandpiper	*Tringa ochropus*	26	2018	WCA.
Greenshank	*Tringa nebularia*	90	2018	WCA.
Grey Heron	*Ardea cinerea*	107	2018	CS.
Grey Partridge	*Perdix perdix*	5	2016	BirdRed. NERC SPI.
Grey Plover	*Pluvialis squatarola*	78	2018	CI.
Grey Wagtail	*Motacilla cinerea*	38	2018	BirdRed.
Hawfinch	*Coccothraustes coccothraustes*	1	2018	BirdRed. NERC SPI. CI
Hen Harrier	*Circus cyaneus*	4	2018	BirdDir. BirdRed. NERC SPI. WCA.
Herring Gull	*Larus argentatus*	84	2018	BirdRed. CR.

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Hobby	*Falco subbuteo*	30	2018	WCA. CI.
Honey-buzzard	*Pernis apivorus*	3	2017	BirdDir. WCA. CR.
Hoopoe	*Upupa epops*	7	2018	WCA.
House Sparrow	*Passer domesticus*	44	2018	BirdRed. NERC SPI.
Kingfisher	*Alcedo atthis*	103	2018	BirdDir. WCA.
Kittiwake	*Rissa tridactyla*	24	2018	BirdRed.
Lapland Bunting	*Calcarius lapponicus*	1	2011	WCA.
Lapwing	*Vanellus vanellus*	82	2018	BirdRed. NERC SPI.
Lesser Black-backed Gull	*Larus fuscus*	66	2018	BirdRed. CR.
Lesser Redpoll	*Acanthis cabaret*	15	2018	BirdRed. NERC SPI.
Lesser Spotted Woodpecker	*Dendrocopos minor*	1	2018	BirdRed.
Linnet	*Linaria cannabina*	57	2018	BirdRed.
Little Egret	*Egretta garzetta*	196	2018	BirdDir. CR.
Little Gull	*Hydrocoloeus minutus*	25	2018	BirdDir. WCA.
Little Ringed Plover	*Charadrius dubius*	7	2018	WCA. CS.
Little Tern	*Sternula albifrons*	30	2018	BirdDir. WCA. CR.
Long-eared Owl	*Asio otus*	3	2013	CR.
Long-tailed Duck	*Clangula hyemalis*	14	2018	BirdRed. WCA.
Marsh Harrier	*Circus aeruginosus*	30	2018	BirdDir. WCA. CR.
Marsh Tit	*Poecile palustris*	11	2018	BirdRed.

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Mediterranean Gull	*Larus melanocephalus*	176	2018	BirdDir. WCA. CR.
Merlin	*Falco columbarius*	12	2018	BirdDir. BirdRed. WCA.
Mistle Thrush	*Turdus viscivorus*	21	2018	BirdRed.
Montagu's Harrier	*Circus pygargus*	1	2016	BirdDir. WCA. CR.
Nightingale	*Luscinia megarhynchos*	6	2017	BirdRed. CS.
Nightjar	*Caprimulgus europaeus*	3	2018	BirdDir. NERC SPI. CI
Ortolan Bunting	*Emberiza hortulana*	4	2018	BirdDir.
Osprey	*Pandion haliaetus*	45	2018	BirdDir. WCA.
Oystercatcher	*Haematopus ostralegus*	150	2018	CS.
Peregrine	*Falco peregrinus*	94	2018	BirdDir. WCA. CR.
Pied Flycatcher	*Ficedula hypoleuca*	10	2017	BirdRed. CR.
Pochard	*Aythya ferina*	19	2018	BirdRed. CS.
Purple Heron	*Ardea purpurea*	2	2014	BirdDir. WCA.
Purple Sandpiper	*Calidris maritima*	36	2018	WCA.
Quail	*Coturnix coturnix*	2	2015	WCA. CR.
Red Kite	*Milvus milvus*	46	2018	BirdDir. WCA. CR.
Red-backed Shrike	*Lanius collurio*	1	2018	BirdDir. BirdRed. WCA.
Red-breasted Goose	*Branta ruficollis*	23	2013	BirdDir.
Red-necked Grebe	*Podiceps grisegena*	7	2018	BirdRed.
Red-necked Phalarope	*Phalaropus lobatus*	1	2017	BirdDir. BirdRed. WCA.

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Redstart	*Phoenicurus phoenicurus*	50	2018	CI.
Red-throated Diver	*Gavia stellata*	9	2018	BirdDir. WCA.
Redwing	*Turdus iliacus*	46	2018	BirdRed. WCA.
Reed Bunting	*Emberiza schoeniclus*	53	2018	NERC SPI.
Ring Ouzel	*Turdus torquatus*	31	2018	BirdRed. NERC SPI.
Ringed Plover	*Charadrius hiaticula*	38	2018	BirdRed.
Rock Pipit	*Anthus petrosus*	101	2018	CR.
Roseate Tern	*Sterna dougallii*	8	2016	BirdDir. BirdRed. NERC SPI. WCA. CR
Ruddy Shelduck	*Tadorna ferruginea*	5	2018	BirdDir.
Ruff	*Calidris pugnax*	10	2018	BirdDir. BirdRed. WCA.
Sand Martin	*Riparia riparia*	13	2018	CS.
Sandwich Tern	*Sterna sandvicensis*	106	2018	BirdDir. CR.
Savi's Warbler	*Locustella luscinioides*	7	2018	BirdRed. NERC SPI. WCA. CI
Scandinavian Rock Pipit	*Anthus petrosus subsp. littoralis*	2	2013	CR.
Scaup	*Aythya marila*	14	2018	BirdRed. NERC SPI. WCA.
Shag	*Phalacrocorax aristotelis*	47	2018	BirdRed.
Shelduck	*Tadorna tadorna*	102	2018	CI.
Shore Lark	*Eremophila alpestris*	1	2016	WCA.
Short-eared Owl	*Asio flammeus*	38	2018	BirdDir.
Shoveler	*Anas clypeata*	70	2018	CR.

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Siskin	*Spinus spinus*	21	2018	CI.
Skylark	*Alauda arvensis*	35	2018	BirdRed. NERC SPI.
Slavonian Grebe	*Podiceps auritus*	26	2018	BirdDir. WCA.
Snipe	*Gallinago gallinago*	47	2018	CS.
Snow Bunting	*Plectrophenax nivalis*	7	2016	WCA.
Song Thrush	*Turdus philomelos*	25	2018	BirdRed.
Spoonbill	*Platalea leucorodia*	28	2018	BirdDir. WCA.
Spotted Crake	*Porzana porzana*	2	2012	BirdDir. WCA.
Spotted Flycatcher	*Muscicapa striata*	45	2018	BirdRed. NERC SPI.
Squacco Heron	*Ardeola ralloides*	1	2014	BirdDir.
Starling	*Sturnus vulgaris*	77	2018	BirdRed.
Stone-curlew	*Burhinus oedicnemus*	1	2016	BirdDir. NERC SPI. WCA. CS
Storm Petrel	*Hydrobates pelagicus*	1	2014	BirdDir.
Tawny Pipit	*Anthus campestris*	1	2017	BirdDir.
Tree Pipit	*Anthus trivialis*	12	2018	BirdRed. NERC SPI.
Turtle Dove	*Streptopelia turtur*	5	2015	BirdRed. NERC SPI.
Velvet Scoter	*Melanitta fusca*	16	2018	WCA.
Water Pipit	*Anthus spinoletta*	10	2018	CS.
Water Rail	*Rallus aquaticus*	47	2018	CS.
Wheatear	*Oenanthe oenanthe*	120	2018	CS.

Species common name	Species Latin name	No. of records	Most recent record	Legal / Conservation Status[16]
Whimbrel	*Numenius phaeopus*	99	2018	BirdRed. WCA.
Whinchat	*Saxicola rubetra*	47	2018	BirdRed. CR.
White Stork	*Ciconia ciconia*	8	2018	BirdDir.
White-fronted Goose	*Anser albifrons*	5	2018	BirdRed.
Wood Sandpiper	*Tringa glareola*	12	2018	BirdDir. WCA.
Wood Warbler	*Phylloscopus sibilatrix*	2	2016	BirdRed. NERC SPI. CI
Woodcock	*Scolopax rusticola*	10	2018	BirdRed.
Woodlark	*Lullula arborea*	16	2018	BirdDir. NERC SPI. WCA. CI
Wryneck	*Jynx torquilla*	15	2018	WCA.
Yellow Wagtail	*Motacilla flava*	57	2018	BirdRed. CR.
Yellowhammer	*Emberiza citrinella*	20	2018	BirdRed. NERC SPI.

Table 9 - Protected and notable invertebrates for which records have been identified within 5km

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Coleoptera				
Alder Leaf Beetle	*Agelastica alni*	2	2019	NR. IUCN.
Aphodius punctatosulcatus	*Aphodius sphacelatus*	2	2014	IUCN.
Isochnus sequensi	*Isochnus sequensi*	1	2012	IUCN.
Lixus scabricollis	*Lixus scabricollis*	3	2016	IUCN.
Mellet's Downy-back	*Ophonus melletii*	2	2018	NR. NS. NERC SPI. IUCN.
Paracorymbia fulva	*Paracorymbia fulva*	1	2011	IUCN.
Stag Beetle	*Lucanus cervus*	169	2019	NS. NERC SPI. IUCN.
Diptera				
Acinia corniculata	*Acinia corniculata*	1	2018	IUCN.
Campiglossa malaris	*Campiglossa malaris*	1	2013	IUCN.
Dicranomyia chorea	*Dicranomyia chorea*	2	2016	IUCN.
Dotted Bee-fly	*Bombylius discolor*	1	2013	NN. NS. IUCN.

[17]NERC SPI = Schedule 41 Natural Environment and Rural Communities Act (2006), NR = Nationally Rare, NS = Nationally scarce, NN = Nationally notable, CR = county rare, CS = County scarce, CI = Species listed as county of other interest, nHR – North Hampshire Rare, sNR = South Hampshire Rare, nHS = North Hampshire Scarce, sNS = South Hampshire Scarce, IUCN = species listed on the IUCN GB and/or England red list. More information available at https://documents.hants.gov.uk/HBIC/HBICProtectedandNotableSpeciesStatusesNovember2016.pdf

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Downland Robberfly	*Machimus rusticus*	2	2019	NS.
Freraea gagatea	*Freraea gagatea*	1	2019	IUCN.
Gymnosoma rotundatum	*Gymnosoma rotundatum*	3	2019	IUCN.
Pherbellia argyra	*Pherbellia argyra*	1	2013	IUCN.
Phoenix Fly	*Dorycera graminum*	6	2017	NERC SPI. IUCN
Small Plain Stiletto	*Thereva fulva*	2	2016	NR. IUCN.
Tephritis praecox	*Tephritis praecox*	1	2018	IUCN.
Zipperback	*Chrysotoxum elegans*	3	2018	NS. IUCN.
Hemiptera				
Lygus pratensis	*Lygus pratensis*	2	2014	IUCN.
Orthotylus (Melanotrichus) moncreaffi	*Orthotylus (Melanotrichus) moncreaffi*	2	2017	IUCN.
Hymenoptera				
Alfken's Mini-miner	*Andrena (Micrandrena) alfkenella*	3	2011	IUCN.
Bee Wolf	*Philanthus triangulum*	2	2019	IUCN.
Black-headed Mason Wasp	*Odynerus melanocephalus*	4	2011	NS. NERC SPI. IUCN.
Brown-banded Carder-bee	*Bombus humilis*	5	2019	NERC SPI.
Bryony Mining Bee	*Andrena (Poliandrena) florea*	2	2019	IUCN.
Dark Blood Bee	*Sphecodes niger*	2	2011	IUCN.
Dolichovespula saxonica	*Dolichovespula (Pseudovespula) saxonica*	2	2011	IUCN.
Gorytes laticinctus	*Gorytes laticinctus*	3	2019	IUCN.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Lathbury's Nomad Bee	*Nomada lathburiana*	3	2016	IUCN.
Little Black Wasp	*Pemphredon (Cemonus) lethifera*	2	2019	IUCN.
Little Carpenter Bee	*Ceratina (Euceratina) cyanea*	7	2019	IUCN.
Long-horned Bee	*Eucera longicornis*	4	2019	NS. NERC SPI. IUCN.
Red-tailed (Hill) Cuckoo Bee	*Bombus (Psithyrus) rupestris*	1	2019	NS.
Sea Aster Bee	*Colletes halophilus*	2	2012	NS. NERC SPI. IUCN.
Shingle Yellow-face Bee	*Hylaeus annularis*	6	2019	IUCN.
White-footed Furrow Bee	*Lasioglossum (Dialictus) leucopus*	7	2019	IUCN.
Lepidoptera				
Adonis Blue	*Polyommatus bellargus*	8	2017	CR. IUCN.
Agrimony Pigmy	*Ectoedemia agrimoniae*	1	2012	CR.
Alder Moth	*Acronicta alni*	1	2013	nHS
Apple Ermine	*Yponomeuta malinellus*	4	2018	CR.
Ash Pug	*Eupithecia innotata form fraxinata*	1	2011	CS.
August Thorn	*Ennomos quercinaria*	5	2018	NERC SPI.
Balsam Carpet	*Xanthorhoe biriviata*	2	2016	IUCN.
Barred Rivulet	*Perizoma bifaciata*	3	2018	CS.
Beaded Chestnut	*Agrochola lychnidis*	6	2018	NERC SPI.
Beautiful Gothic	*Leucochlaena oditis*	1	2018	IUCN.
Beautiful Groundling	*Caryocolum marmorea*	1	2015	CR.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Bird's Wing	*Dypterygia scabriuscula*	4	2018	nHS
Bitter-cress Smudge	*Eidophasia messingiella*	4	2016	CR.
Black-dotted Groundling	*Stenolechia gemmella*	1	2013	CR.
Black-edged Marble	*Endothenia nigricostana*	1	2015	CR.
Black-headed Dwarf	*Elachista atricomella*	1	2016	CR.
Blackthorn Case-bearer	*Coleophora coracipennella*	4	2017	CR.
Blood-vein	*Timandra comae*	10	2018	NERC SPI.
Blossom Underwing	*Orthosia miniosa*	1	2011	CS.
Blotched Marble	*Endothenia quadrimaculana*	1	2017	CR.
Bloxworth Snout	*Hypena obsitalis*	13	2018	CR.
Blue-bordered Carpet	*Plemyria rubiginata*	8	2017	nHS
Bordered Beauty	*Epione repandaria*	5	2017	nHS
Bordered Ermel	*Ethmia bipunctella*	1	2013	IUCN.
Bordered Sallow	*Pyrrhia umbra*	5	2018	nHR
Bordered White	*Bupalus piniaria*	1	2015	nHS
Brindled Beauty	*Lycia hirtaria*	2	2017	NERC SPI.
Brown Hairstreak	*Thecla betulae*	3	2018	NERC SPI. CS. IUCN.
Brown Oak Tortrix	*Archips crataegana*	1	2013	CR.
Brown-dotted Clothes Moth	*Niditinea fuscella*	2	2015	CR.
Brown-veined Wainscot	*Archanara dissoluta*	6	2017	IUCN. nHR

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Buff Cosmet	*Mompha ochraceella*	1	2016	CR.
Buff Ermine	*Spilosoma lutea*	19	2018	NERC SPI.
Buff-marked Neb	*Monochroa lucidella*	1	2012	CR.
Bugloss Spear-wing	*Tinagma ocnerostomella*	1	2016	CR.
Bulrush Wainscot	*Nonagria typhae*	4	2015	nHS
Buttoned Snout	*Hypena rostralis*	3	2016	NN.
Campion	*Sideridis rivularis*	7	2017	nHS
Carline Neb	*Metzneria aestivella*	3	2015	CR.
Carrot Lance-wing	*Epermenia aequidentellus*	2	2015	CR.
Case-bearing Clothes Moth	*Tinea pellionella*	2	2015	CR.
Centre-barred Sallow	*Atethmia centrago*	4	2016	NERC SPI.
Chalk Hill Blue	*Polyommatus coridon*	148	2018	CS. IUCN.
Channel Islands Pug	*Eupithecia ultimaria*	3	2016	CR.
Cinnabar	*Tyria jacobaeae*	20	2018	NERC SPI.
Cloaked Pug	*Eupithecia abietaria*	1	2012	CR. IUCN.
Clouded Slender	*Caloptilia populetorum*	2	2015	CR.
Clover Slender	*Parectopa ononidis*	4	2017	CR. IUCN.
Common Clothes Moth	*Tineola bisselliella*	3	2016	CR.
Coppery Long-horn	*Nemophora cupriacella*	1	2011	CR.
Crescent	*Helotropha leucostigma*	2	2015	NERC SPI. CS

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Crested Bent-wing	*Bucculatrix cristatella*	1	2013	CR.
Currant Pug	*Eupithecia assimilata*	7	2017	nHS
Cypress Groundling	*Gelechia senticetella*	3	2018	CR.
Cypress Pug	*Eupithecia phoeniceata*	11	2018	nHR
Cypress Tip Moth	*Argyresthia cupressella*	3	2018	CR.
Dark Chestnut	*Conistra ligula*	1	2011	nHS
Dark Crimson Underwing	*Catocala sponsa*	1	2016	NERC SPI. IUCN.
Dark Dwarf	*Elachista subnigrella*	2	2013	CR.
Dark Elm Case-bearer	*Coleophora limosipennella*	6	2015	CR.
Dark Green Fritillary	*Argynnis aglaja*	21	2018	CS.
Dark Spectacle	*Abrostola triplasia*	5	2018	CS.
Dark Spinach	*Pelurga comitata*	1	2012	NERC SPI. CS
Dark-barred Twin-spot Carpet	*Xanthorhoe ferrugata*	5	2017	NERC SPI.
Deep Brown Shade	*Neosphaleroptera nubilana*	2	2014	CR.
Deep-brown Dart	*Aporophyla lutulenta*	4	2018	NERC SPI.
Diamond-spot Sable	*Loxostege sticticalis*	1	2015	IUCN.
Dingy Shears	*Apterogenum ypsillon*	3	2017	nHS
Dingy Skipper	*Erynnis tages*	1	2013	NERC SPI. CI. IUCN.
Dog's Tooth	*Lacanobia suasa*	3	2016	CS.
Dot Moth	*Melanchra persicariae*	4	2016	NERC SPI.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Dotted Shade	*Eana osseana*	2	2014	CR.
Double Kidney	*Ipimorpha retusa*	2	2014	IUCN. nHS
Dowdy Plume	*Stenoptilia zophodactylus*	1	2017	CR.
Downland Bell	*Rhopobota stagnana*	1	2011	CR.
Downland Case-bearer	*Coleophora lixella*	1	2015	CR.
Downland Conch	*Aethes tesserana*	3	2017	CR.
Dusky Brocade	*Apamea remissa*	11	2018	NERC SPI.
Dusky Groundling	*Aroga velocella*	1	2011	CR.
Dusky Thorn	*Ennomos fuscantaria*	13	2018	NERC SPI.
Dusky-lemon Sallow	*Cirrhia gilvago*	1	2017	NERC SPI. CR
Dusted Case-bearer	*Coleophora adspersella*	1	2013	CR.
Ear Moth	*Amphipoea oculea*	6	2016	NERC SPI.
Elm Bent-wing	*Bucculatrix albedinella*	8	2015	CR.
Elm Groundling	*Carpatolechia fugitivella*	1	2015	CR.
Elm Smudge	*Ypsolopha vittella*	1	2017	CR.
Eyelet Sober	*Thiotricha subocellea*	1	2013	CR.
False Brown Flat-body	*Depressaria badiella*	1	2016	CR.
False Cacao Moth	*Ephestia parasitella*	3	2016	CR.
Feathered Beauty	*Peribatodes secundaria*	1	2013	IUCN.
Feathered Gothic	*Tholera decimalis*	5	2016	NERC SPI. IUCN.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Feathered Ranunculus	*Polymixis lichenea*	7	2018	CS.
Fen Wainscot	*Arenostola phragmitidis*	4	2016	IUCN. nHR.
Festoon	*Apoda limacodes*	3	2015	NN.
Field Dwarf	*Elachista consortella*	3	2015	CR.
Flame Brocade	*Trigonophora flammea*	1	2015	IUCN.
Flame Wainscot	*Senta flammea*	1	2011	IUCN.
Fleabane Smudge	*Digitivalva pulicariae*	4	2017	CR.
Four-spotted Footman	*Lithosia quadra*	6	2018	CR. RBD.
Galium Carpet	*Epirrhoe galiata*	10	2018	NERC SPI. CS
Garden Tiger	*Arctia caja*	20	2018	NERC SPI. IUCN. nHS
Ghost Moth	*Hepialus humuli*	4	2016	NERC SPI.
Glasswort Case-bearer	*Coleophora salicorniae*	2	2018	CR.
Gold Pine Ermel	*Cedestis gysseleniella*	1	2013	CR.
Gold Spot	*Plusia festucae*	4	2018	CS.
Golden-rod Case-bearer	*Coleophora virgaureae*	1	2016	CR.
Gorse Knot-horn	*Pempelia genistella*	3	2018	NS.
Grass Rivulet	*Perizoma albulata*	1	2013	CS.
Grayling	*Hipparchia semele*	1	2011	NERC SPI. IUCN.
Greater Tawny Tubic	*Batia lambdella*	1	2015	CR.
Green-brindled Crescent	*Allophyes oxyacanthae*	5	2017	NERC SPI.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Grey Apple Pigmy	*Stigmella incognitella*	4	2013	CR.
Grey Dagger	*Acronicta psi*	10	2018	NERC SPI.
Grey Pine Ermel	*Ocnerostoma friesei*	1	2013	CR.
Grey-streaked Smudge	*Plutella porrectella*	1	2011	CR.
Grizzled Skipper	*Pyrgus malvae*	8	2016	NERC SPI. CI. IUCN.
Gypsy Moth	*Lymantria dispar*	1	2012	IUCN.
Heath Marble	*Endothenia ericetana*	1	2015	CR.
Heather Twist	*Argyrotaenia ljungiana*	1	2016	CR.
Hemlock Yellow Conch	*Aethes beatricella*	1	2017	CR.
Hemp-agrimony Conch	*Cochylidia rupicola*	2	2014	CR.
Hook-tipped Grass-veneer	*Platytes alpinella*	3	2014	IUCN.
Jersey Tiger	*Euplagia quadripunctaria*	6	2018	IUCN.
Jointed-rush Case-bearer	*Coleophora tamesis*	1	2015	CR.
Kent Bent-wing	*Phyllocnistis xenia*	11	2016	IUCN.
Knot Grass	*Acronicta rumicis*	16	2018	NERC SPI. IUCN.
Lackey	*Malacosoma neustria*	17	2018	NERC SPI. IUCN.
Larch Case-bearer	*Coleophora laricella*	2	2011	CR.
Larch Tortrix	*Zeiraphera griseana*	1	2015	CR.
Larch-bud Moth	*Spilonota laricana*	2	2016	CR.
Large Carrot Flat-body	*Agonopterix ciliella*	1	2012	CR.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Large Gold Case-bearer	*Coleophora vibicella*	1	2015	NERC SPI. IUCN.
Large Ranunculus	*Polymixis flavicincta*	1	2015	CS.
Large Saltmarsh Conch	*Phalonidia affinitana*	1	2014	CR.
Large Wainscot	*Rhizedra lutosa*	4	2017	NERC SPI.
Latticed Heath	*Chiasmia clathrata*	1	2017	NERC SPI. CS
Lead-coloured Drab	*Orthosia populeti*	1	2016	CS.
Least Carpet	*Idaea rusticata subsp. atrosignaria*	1	2016	CS.
Lemon Bell	*Thiodia citrana*	1	2014	CR.
Lesser Cream Wave	*Scopula immutata*	1	2015	nHR
Lesser-spotted Pinion	*Cosmia affinis*	1	2015	CS.
Light Crimson Underwing	*Catocala promissa*	1	2016	NERC SPI. IUCN.
Light Feathered Rustic	*Agrotis cinerea*	2	2016	NN. IUCN.
Little Emerald	*Jodis lactearia*	1	2012	nHS
Little Grass-veneer	*Platytes cerussella*	2	2016	CR.
Lotus Case-bearer	*Coleophora discordella*	2	2014	CR.
Lunar-spotted Pinion	*Cosmia pyralina*	1	2013	IUCN.
Mallow	*Larentia clavaria*	4	2017	CS.
Maple Prominent	*Ptilodon cucullina*	1	2015	CS.
Maple-seed Pigmy	*Ectoedemia louisella*	4	2014	CR. IUCN.
Marbled Coronet	*Hadena confusa*	1	2014	CS.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Marbled Green	*Nyctobrya muralis*	15	2018	CS.
Meadow Dwarf	*Elachista triatomea*	1	2016	CR.
Meadow Shade	*Cnephasia pasiuana*	3	2016	CR.
Merveille du Jour	*Griposia aprilina*	4	2017	IUCN.
Mottled Marble	*Bactra furfurana*	3	2016	CR.
Mottled Rustic	*Caradrina morpheus*	11	2018	NERC SPI.
Mouse Moth	*Amphipyra tragopoginis*	5	2017	NERC SPI.
Mouse-ear Groundling	*Caryocolum fraternella*	1	2014	CR.
Mullein Wave	*Scopula marginepunctata*	8	2018	NERC SPI.
Narrow-blotch Drill	*Dichrorampha flavidorsana*	4	2013	CR.
New Marsh Cosmet	*Cosmopterix scribaiella*	3	2014	CS.
Oak Hook-tip	*Watsonalla binaria*	11	2018	NERC SPI. IUCN.
Obscure Drill	*Dichrorampha aeratana*	2	2013	CR.
Obscure Wainscot	*Leucania obsoleta*	1	2017	CS.
Ochreous Pug	*Eupithecia indigata*	1	2014	CS.
Olive	*Ipimorpha subtusa*	1	2016	nHS
Orache Case-bearer	*Coleophora saxicolella*	2	2016	CR.
Orange Sallow	*Tiliacea citrago*	1	2016	CS.
Ox-tongue Conch	*Cochylis molliculana*	8	2017	CS.
Pale Orache Case-bearer	*Coleophora versurella*	2	2016	CR.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Pale-backed Clothes	*Monopis crocicapitella*	5	2018	CR.
Pigmy Footman	*Eilema pygmaeola*	1	2013	nHS
Pine Beauty	*Panolis flammea*	3	2016	nHS
Pine Carpet	*Pennithera firmata*	1	2014	Nhs
Pine Leaf-mining Moth	*Clavigesta purdeyi*	4	2016	CR. IUCN.
Pinion-streaked Snout	*Schrankia costaestrigalis*	2	2016	nHS
Plain Pug	*Eupithecia simpliciata*	2	2017	CS.
Poplar Kitten	*Furcula bifida*	3	2017	CS.
Portland Ribbon Wave	*Idaea degeneraria*	1	2017	IUCN.
Powdered Quaker	*Orthosia gracilis*	2	2014	NERC SPI.
Pretty Chalk Carpet	*Melanthia procellata*	6	2018	NERC SPI.
Purple Emperor	*Apatura iris*	2	2015	CS. IUCN.
Reddish Light Arches	*Apamea sublustris*	1	2011	CS.
Red-necked Footman	*Atolmis rubricollis*	9	2017	CS. IUCN.
Rose Tortrix	*Archips rosana*	1	2013	CR.
Roseate Marble	*Celypha rosaceana*	4	2017	CR.
Rosy Cloaked Shoot	*Gypsonoma aceriana*	2	2015	CR.
Rosy Minor	*Litoligia literosa*	5	2016	NERC SPI.
Rosy Rustic	*Hydraecia micacea*	6	2018	NERC SPI.
Round-winged Muslin	*Thumatha senex*	2	2014	IUCN.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Ruddy Flat-body	*Agonopterix subpropinquella*	1	2015	CR.
Rustic	*Hoplodrina blanda*	12	2018	NERC SPI. IUCN.
Sallow	*Cirrhia icteritia*	4	2016	NERC SPI.
Saltern Dwarf	*Elachista scirpi*	1	2014	CR.
Saltern Ear	*Amphipoea fucosa*	5	2017	CS.
Saltern Groundling	*Scrobipalpa instabilella*	2	2015	CR.
Saltmarsh Bell	*Eucosma tripoliana*	2	2017	CR.
Saltmarsh Case-bearer	*Coleophora atriplicis*	3	2016	CR.
Saltmarsh Plume	*Agdistis bennetii*	2	2015	CR.
Sandhill Knot-horn	*Anerastia lotella*	1	2015	CR.
Satin Wave	*Idaea subsericeata*	9	2018	nHS
Scabious Conch	*Aethes hartmanniana*	1	2014	CR.
Scarce Cosmet	*Mompha jurassicella*	1	2013	CR.
Scarce Sedge Marble	*Bactra lacteana*	1	2014	CR.
Scarce Silver-lines	*Bena bicolorana*	2	2016	nHS
Scarce Umber	*Agriopis aurantiaria*	1	2011	CS.
Sea-purslane Case-bearer	*Coleophora salinella*	4	2016	CR.
Sea-rush Case-bearer	*Coleophora maritimella*	1	2016	CR.
September Thorn	*Ennomos erosaria*	4	2016	NERC SPI.
Seraphim	*Lobophora halterata*	2	2016	IUCN.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Shaded Broad-bar	*Scotopteryx chenopodiata*	8	2017	NERC SPI. IUCN.
Shaded Pug	*Eupithecia subumbrata*	5	2017	CS.
Shark	*Cucullia umbratica*	4	2016	nHS
Shoulder-striped Wainscot	*Leucania comma*	4	2017	NERC SPI.
Silver-barred Bell	*Epinotia fraternana*	1	2013	CR.
Silver-streaked Case-bearer	*Coleophora limoniella*	1	2015	CR.
Silver-striped Marble	*Celypha rivulana*	1	2016	CR.
Silver-studded Blue	*Plebejus argus*	3	2018	NERC SPI. CI. IUCN.
Silver-washed Fritillary	*Argynnis paphia*	44	2018	CI. IUCN.
Slender Pug	*Eupithecia tenuiata*	4	2017	IUCN.
Sloe Pug	*Pasiphila chloerata*	1	2012	CR.
Small Blue	*Cupido minimus*	214	2018	NERC SPI. CS. IUCN.
Small Buckthorn Roller	*Ancylis obtusana*	1	2016	CR.
Small China-mark	*Cataclysta lemnata*	5	2018	CR. IUCN.
Small Clouded Brindle	*Apamea unanimis*	2	2017	CS.
Small Clouded Knot-horn	*Phycitodes saxicola*	3	2016	CR.
Small Emerald	*Hemistola chrysoprasaria*	13	2017	NERC SPI.
Small Heath	*Coenonympha pamphilus*	180	2018	NERC SPI. IUCN.
Small Purple-barred	*Phytometra viridaria*	1	2013	nHS
Small Ranunculus	*Hecatera dysodea*	8	2018	IUCN.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Small Rufous	*Coenobia rufa*	5	2018	nHS
Small Scallop	*Idaea emarginata*	3	2015	CS. IUCN.
Small Square-spot	*Diarsia rubi*	10	2017	NERC SPI.
Small Wainscot	*Denticucullus pygmina*	2	2014	nHS
Small Yellow Underwing	*Panemeria tenebrata*	1	2015	CS.
Southern Wainscot	*Mythimna straminea*	4	2017	IUCN.
Speckled Case-bearer	*Coleophora sternipennella*	2	2014	CR.
Spinach	*Eulithis mellinata*	3	2018	NERC SPI.
Spruce Seed Moth	*Cydia strobilella*	2	2016	CR.
Starry Pearl	*Cynaeda dentalis*	1	2016	IUCN.
Suspected	*Parastichtis suspecta*	1	2014	nHS
Swallowtail	*Papilio machaon*	4	2015	WCA. IUCN.
Sycamore-seed Pigmy	*Ectoedemia decentella*	2	2016	CR.
Tawny Shears	*Hadena perplexa*	2	2016	CS.
Treble-bar	*Aplocera plagiata*	2	2014	nHS
Tree-lichen Beauty	*Cryphia algae*	15	2018	CR. IUCN.
Twin-spot Carpet	*Mesotype didymata*	1	2013	CS.
Twin-spotted Wainscot	*Lenisa geminipuncta*	2	2016	CS.
Two-coloured Bell	*Eucosma obumbratana*	2	2016	CR.
Unmarked Neb	*Eulamprotes unicolorella*	1	2015	CR.

Species common name	Species Latin name	No. of records	Most recent record	Legal / conservation status[17]
Varied Coronet	*Hadena compta*	5	2016	nHS
Verge Case-bearer	*Coleophora trochilella*	3	2014	CR.
Wall	*Lasiommata megera*	12	2018	NERC SPI. CS. IUCN.
White Admiral	*Limenitis camilla*	29	2018	NERC SPI. IUCN.
White Ermine	*Spilosoma lubricipeda*	18	2018	NERC SPI. IUCN.
White Satin Moth	*Leucoma salicis*	6	2017	CS.
White-bodied Conch	*Cochylis hybridella*	8	2018	CR.
White-border Neb	*Isophrictis striatella*	2	2017	CR.
White-letter Hairstreak	*Satyrium w-album*	36	2018	NERC SPI. CS. IUCN.
White-line Dart	*Euxoa tritici*	2	2014	NERC SPI. CS
White-point	*Mythimna albipuncta*	18	2018	nHS
White-shouldered Sober	*Sophronia semicostella*	2	2013	CR.
Willow Bent-wing	*Phyllocnistis saligna*	7	2016	CR.
Willow Midget	*Phyllonorycter viminiella*	9	2016	CR. IUCN.
Wood Carpet	*Epirrhoe rivata*	2	2016	CS.
Yellow Belle	*Aspitates ochrearia*	4	2016	CS.
Yellow-backed Clothes	*Monopis obviella*	2	2016	CR.
Yellow-headed Cosmet	*Spuleria flavicaput*	4	2015	CR.
Mollusca				
Large Black Slug	*Arion (Arion) ater*	2	2012	IUCN.

Table 10 – Invasive and/or non-native species for which records have been identified within 5km

Species common name	Latin name	No. of records	Most recent record	Nearest record from Site (km)	Legal/ conservation status[18]
Mammals - terrestrial					
Grey Squirrel	*Sciurus carolinensis*	33	2019	0.9	WCA.
Muntjac	*Muntiacus reevesi*	1	2018	3.5	WCA.
Birds					
Bar-headed Goose	*Anser indicus*	4	2012	0.4	WCA. B, Watch List.
Canada Goose	*Branta canadensis*	42	2019	0.0	WCA.
Mandarin Duck	*Aix galericulata*	7	2012	3.4	WCA.
Invertebrates - Crustacea					
Signal Crayfish	*Pacifastacus leniusculus*	2	2011	3.3	WCA. EAList
Invertebrates - Lepidoptera					
Horse Chestnut Leaf Miner	*Cameraria ohridella*	28	2018	0.0	Hants
Light Brown Apple Moth	*Epiphyas postvittana*	39	2018	0.0	Hants

[18] WCA = Species listed on Schedule 9 of the Wildlife and Countryside act 1981, A, Black List/ B, Watch List = Natural England – Horizon scanning for INNS (http://publications.naturalengland.org.uk/publication/43005), Plantlife Critical/ Moderate Risk/ Urgent =Species is listed on the Plantlife 'Here today Gone Tomorrow' list published in 2017, EA List = species is listed in the MOA between the Environment Agency and HBIC, Hants = species listed as invasive in Hampshire according to local experts. Information available from https://documents.hants.gov.uk/biodiversity/hbic-non-native-invasive-species-metadata.pdf

Species common name	Latin name	No. of records	Most recent record	Nearest record from Site (km)	Legal/ conservation status[18]
Higher Plants - Flowering plants					
Asian Firethorn	*Pyracantha rogersiana*	1	2013	2.1	Plantlife Critical.
Aunt-Eliza	*Crocosmia paniculata*	1	2012	3.1	Plantlife Critical.
Bay	*Laurus nobilis*	51	2020	1.9	Plantlife Critical.
Bluebell	*Hyacinthoides hispanica x non-scripta*	42	2019	0.0	Plantlife Critical.
Broad-leaved Bamboo	*Sasa palmata*	1	2019	4.8	Plantlife Critical.
Butterfly Bush	*Buddleja davidii*	128	2019	0.0	Plantlife Critical.
Canadian Waterweed (Canadian Pondweed)	*Elodea canadensis*	2	2016	3.0	WCA. Plantlife Critical. EAList
Cherry Laurel	*Prunus laurocerasus*	19	2020	1.2	Hants
Curly Waterweed (Curly Pondweed)	*Lagarosiphon major*	5	2018	2.7	WCA. Plantlife Critical. EAList
Druce's Crane's-bill	*Geranium endressii x versicolor*	1	2011	2.9	Plantlife Urgent.
Evergreen Oak (Holm Oak)	*Quercus ilex*	75	2020	0.0	Plantlife Critical. Hants
False-acacia	*Robinia pseudoacacia*	11	2018	0.2	WCA. Plantlife Critical.
Firethorn	*Pyracantha coccinea*	7	2016	1.8	Plantlife Critical.
Floating Pennywort	*Hydrocotyle ranunculoides*	2	2011	2.7	WCA. Plantlife Critical. EAList
Garden Pink-sorrel	*Oxalis latifolia*	1	2019	5.0	Plantlife Urgent.
Garden Privet	*Ligustrum ovalifolium*	35	2020	0.0	Plantlife Critical.
Giant Hogweed	*Heracleum mantegazzianum*	10	2016	0.0	WCA. EAList

Species common name	Latin name	No. of records	Most recent record	Nearest record from Site (km)	Legal/ conservation status[18]
Giant Viper's-bugloss	*Echium pininana*	1	2019	5.0	Plantlife Urgent.
Himalayan Cotoneaster	*Cotoneaster simonsii*	4	2013	1.8	WCA. Plantlife Critical.
Hybrid Coralberry	*Symphoricarpos microphyllus x orbicularis*	1	2019	4.8	Plantlife Critical.
Indian Balsam (Himalayan Balsam)	*Impatiens glandulifera*	29	2019	2.2	WCA. EAList
Italian Alder	*Alnus cordata*	5	2019	0.0	Plantlife Urgent.
Japanese Honeysuckle	*Lonicera japonica*	6	2011	0.2	Plantlife Critical.
Japanese Knotweed	*Fallopia japonica*	65	2018	0.0	WCA. EAList
Japanese rose	*Rosa rugosa*	11	2012	0.2	WCA. Plantlife Critical.
Late Cotoneaster	*Cotoneaster lacteus*	4	2013	1.8	Plantlife Critical.
Lawson's Cypress	*Chamaecyparis lawsoniana*	4	2012	2.9	Plantlife Critical.
Mexican Fleabane	*Erigeron karvinskianus*	6	2019	2.9	Plantlife Urgent.
Montbretia	*Crocosmia x crocosmifolia*	17	2020	1.3	WCA. Plantlife Critical.
New Zealand Pigmyweed (Australian Swamp Stonecrop)	*Crassula helmsii*	5	2019	2.8	WCA. Plantlife Critical. EAList
Nuttall's Waterweed	*Elodea nuttallii*	7	2014	0.0	WCA. Plantlife Critical. EAList
Pale Galingale	*Cyperus eragrostis*	2	2012	3.9	Plantlife Critical.
Pampas-grass	*Cortaderia selloana*	10	2019	0.0	Plantlife Urgent. Hants
Portugal Laurel	*Prunus lusitanica*	6	2016	1.5	Plantlife Critical.
Red Oak	*Quercus rubra*	7	2020	0.0	Plantlife Critical.

Species common name	Latin name	No. of records	Most recent record	Nearest record from Site (km)	Legal/ conservation status[18]
Red-osier Dogwood	*Cornus alba*	3	2015	1.8	Plantlife Urgent.
Russian Vine	*Fallopia baldschuanica*	10	2017	0.0	Plantlife Critical.
Seaside Daisy	*Erigeron glaucus*	6	2019	3.3	Plantlife Moderate Risk.
Spurge	*Euphorbia amygdaloides subsp.robbiae*	3	2017	0.0	Plantlife Critical.
Stag's-horn Sumach	*Rhus typhina*	5	2012	2.7	Plantlife Moderate Risk.
Three-cornered Garlic	*Allium triquetrum*	18	2019	0.4	WCA. Plantlife Critical.
Trailing Bellflower	*Campanula poscharskyana*	3	2019	2.8	Plantlife Moderate Risk.
Tree of Heaven	*Ailanthus altissima*	3	2018	2.6	Plantlife Critical.
Turkey Oak	*Quercus cerris*	37	2020	0.0	Plantlife Critical.
Virginia-creeper	*Parthenocissus quinquefolia*	9	2017	1.9	WCA. Plantlife Urgent.
Wall Cotoneaster	*Cotoneaster horizontalis*	13	2018	1.8	WCA. Plantlife Critical.
Wilson's Honeysuckle	*Lonicera nitida*	13	2017	0.2	Plantlife Critical.
Wrinkled Viburnum	*Viburnum rhytidophyllum*	1	2015	2.8	Plantlife Urgent.
Variegated Yellow Archangel	*Lamiastrum galeodbolon argentatum*	5	2020	2.6	WCA. Plantlife Critical.
Higher plants - Ferns					
Water Fern (Fairy Moss)	*Azolla filiculoides*	2	2017	3.5	WCA. Plantlife Critical. EAList. Hants

Appendix C

PLANT SPECIES LIST

PLANT SPECIES RECORDED

Table 11 – Grassland plant species recorded on Horsea Island East

Common Name	Latin Name	Frequency (DAFOR) within each habitat parcel[19]				
		SI(P)1	SNG1	SNG2	SNG3	ESP
Bent, common	*Agrostis capillaris*			D		
Bent, creeping	*Agrostis stolonifera*	F				F
Blackthorn	*Prunus spinosa*		LD			
Bramble	*Rubus fructicosus*		LA			
Butterburr	*Petasites species*		LD			
Buttercup, creeping	*Trifolium pratense*				F	F
Buttercup, meadow	*Trifolium repens*					F
Carrot, wild	*Daucus carota*					
Cinquefoil, creeping	*Potentilla reptans*					
Clover, white	*Trifolium repens*				F	
Cocksfoot	*Dactylis glomerata*		O		F	
Cranesbill, dovesfoot	*Geranium molle*		O		F	
Daisy, common	*Bellis perennis*	F	A			
Dock, species	*Rumex sp.*				F	
Fescue, species	*Festuca sp.*		O	F		F
Goatsrue	*Galega officinalis*					
Hawthorn	*Crataegus monogyna*			R		
Hemlock	*Conium maculatum*				R	
Iris, stinking	*Iris foetidissima*	F		R		
Ivy, ground	*Glechoma hederacea*					F
Knapweed, species	*Centaurea sp.*		LA			
Meddick, species	*Medicago sp.*				F	

[19] Please see Figure 8 - Phase 1 habitat plan for locations of each habitat parcel.

Common Name	Latin Name	Frequency (DAFOR) within each habitat parcel[19]				
		SI(P)1	SNG1	SNG2	SNG3	ESP
Meddick, spotted	*Medicago arabica*		A			
Moss, species	*Bryophyta*					D
Nettle, common	*Urtica dioica*			O		
Oatgrass, species	*Arrhenatherum sp.*					
Orchid, bee	*Ophrys apifera*					
Ox tongue, bristly	*Helminthotheca echioides*			O	F	F
Plantain, ribwort	*Plantago lanceolata*		F			
Ragwort	*Jacobaea vulgaris*		O	A	F	F
Rose, dog	*Rosa canina*		R			
Rush, species	*Juncus sp.*					
Rye grass, Perennial	*Lolium perenne*	D		F		
Speedwell, germander	*Veronica chamaedrys*				O	
Teasel	*Dipsacus fullonum*			O		F
Thistle, species	*Cirsium sp.*			O		F
Vetch, species	*Vicia sp.*		O			
Willowherb, species	*Epilobium sp.*		F			
Yarrow	*Achillea millefolium*	F	F		F	
Yorkshire fog	*Holcus lanatus*				F	

Table 12 – Grassland plant species recorded on Tipner West

Common Name	Latin name	Frequency (DAFOR) within each habitat parcel[20]						
		SNG4	SNG5	SNG6	SNG7	SI(P)2	SI(P)3	G1
Bent, common	*Agrostis capillaris*	A	A	A	A		A	A
Bramble	*Rubus fructicosus agg.*		O		O			
Buttercup, creeping	*Ranunculus repens*		O	O	O	O	F	
Chickweed, mouse-ear	*Stellaria media*	O		F				LA
Cinquefoil, creeping	*Potentilla reptans*		O		O	X[21]	O	O
Cleavers	*Galium aparine*				O			
Clover, red	*Trifolium pratense*	A	O	F				
Clover, white	*Trifolium repens*				O			F
Cocksfoot	*Dactylis glomerata*	F	F	F	F		F	
Couch, sea	*Elytrigia atherica*							F
Crane's-bill, dove's-foot	*Geranium molle*	F	A	F	F	R	O	O
Daisy, common	*Bellis perennis*	F		A		F		
Dandelion, species	*Taraxacum sp.*	O	R	F	O	O		
Deadnettle, red	*Lamium purpureum*			O	O	X		
Deadnettle, species	*Lamium sp.*							O
Dock, species	*Rumex sp.*		R		O			
Elder	*Sambucus nigra*				R			
Fescue, species	*Festuca sp.*		A	F	F		F	
Goatsrue	*Galega officinalis*		O		O		O	O
Knapweed, species	*Centaurea sp.*				R			
Meddick, species	*Medicago sp.*		O	LF	A			F

[20] Please see Figure 8 - Phase 1 habitat plan for locations of each habitat parcel.

[21] X denotes that the species is present, however a frequency had not been determined

Common Name	Latin name	Frequency (DAFOR) within each habitat parcel[20]						
		SNG4	SNG5	SNG6	SNG7	SI(P)2	SI(P)3	G1
Nettle, common	*Urtica dioica*						R	
Orchid, bee	*Ophrys apifera*			LF				
Ox tongue, bristly	*Helminthotheca echioides*			O	F	R	R	F
Plantain, buckshorn	*Plantago coronopus*		O		O			LA
Plantain, ribwort	*Plantago lanceolata*	O	O	F	F	F		
Ragwort	*Jacobaea vulgaris*	O		O			O	
Rush, species	*Juncus sp.*				O			
Rye grass, perennial	*Lolium perenne*	A		A	A	D	D	
Sea beet	*Beta vulgaris subsp. maritima*							F
Sea Purslane	*Halimione portulacoides*							A
Sorrel, species	*Rumex sp.*						LA	
Teasel	*Dipsacus fullonum*							R
Thistle, species	*Cirsium sp.*		R		R		LF	O
Timothy	*Phleum pratense*		O					
Vetch, species	*Vicia sp.*		O		O			
Willow species	*Salix sp.*				R			
Yarrow	*Achillea millefolium*	F/LA	A	A	F	F		A
Yorkshire fog	*Holcus lanatus*					F	O	

Table 13 – Scrub and tall ruderal plant species recorded on Horsea Island East

Common name	Latin name	Frequency (DAFOR) within each habitat parcel[22]								
		DS1	DS2	DS3	DS4	DS5	DS6	SS/ TR1	TR 1	TR 2
Alkanet, green	*Pentaglottis sempervirens*							X[23]		
Bracken	*Pteridium aquilinum*					R		X		
Bramble	*Rubus fructicosus agg.*	A	D		D	D	X	X		
Buddleia	*Buddleja davidii*	A					X	X		
Burdock, lesser	*Arctium minus*							X	O	F
Cleavers	*Galium aparine*							X		
Dock, species	*Rumex sp.*							X	F	
Dogwood	*Cornus sanguinea*		R		F			X		
Elder	*Sambucus negra*					R	X	X		
Foxglove	*Digitalis sp.*							X		
Hawthorn	*Crataegus rhipdophylla*	O	O		O	D	X	X		
Hemlock	*Conium maculatum*							X	R	
Iris, stinking	*Iris foetidissima*				LA	R		X		R
Ivy	*Hedera helix*						X	X		O
Nettle, common	*Urtica dioica*						X	X	F	F
Orchid, bee	*Ophrys apifera*				LD					
Ox-tongue, bristly	*Helminthotheca echioides*									F
Ragwort	*Jacobaea vulgaris*					O		X	R	F
Rose, dog	*Rosa canina*				F					
Sumac, staghorn	*Rhus typhina*									
Teasel	*Dipsacus fullonum*		R		LA	LA		X	A	A

[22] Please see Figure 8 - Phase 1 habitat plan for locations of each habitat parcel.

[23] X denotes that the species is present, however a frequency had not been determined

Common name	Latin name	Frequency (DAFOR) within each habitat parcel[22]								
		DS1	DS2	DS3	DS4	DS5	DS6	SS/ TR1	TR 1	TR 2
Thistle, spear	*Cirsium vulgare*							X		
Willow, species	*Salix sp.*			D						
Willowherb, species	*Epilobium sp.*							X	F	O

Table 14 – Scrub and tall ruderal plant species recorded on Tipner West

Common name	Latin name	Frequency (DAFOR) within each habitat parcel[24]						
		DS7	DS8	DS9	DS10	DS11	DS12	DS13
Birch, silver	*Betula pendula*							R
Blackthorn	*Prunus spinosa*							A
Bramble	*Rubus fructicosus agg*	D	D	A	D	D	D	A
Buddleia	*Buddleja davidii*	R	R		R			
Butterburr	*Petasites species*							LA
Cleavers	*Galium aparine*						F	
Couch, sea	*Elytrigia atherica*				X			
Elder	*Sambucus negra*	O						
Gorse	*Ulex europaeus*		A				O	R
Hawthorn	*Crataegus rhipdophylla*							A
Hazel	*Corylus avellana*							F
Knotweed, Japanese	*Reynoutria japonica*					R/ LA		
Oak	*Quercus sp.*							O
Pine, species	*Pinus sp.*							O
Ragwort	*Jacobaea vulgaris*						R	

[24] Please see Figure 8 - Phase 1 habitat plan for locations of each habitat parcel.

Common name	Latin name	Frequency (DAFOR) within each habitat parcel[24]						
		DS7	DS8	DS9	DS10	DS11	DS12	DS13
Rose, dog	*Rosa canina*					F	O	
Sumac, staghorn	*Rhus typhina*				O			
Teasel	*Dipsacus fullonum*							R
Umbelifer, species	*Apiaceae sp.*						O	
Willow, species	*Salix sp.*			A	O		O	O
Yarrow	*Achillea millefolium*						F	
Rye grass, Perennial	*Lolium perenne*							D

Table 15 – Woodland plant species recorded on Horsea Island East and Tipner West

Common name	Species name	Frequency (DAFOR) within each habitat parcel[25]						
		BW1	BW2	BW3	BW4	PBW1	PBW2	PBW3
Apple	*Malus domestica*		LF					
Ash	*Fraxinus excelsior*		A	A			X[26]	X
Birch	*Betula pubescens*			R				
Birch, silver	*Betula pendula*		O					
Bluebell, English	*Hyacinthoides non-scripta*		R					
Bramble	*Rubus fructicosus agg.*	A	O	F	D	A	D	X
Broom, butchers	*Ruscus aculeatus*			R				
Cherry, species	*Prunus sp.*		O					
Cotoneaster, species	*Cotoneaster sp.*		F					
Dogwood	*Cornus sanguinea*	X						
Elder	*Sambucus negra*	O	F	F	R			
Elm	*Ulmus sp.*	R				D		

[25] Please see Figure 8 - Phase 1 habitat plan for locations of each habitat parcel.

[26] X denotes that the species is present, however a frequency had not been determined

Common name	Species name	Frequency (DAFOR) within each habitat parcel[25]						
		BW1	BW2	BW3	BW4	PBW1	PBW2	PBW3
Fern, harts-tongue	*Asplenium scolopendrium*		R					
Hawthorn	*Crataegus rhipdophylla*	D	X				X	X
Hazel	*Corylus avellana*		O					X
Holly	*Ilex aquifolium*		O					
Iris, stinking	*Iris foetidissima*		O					
Ivy	*Hedera helix*	LA	A	A				
Ivy, ground	*Glechoma hederacea*					D		
Lords and Ladies	*Arum maculatum*	R	O					
Nettle, common	*Urtica dioica*	A		O				
Oak	*Quercus sp.*			A	R		X	
Poplar, white	*Populus alba*				D			X
Privet, garden	*Ligustrum ovalifolium*		R					
Rhodedendron	*Rhododendron sp.*		R					
Rose, dog	*Rosa canina*						X	
Sedge, divided	*Carex divisa*						R/LA	
Spurge, caper	*Euphorbia lathyris*		R					
Sumac, staghorn	*Rhus typhina*		R					
Sycamore	*Acer pseudoplatanus*		F	R				

Appendix D

PHOTOGRAPHS

Table 16 – Photographs of Horsea Island East, Tipner West and Target Notes

No.	Description	Photograph	No.	Description	Photograph	No.	Description	Photograph
Horsea Island East								
1	BW1/ DS5/ ESP		2	BW2		3	BW2	
4	DS3		5	DS3/ SP1		6	DS4	
7	TR/SS1		8	SNG1		9	SNG2	

No.	Description	Photograph	No.	Description	Photograph	No.	Description	Photograph
10	SNG3/ SS		11	TR1		12	TR2/DS4	
Tipner West								
13	BW4		14	DS7		15	DS9	
16	DS10		17	DS11		18	DS7	

No.	Description	Photograph	No.	Description	Photograph	No.	Description	Photograph
19	DS7		20	DS13		21	Scattered trees on amenity grassland. PBW3 in the distance	
21	SNG4/ SNG5/ DS7/ DS8		22	SNG6		23	SNG7	
24	G1		25	SI(P)2		26	SI(P)3/SS	

No.	Description	Photograph	No.	Description	Photograph	No.	Description	Photograph
27	SI(P)3/SS		28	Tipner Peninsula		29	ESP	
Target Notes								
30	TN1 Bee orchids on HIE		31	TN1 Bee orchids on HIE		32	TN2 Woodpile on HIE	
33	TN3 Introduced shrubs – cotoneaster species.		34	TN5 WW2 Jetties		35	TN6 Fox den on Tipner Range	

No.	Description	Photograph	No.	Description	Photograph	No.	Description	Photograph
36	TN7 Japanese knotweed on Tipner West		37	TN8 Golden Samphire on Tipner West				

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A8: North Solent SMP IROPI Decision letter (DEFRA, 4th April 2011)

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Andrew Colenutt
North Solent SMP Project Manager
New Forest District Council
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Hampshire
SO43 7PA

Our ref NSSS57

4 April 2011

Dear Mr Colenutt

NORTH SOLENT SMP

1. Thank you for supplying the Habitats Regulations Assessment and the completed Appendix 20 application for the North Solent SMP.

2. I recognise that your Council has fulfilled its obligations under the Habitats Regulations and appropriately assessed the impacts of the proposed SMP on the European sites that may have been affected.

3. I am satisfied that you have carried out a thorough evaluation of alternative solutions. I accept that there are no alternative solutions to the preferred options that would have a lesser effect on the integrity of the European sites.

4. Given that coastal flooding and erosion poses a risk to 51,000 residential and commercials properties, two major ports, industrial assets and key infrastructure, I consider that you have made a strong case to justify the potential damage on grounds of imperative reasons of overriding public interest.

5. I am satisfied that you have taken appropriate steps to secure suitable compensatory habitat within the Southern Regional Habitat Creation Programme to ensure that the overall coherence of the Natura 2000 network is protected.

6. Consequently, I can confirm that, in respect of regulation 62 of the Conservation of Habitats and Species Regulations 2010, Defra has no objections to your Council's intention to approve this strategy.

7. I would be grateful if you could inform Craig Lee once the Strategy is approved so that he can forward the details to the European Commission.

8. I am copying this letter to Paul Murby in Defra, Jenny Buffrey in the EA and Chris McMullon in Natural England.

Yours sincerely

Steve Lee-Bapty
Head of Protected Areas
Acting on behalf of the Secretary of State

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A9: Portsea Island Coastal Strategy IROPI Decision letter (DEFRA, 5th April 2011)

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RECEIVED

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Our ref NSSS62

5 April 2011

Dear Mr Davies

PORTSEA ISLAND COASTAL STRATEGY

1. Thank you for supplying the Habitats Regulations Assessment and the completed Appendix 20 application for the Portsea Island Coastal Strategy.

2. I recognise that your Council has fulfilled its obligations under the Habitats Regulations and appropriately assessed the impacts of the proposed strategy on the European sites that may have been affected.

3. I am satisfied that you have carried out an appropriate evaluation of alternative solutions. I accept that there are no alternative solutions to the preferred options that would have a lesser effect on the integrity of the European sites.

4. Given that coastal flooding and erosion poses a risk to over 9,000 residential and commercials properties, key infrastructure and the HM Naval Base, I consider that you have made a strong case to justify the potential damage on grounds of imperative reasons of overriding public interest.

5. I am satisfied that you have taken appropriate steps to secure suitable compensatory habitat within the Southern Regional Habitat Creation Programme to ensure that the overall coherence of the Natura 2000 network is protected.

6. Consequently, I can confirm that, in respect of regulation 62 of the Conservation of Habitats and Species Regulations 2010, Defra has no objections to your Council's intention to approve this strategy.

7. I would be grateful if you could inform Craig Lee once the strategy is approved so that he can forward the details to the European Commission.

INVESTOR IN PEOPLE
POSITIVE ABOUT DISABLED PEOPLE

8. I am copying this letter to Paul Murby in Defra, Jenny Buffrey in the EA and Chris McMullon in Natural England.

Yours sincerely

Steve Lee-Bapty
Head of Protected Areas
Acting on behalf of the Secretary of State

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A10: Tipner, Port Solent and Horsea Island Bridge Feasibility Study, Peter Brett Associates (June 2010)

Tipner, Port Solent and Horsea Island

Bridge Feasibility Study

Report prepared for Portsmouth City Council

Project Ref: 24012/001

Doc Ref: RBFS/rev001

June 2010

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Project Name: **Tipner, Port Solent and Horsea Island**

Project Ref: **24012/001**

Report Title: **Bridge Feasibility Study Report prepared for Portsmouth City Council**

Doc Ref: **RBFS/rev001**

Date: **June 2010**

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For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
Skeleton draft / content of report	14th May 2010	Issued to Savills and Portsmouth City Council	SS/SW/PW	JDO	JDO
1st Draft	25th May 2010	Issued to Savills	SS/SW/PW	JDO	JDO
Draft report	28th May 2010	Issued to Savills and Portsmouth City Council	SS/SW/PW	JDO	JDO
Final Draft Report	8th June 2010	Issued to Savills and Portsmouth City Council	SS/SW/PW/ CC	JDO/PG	JDO/PG

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1 Executive Summary

1.1 Purpose of Report

1.1.1. The Bridge Feasibility Study provides supporting evidence to the Local Development Framework Concept Statements for Tipner, Port Solent and Horsea Island. The study forms part of the emerging 'Portsmouth Plan'.

1.1.2. The purpose of the Bridge Feasibility Study is to provide outline and high level evidence demonstrating the potential for a bridge link between Horsea Island and Tipner in a civil engineering context. It also outlines the onward process of delivering a crossing.

1.1.3. The study reflects a partnering approach between Peter Brett Associates, Atkins and Savills on behalf of Portsmouth City Council.

1.1.4. Peter Brett Associates have led the high level civil engineering design and feasibility of the bridge. This work includes considering different alignment options and providing advice on the broad level of construction costs for the various alignment options available. An outline of process delivery including potential funding streams has also been advised.

1.1.5. Atkins have undertaken a separate study entitled the 'Draft Western Corridor Transport Strategy' for Portsmouth (May 2010) and much of their analysis contained in Section 3 of this report relates from that broader work. That study concluded that without the bridge there would be a maximum level of development that could be provided at the Port Solent and Horsea Island sites, based on available junction capacity (it was also noted, not relevant to this study that without the Tipner Interchange there was also a maximum amount of development that could be provided at Tipner). The assessment and modelling applied to this wider study has been useful in understanding the benefits and the justification for a new bridge.

1.2 Justification of the Scheme

1.2.1. The modelling and transport evidence referred to below is intended to confirm or otherwise at an early stage the need for the bridge link to enable full development of the Port Solent and Horsea Island sites. The modelling exercise undertaken is on a comparative basis of two future scenarios (with and without the bridge) and is therefore intended to inform planning decisions. In this summary a number of key findings can be drawn from the assessments discussed above to inform the evidence base for the bridge link:

Enabling The Development

- Without the bridge link access to the Horsea Island and Port Solent development strategic sites would be reliant on the Port Way access road, whereas the main access point for the Tipner site would be retained via the proposed Tipner Interchange on the M275;

- In the absence of the bridge link development related traffic travelling between Horsea Island/Port Solent sites to central areas of the city centre (for example) will be subject to lengthy detours relative to a scenario which includes the bridge link. Average peak hour journey times to reach the central areas by car would increase by half an hour, resulting from a combination of increased distances travelled (four kilometres to the city centre) and higher levels of congestion and delays at key junctions;

- Without the bridge link the resulting poorer levels of accessibility and congestion mean that the development will be less attractive and therefore reduced take up of housing, commercial space and regeneration;

- In large part, the wider impact of not including the bridge link in delivering the Portsmouth Plan housing allocation within the western corridor area appears to be restricted to a couple of key junctions on the immediate highway network, including;

  - The M27 junction with Port Way; and

  - Johnson & Johnson Junction.

- It is noted that the traffic impact of excluding the bridge link is negligible beyond the immediately adjacent network junctions – identifying the bridge link as a local scheme based on the extent of its impacts;

Accessibility, Connectivity & Public Transport

- Similarly, without the bridge link, the Horsea Island and Port Solent sites would not be served directly by the express bus services; hence development related trips wishing to continue using public transport would be reliant on local bus services. As a result public transport travellers between the development sites and the central areas would be subject to increases in travel times of up to half an hour, and therefore the mode share of car trips increases to nearly 75% from around 65% with the link (i.e. public transport mode share drops from 35% to 25%). With increased accessibility to public transport, the inclusion of the bridge link therefore achieves greater mode shift to sustainable (non-car) modes of transport;

- Albeit a local scheme in transport modelling terms, the bridge link should be considered major infrastructure in a city-wide context as it is required to enable significant residential development and regeneration and would also enable access through Port Solent, Horsea Island and Tipner for regional / express bus routes principally from Waterlooville to Portsmouth and Fareham to Portsmouth (also known as BRT/ZIP).[1]

- The bridge link will connect Tipner and Horsea Island significantly reducing severance between the two development locations and improving site permeability and access to jobs, services and public transport. Thereby removing the present requirement for bus services to terminate at Tipner and Port Solent which would have the benefit of reduced journey times and increased operational efficiency. Furthermore, the omission

[1] **Bus Rapid Transit (BRT)**
The regional express bus services referred to in this report are part of a wider proposed Bus Rapid Transit (BRT) network for South Hampshire. One of the underlying objectives for sustainable development for Portsmouth is for public transport to have an impact on congestion both now and in the future on the approaches to the City Centre. To achieve a higher share of journeys using public transport, and significantly improved journey times for public transport users in the Western Corridor into the city will require a step change in the provision of public transport. Transport for South Hampshire has developed a conceptual BRT network for connections between the major centres in south Hampshire. The rationale behind the BRT network is that it should be designed to attract car users with competitive journey times and frequencies. It would operate where practical and feasible with the highest levels of segregation and priority over other vehicles and use high quality vehicles which are more like trams than buses.

Phase 1 of the South Hampshire BRT network between Gosport and Fareham has now received funding and it is hoped that it will be operational by 2011. Fastrack in Kent is the closest comparison to the BRT envisioned for south east Hampshire. The Cambridge Guided Bus Way, when completed, will also reflect this definition with strong links to new housing and employment development.

of the bridge link would also have an acute impact on servicing Horsea Island from other areas in central Portsmouth;

Viability And Funding

- A number of methods of financing the new bridge are available owing to the broad range of local and regional benefits. A preliminary high level benefit to cost assessment under these conditions suggests a strong case for the bridge link with an indicative ratio of benefits to costs of around 10 to 1 which reflects on the points above.

1.3 Engineering Feasibility and Alignment Options

1.3.1. There were four alignment options that have been considered. These alignments are summarised in the following tables. Each of these options was considered for two height options. The high level option was defined as one that replicates the height of the existing M275 bridge and a low level option was 1.5 metres lower than that level.

OPTION A

Key Bridge Statistics:

- Bridge – approx 104m long as existing adjacent M275 bridge (50m main span, with 2 no. 27m side spans)
- Approach retaining walls within M275 embankment – approx 260m long
- Culverted embankment across mudflats – approx 140m long

Pros

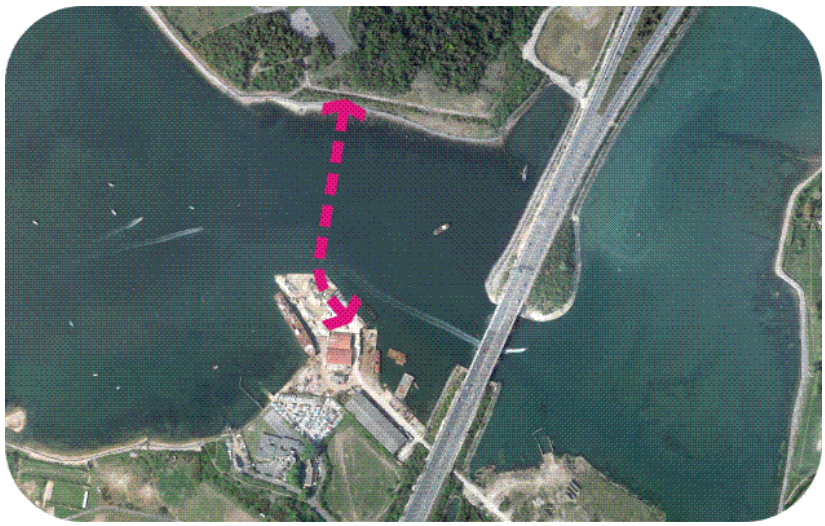
- Shortest bridge crossing route
- Utilises existing reclaimed land at the toe of M275 embankment
- Most discrete crossing
- Likely form of construction enables bridge to vary in depth, improving the aesthetics of the bridge elevation
- Northern and Southern approaches can remain within Portsmouth City Council land

Cons

- Impact on adjacent motorway operation during construction
- Adjacent motorway traffic encourages link road traffic to travel faster (low level version could provide some mitigation for this)
- Long retaining walls required for approaches
- Interaction with Highways Agency required on the northern approach
- Interface with existing architectural feature on M275 bridge
- Main span length would need to match existing M275 bridge, putting it outside the range of common UK construction techniques for concrete bridges. For example, insitu balanced cantilever construction, rather than precast prestressed beams would be used
- Environmental impact of significant embankment across mudflats and the need for compliance with the Habitats Regulations

Construction Estimate £19.2 million (plus £4.5 million for connection from Port Solent to Horsea Island)

OPTION B



Key Bridge Statistics:

- Bridge – approx 250m long (40m main span, with 6 no. 25m side spans and 2 no 30m side spans)
- Reduced main span length of 40m assumed acceptable due to separation from M275 bridge
- 75m southern approach ramp on reinforced soil to reduce footprint and mitigate impact on listed building as the road to lowers to extreme tidal level of 4.5mAOD
- 45m northern approach ramp for road to lower to extreme tidal level of 4.5mAOD

Pros

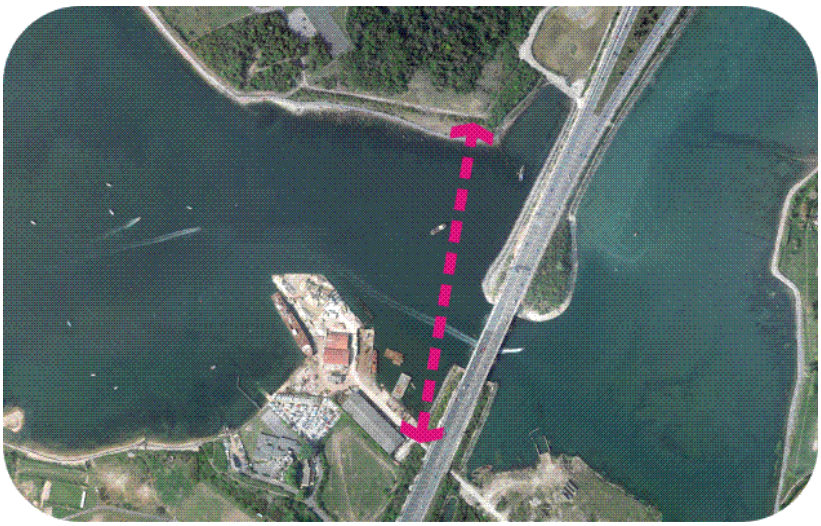
- Shortest overall length (compared with combined length in Option A of bridge, approach retaining walls and embankment across mudflats)
- Assuming 40m main span permissible, can be constructing using common UK construction techniques for concrete bridges (i.e. precast prestressed beams)
- Separation from M275 would allow development of a landmark gateway structure (for additional cost)

Cons

- Environmental disturbance to harbour bed from construction of 8 no. piers and the need for compliance with the Habitats Regulations
- Most economic form of construction leads to aesthetic challenge of flat soffits (GRP cladding included to provide some mitigation for this)
- Requires land negotiation for the southern approach
- Proximity of listed buildings on the south side gives rise to a challenging horizontal alignment

Construction Estimate £21.4 million (plus £4.5 million for connection from Port Solent to Horsea Island)

OPTION C



Key Bridge Statistics:

- Bridge – approx 440m long (40m main span, with 16 no. 25m side spans)
- Reduced main span length of 40m assumed acceptable due to separation from M275 bridge
- 45m approach ramps at each end for road to lower to extreme tidal level of 4.5mAOD

Pros

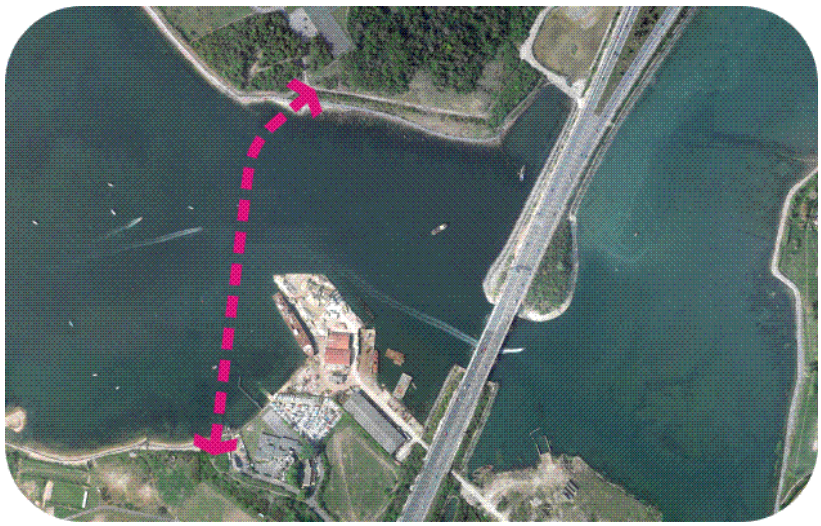
- Assuming 40m main span permissible, can be constructing using common UK construction techniques for concrete bridges (i.e. precast prestressed beams)
- Separation from M275 would allow development of a landmark gateway structure (for additional cost)
- Southern approach alignment could be adjusted to remain within Portsmouth City Council land (some approach retaining wall would be required along the M275 embankment)

Cons

- Environmental disturbance to harbour bed from construction of 16 no. piers and the need for compliance with the Habitats Regulations
- Most economic form of construction leads to aesthetic challenge of flat soffits (GRP cladding indicated to provide some mitigation for this)
- Higher cost crossing

Construction Estimate £29.3 million (plus £4.5 million for connection from Port Solent to Horsea Island)

OPTION D



Key Bridge Statistics:

- Bridge – approx 540m long (40m main span, with 20 no. 25m side spans)
- Reduced main span length of 40m assumed acceptable due to separation from M275 bridge
- 60m approach ramps at each end for road to lower to extreme tidal level of 4.5mAOD

Pros

- Assuming 40m main span permissible, can be constructing using common UK construction techniques for concrete bridges (i.e. precast prestressed beams)
- Separation from M275 would allow development of a landmark gateway structure (for additional cost)
- Southern approach remains within Portsmouth City Council land

Cons

- Environmental disturbance to harbour bed from construction of 20 no. piers and the need for compliance with the Habitats Regulations
- Most economic form of construction leads to aesthetic challenge of flat soffits (GRP cladding indicated to provide some mitigation for this)
- Higher cost crossing

Cost Estimate £36.0 million (plus £4.5 million for connection from Port Solent to Horsea Island)

1.3.2. **Option A** may result in comparatively less significant ecological issues and is the lowest cost option. It would however provide much less of a land mark to serve the development and would require additional works to minimise the intrusion into the former landfill site to the north.

1.3.3. **Option B** would provide more of a land mark and gateway for the development but may have more environmental challenges to overcome than A, including routing close to the listed buildings. The cost is broadly similar to Option A. This option may be more visually intrusive in relation to the listed Portchester Castle situated at the head of Portsmouth Harbour.

1.3.4. **Option C** would result in a very lengthy crossing of the harbour and as such the cost of this option is high. The environmental implications of this option are likely to be somewhere between those of Options A and B. This option avoids having to re-route the road to the south of the former landfill site and would have less implications in relation to the listed buildings at Tipner Point.

1.3.5. **Option D** would provide a very lengthy crossing and would be expected to have the greatest visual implications in relation to Portchester Castle and environmental implications. It would also have the highest construction cost of the options.

1.3.6. In terms of their engineering feasibility, it is recommended that **Option A** and **B** remain in consideration at the current stage of investigation and further progressed.

1.3.7. It is recommended that **Options C** and **D** be discounted primarily due to the viability and challenging environmental issues which would make these options too difficult to deliver.

1.4 Scheme Delivery and Promotion

1.4.1. The bridge link will be required to enable all of the development growth planned at Horsea Island and Port Solent as outlined in the Portsmouth Plan. Its implementation is a key condition of the planning in the area, however, the timing of implementation will be phased to reflect procurement and commercial delivery considerations. There are a number of sources of funding for the bridge including (and not restricted to):

- Developer Funding (CIL/Local Levy/Section 106)
- Public Subsidy (Local, Regional, National)
- Local Asset Based Vehicles (LABV)

1.4.2. At this stage, the Feasibility Study acts to illustrate the broad range of potential delivery mechanisms to enable the bridge link. This includes technical engineering, high level costs and potential mechanisms of delivery.

1.4.3. In environmental terms the broad impacts of the Concept Statements (which all include the bridge Options A and B) have been tested by the SA/SEA and the Habitats Regulations Assessment for the Portsmouth Plan (see the separate HRA Technical Note). However, the specific engineering solutions outlined in this document were not available at the time these assessments were made. Future iterations of the SA/SEA and HRA will take further account of the engineering solutions outlined in later chapters. The specific environmental impacts (and any required mitigation) will be outlined by Environmental Impact Assessment and project level HRA at a future date when the bridge proposals are forwarded through the planning process.

1.4.4. Clearly, there may be differing environmental impacts between each option. These potential impacts are not discussed in detail at this stage, as outlined in the separate HRA Technical Note. It could be that a particular bridge option (notably those further away from the M275) may have greater environmental impacts, for example disturbance on the SSSI/SPA at Portsmouth Harbour and the need for a greater number of supporting piers with possible impacts to intertidal habitat. Stakeholder and consultee comments are welcome on these aspects to help inform the Portsmouth Plan and onward detailed planning process for the bridge.

2 Introduction

2.1.1. The Bridge Feasibility Study provides supporting evidence to the Local Development Framework, Core Strategy (known as the Portsmouth Plan) Concept Statements for Tipner, Port Solent and Horsea Island.

2.1.2. The purpose of the Bridge Feasibility Study is to outline high level evidence which demonstrates the potential for a bridge link between Horsea Island and Tipner as being both justifiable by evidence and technically feasible in engineering terms.

2.1.3. The City Council does not have a preferred option for the bridge link at present, and is consulting on both options A & B (see separate Concept Statements documentation), assuming for the purpose of consultation that ecological and planning constraints can be overcome through detailed design. The location of the bridge link options is shown by Figure1. The Engineering feasibility has considered both high and low level bridge height options (the highest being the approximate height of the M275, the lowest approximately 1.5 metres below this). The position of the City Council is that a bridge link would be a requirement of development delivery at Horsea Island, and also Port Solent (subject to phased implementation).

2.1.4. The study reflects a partnering approach between Peter Brett Associates, Atkins and Savills on behalf of Portsmouth City Council.

2.1.5. Peter Brett Associates have led the high level civil engineering design and feasibility of the bridge. This work includes considering different alignment options and providing advice on the broad level of construction costs for the various alignment options available. An outline of process delivery including potential funding streams has also been advised.

2.1.6. Atkins have undertaken a separate study entitled the 'Draft Western Corridor Transport Strategy' for Portsmouth and much of their analysis contained in Section 3 of this report relates to that broader work. The assessment and modelling applied too this wider study has been useful in understanding the benefits and the justification for a new bridge.

2.1.7. The Study does not form a detailed Cost/ Benefit Analysis or include detailed engineering drawings.

2.1.8. This report is structured as follows:

- **Section 3** - sets out the justification for the new bridge. This section of work has been undertaken by Atkins using the Transport Models that they have developed for Portsmouth (both a wider SATURN model and a VISSIM model of local junctions).
- **Section 4** – covers the assessment undertaken on the engineering feasibility of the alignment options for the new bridge. It considers a number of potential alignment options and the issues associated with each of these. It also considers the broad level of construction costs that each alignment option would be likely to require.
- **Section 5** – looks at the potential funding options for the new bridge, the timescales and the way forward.
- **Section 6** - provides a summary and conclusions to the above.

2.1.9. As an output this report provides a greater level of understanding for the justification of a bridge between Tipner and Horsea Island and the many benefits it could bring. It also enables the engineering feasibility and likely construction costs of the preferred options to be understood with advice on how the options of the bridge could be promoted and funded.

3 Justification of the Scheme

3.1 Introduction

3.1.1. For the purpose of presenting a case in transport terms for the Bridge Link, transport modelling assessments have been undertaken based on the multi-modal modelling framework (including both strategic and local micro-simulation modelling) that supported the recent work to develop the Draft Western Corridor Transport Strategy (May 2010). In particular the Western Corridor Preferred Strategy model runs (with the full Portsmouth Plan housing allocation) has been assumed here to represent the "with" Horsea Island bridge link scenario.

3.1.2. The modelling exercise undertaken in this bridge study is on a comparative basis of two future scenarios (with and without the bridge) and is therefore intended to inform planning decisions such as primarily the infrastructure needs which in turn facilitates discussions and decisions on the Concept Statements / Portsmouth Plan. It is not the intention of the scenario undertaken to justify a level of development that can be accessed from Port Way without the bridge.

3.1.3. Through comparison of the two modelled scenarios ("with" and "without" the bridge link) across the morning and evening peak hours the case for the bridge link has been examined at a high level to provide early quantified evidence alongside, and commensurate with the policy led / sustainability justifications for the scheme. The remaining sections look at these in turn highlighting the merits of the scheme in terms of:

- A case of the scheme to deliver the Portsmouth Plan housing allocation;
- Accessibility by local and regional bus services as well as private vehicles;
- Linking development areas and;
- Benefit-Cost Assessment.

3.2 Case of the Scheme to Deliver the Portsmouth Plan Housing Allocations

3.2.1. The concept statement 'options' outlines varied levels of housing in a number of 'scenarios'. For the purposes of the Bridge Feasibility Study, and as with the Draft Western Corridor Transport Strategy the following assumption on the spread of development has been made

- Port Solent: 1,000 Units;
- Horsea Island: 1,000 Units; and
- Tipner: 1,600 Units.

3.2.2. In effect the maximum development parameter tested for Tipner is 1,600 units, and Port Solent and Horsea Island in combination 2,000 units, this is within the parameters of all the concept statement options with the exception of option 4 which envisages further development at Horsea Island, bringing the total (with Port Solent) to 2,350 units, however mirrored by a reduction in development quantum at Tipner of 350 units (total 1,250 units) returning the balance.

3.2.3. Currently, both Port Solent and Horsea Island are accessed via the Port Way junction with the A27 Southampton Road. With the bridge link between Tipner and Horsea Island, traffic associated with the development at Horsea Island could be accessed via the proposed Tipner Interchange on the M275. It is noted that this Interchange has been 'future-proofed' in its design to accommodate the full quantum of traffic associated with 2,600 residential units from both Tipner and Horsea Island; in this scenario Port Way would provide only private vehicular the access to development in Port Solent.

3.2.4. Therefore to enable the full residential development associated with the Portsmouth Plan "without the bridge link", the Port Way junction with the M27 and the adjacent road network would need to support traffic associated with 2,000 additional residential units from both Port Solent and Horsea Island (as well as other business and service related trips).

3.3 Highway Network Assessments

Network Performance

3.3.1. Based on the strategic transport model the performance of the network across the western corridor of Portsmouth (during the morning peak hour in 2031) has been compared for the 'with bridge' and 'without bridge' scenarios. This demonstrates significant benefits for particular journeys to and from the new development sites, particularly in terms of journey times and availability of alternatives to the car. This is discussed further in the following paragraphs.

Journey Times

3.3.2. The journey times from Horsea Island/Port Solent strategic sites to the central areas of Portsmouth are clearly the most affected without bridge link as both buses and cars are required reroute their journeys via the Port Way junction (Table 3.1). Without the bridge link the journey time from Horsea Island and Port Solent for buses is affected by at least 30 minutes as there is no direct bus service and users are required to find connecting services en route.

3.3.3. A similar increase can be expected by car drivers travelling from Horsea Island who would otherwise use the bridge where the detour and the additional delays together result in an extra half hour travel time to the central area. Cars trips from Port Solent who would have used the Port Way access would experience up to an additional 10 minutes due to delays at the key junctions, particularly Port Way and Johnson & Johnson Roundabout. There is no difference in journey times from Tipner to the central areas of Portsmouth.

3.3.4. In summary, without the bridge link, development related traffic travelling between Horsea Island/Port Solent sites to central areas of the city (for example) will be subject to lengthy detours relative to a scenario which includes the bridge link.

Table 3.1 – AM Peak Person Journey time comparison by mode to Portsmouth Central Area (2031)

Average Journey Times (minutes)	With Bridges		Without Bridges	
	Bus	Car	Bus	Car
Port Solent	39	35[1]	70	43[1]
Horsea Island	37	13[2]	72	43[1]
Tipner	29	11	30	11

[1] Via Port Way
[2] Via Tipner Interchange

Findings of the Impact on the Highway Network

3.3.5. The findings summarised above demonstrate that whilst adverse impacts of not having the bridge link are seen at several key junctions on the surrounding local highway network (with increased queues and delay at local junctions) the strategic modelling confirms that the impacts are negligible on the wider highway network beyond the local junctions identified, and for most non-development related traffic.

3.3.6. In a future scenario where no bridge is provided there is an increased potential for traffic to use local routes to avoid queuing and increased delays on the A27 (Southampton Road).

3.3.7. To assess the localised impact of the proposed development with and without the bridge link, the operational performance of junctions likely to be affected by an increased volume of development traffic has been studied, with average queue lengths and average delays performance indicators extracted from the strategic modelling for the network peak hours. These form the key junctions leading to and from Portway and with the evidence that the majority of development traffic routes to the City Centre via the M275, capture of key junctions in the Western Corridor. These include:

- A27 Southampton Road / Port Way (Access);
- Johnson & Johnson;
- Portsbridge Roundabout;
- M275 Tipner Interchange (Access);
- Rudmore Roundabout; and
- Church Street Roundabout.

3.3.8. The model tests show that the omission of the bridge link has the greatest impact on the Port Way junction; the performance of other junctions is shown to be marginal.

3.3.9. Tipner Interchange has been designed to accommodate traffic associated with both Tipner and Horsea Island in order to 'future proof' its design. Without the bridge link connecting Horsea Island and Tipner, traffic associated with the additional 1,000 residential units at Horsea Island (as well as the 1,000 units at Port Solent) will be completely reliant on Port Way for access. The tests show that Port Way in its current form will be unable cope operationally with the demand from both Horsea Island and Port Solent developments with unacceptable levels of congestion and delays (Table 3.2). Similarly the impact of this development traffic follows on to Johnson & Johnson leading to a significant increase in congestion and delays on certain movements.

Table 3.2 – Performance of A27 Southampton Road / Port Way Junction (2031) AM Peak

Approach Arm	Average Delay (seconds)	
	With Bridge	Without Bridge
A27 Southampton Road (E)	9	97
A27 Southampton Road	3	14
Port Way	8	261

3.3.10. In terms of access to the development sites, it is also noted that with the Tipner Interchange - as proposed in the Draft Western Corridor Transport Strategy - the Tipner development allocation of 1,600 units is deliverable irrespective of the Horsea Island bridge link. However up to around 1,000 units associated with Horsea Island combined with the Port Solent development (1,000 units) is dependent on the bridge link to provide adequate access capacity in addition to Port Way.

3.3.11. Noting that the impact of the development is not limited to the immediate access junctions, this assessment has also examined the impacts of the development traffic on the surrounding network as it gravitates towards its ultimate destinations primarily in Portsmouth City Centre. Without the bridge link additional queuing and delays can be expected at the Port Way access junction and to a more limited extent the Johnson & Johnson Junction. An additional implication of the traffic being re-routed to and from Port Way, is that the other vehicles using the A27 may be displaced onto other more local and inappropriate residential routes in Paulsgrove and Wymering. The impact on the wider network beyond the immediate junctions is however negligible.

3.4 Benefits of the Scheme for Accessibility & Public Transport

3.4.1. The inclusion of a new bridge link between Tipner and Horsea Island would offer the advantage of bus services that are modified and combined to serve the development sites directly from the A27 to the M275 at Tipner Interchange at the proposed Tipner Park & Ride site. It also enables sub regional improvements to connectivity, for example by linking the development sites to Fareham or perhaps beyond to Whiteley and to other strategic employment locations across the sub region.

3.4.2. The bridge provides the key priority access for new public transport connecting the main corridor development sites together, using regional / express bus routes principally from Waterlooville to Portsmouth and Fareham to Portsmouth (also known as BRT/ZIP).[2] The

[2] **Bus Rapid Transit (BRT)**
The regional express bus services referred to in this report are part of a wider proposed Bus Rapid Transit (BRT) network for South Hampshire. One of the underlying objectives for sustainable development for Portsmouth is for public transport to have an impact on congestion both now and in the future on the approaches to the City Centre. To achieve a higher share of journeys using public transport, and significantly improved journey times for public transport users in the Western Corridor into the city will require a step change in the provision of public transport. Transport for South Hampshire has developed a conceptual BRT network for connections between the major centres in south Hampshire. The rationale behind the BRT network is that it should be designed to attract car users with competitive journey times and frequencies. It would operate where practical and feasible with the highest levels of segregation and priority over other vehicles and use high quality vehicles which are more like trams than buses.

Phase 1 of the South Hampshire BRT network between Gosport and Fareham has now received funding and it is hoped that it will be operational by 2011. Fastrack in Kent is the closest comparison to the BRT envisioned for south east Hampshire. The Cambridge Guided Bus Way, when completed, will also reflect this definition with strong links to new housing and employment development.

Western Corridor Preferred Strategy recommends a bus gate between Port Solent and Horsea Island to prevent non-bus traffic using the Tipner-Horsea Link Bridge (this is reflected in the concept statement options). Therefore, with the bridge link Port Solent development traffic would access the road network via the Port Way junction, whereas Horsea Island traffic would use the bridge link. Option 3 outlines a scenario whereby a proportion of development at Port Solent is accessed from the Interchange, this being the scenario with no development at Horsea Island and hence a higher quantum is proposed at Port Solent.

3.4.3. Without the bridge link, the Tipner and Port Solent/Horsea Island developments would not be inter-linked by public transport, but served individually through the extension of existing local bus services. BRT services would be re-routed around the M275 corridor without accessing the centre of the development sites directly; though Tipner would be served via the proposed interchange on the M275. The main bus route changes without the bridge would include:

- Existing bus service 11 to be extended to serve the new developments;
- Bus route 52 and 38B serving Port Solent via proposed bridge link to be diverted via M275 and Johnson and Johnson junction without serving Port Solent; and
- Bus services 38B and 52 continue to serve Tipner via Tipner interchange.

3.4.4. Under these conditions there would be both a reduction in the levels of public transport mode share that could be achieved for the developments, and a significant increase the journey times (plus approximately 30 minutes) for bus users (including non-development related travellers using these services between Fareham and Portsmouth). This further reduces the attractiveness of the bus services and hence the expected patronage levels and potentially the viability of the service.

Public Transport Patronage and Performance

3.4.5. As perhaps expected, the patronage levels in the morning peak remain similar for all services except 38b, 52 and 11 which are subject to lengthy diversions without the bridge link, and therefore seen to be less attractive (Table 3.8).

3.4.6. Patronage for buses on routes 38b and 52 is significantly higher in the “with bridge” scenario compared to “without bridge” scenario. This reflects the fact that with the bridge link the bus services are able to draw on the catchments of the proposed development sites at Horsea Island and Port Solent. On-the-other-hand it is noted that Route 11 can be expected to achieve higher ridership without the bridge link as it remains the only bus route serving Port Solent (noting the route was also extended to serve the Horsea Island sites in this test).

3.4.7. Clearly without the bridge link the Port Solent and Horsea Island develop sites will not be served by the BRT services (where these will be diverted along the M275 corridor), and hence the benefits of including the bridge link will be greater with higher patronage levels and mode share for development related trips.

Table 3.3 –Patronage on Selected Bus Routes Serving the Development Sites (2031 AM Peak)

BRT Route	Route Description	Peak Bus Patronage	
		With Bridge Link	Without Bridge Link
38b Inbound	Queen Alexandra Hospital –The Hard via Horsea Island Bridge (Scheme 38)	225	173
38b Outbound	The Hard – Queen Alexandra Hospital via Tipner-Horsea Island Bridge (Scheme 38)	346	205
52 Inbound	Fareham Rail Station to The Hard	284	185
52 Outbound	The Hard to Fareham Rail Station	586	436
11	Cosham to Port Solent	13	207

3.4.8. Finally, it is also noted that the modelling results demonstrate that the usage of the proposed Park & Ride at Tipner would be largely unaffected by the exclusion of the bridge link; the Park & Ride facility has been designed in large part to serve incoming trips from areas beyond the development sites. Without the bridge link the Park & Ride facility attracts around 130 cars to the Park & Ride site in the morning peak hour, this compares with 120 cars with the bridge link in place. Journey time from Tipner Park and Ride site to central areas of Portsmouth remain similar for both scenarios.

3.5 Benefits of the Scheme for Linking Development Areas

Site Severance and Permeability

3.5.1. Without the bridge link there would be significant physical severance between Tipner and Horsea Island development sites as well as Horsea Island and the city centre areas. The bridge link is seen to improve accessibility to jobs and services between the two developments and existing areas in the immediate vicinity of Tipner, delivering more cohesive and integrated residential and business communities.

Demand Response

3.5.2. As well as reducing the mode share of external trips by private vehicles, connecting the development sites with the bridge link is seen to reduce the number of vehicular trips generated by the developments on the external road network, with a larger proportion of internal trips borne about by improved accessibility to services between the two development sites (noting these are more likely to be by non-car modes).

3.5.3. Removal of the Horsea Island bridge link from the Western Corridor Preferred Strategy is expected to lead to some level of trip suppression; as well re-timing journeys or not making the trip at all, trip suppression could also include redistribution of trips where people may choose different places to live and/or work. The model tests indicate that without the bridge link this might occur with up to 100 fewer trips. This is an indicator that bridge link enables greater accessibility to support developments and the take up of jobs and housing.

Mode Share

3.5.4. The total person trips by mode and the mode share for all motorised travel modes (i.e. excluding walking and cycling) for development sites are presented for the morning peak in Table 3.4.

3.5.5. Re-routeing the bus services to the M275 corridor in the scenario without the bridge link leads to a 60% decrease public transport trips from Port Solent and Horsea Island, significantly reducing the sustainability of the development. Without the bridge link the mode share of car trips increases to nearly 75% from around 65% with the link (i.e. public transport mode share drops from 35% to 25%)

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3.5.6. The scenario testing shows that car usage for the Horsea Island development site is expected to decrease by 40% (nearly 200 car based person trips in the peak hour) without the bridge link. The lengthy detour via Port Way and Johnson & Johnson junctions for Horsea Island related trips to reach the city centre areas combined with extra delays at these two junctions has led to some trip suppression, reflecting the reduced attractiveness of Horsea Island as a place to live/work on the grounds of accessibility. Overall, removing the bridge link leads to suppression of nearly 10% trips originating or destined to development zones.

3.5.7. In summary, linking the development areas will both improve connectivity by sustainable modes of transport improving mode share for trips generated by the developments and ensure permeability of movement to and within each development site, in doing so enhance integration with existing communities.

Table 3.4 – AM Peak Person Trips by Mode/Percentage Mode Share (2031) (PWCM Area)

Developments	With Bridge		Without Bridge		% Change	
	PT	Car	PT	Car	PT	Car
Port Solent	302	308	129	331	-57	7
Horsea Island	250	518	87	338	-65	-35
Tipner	297	830	327	827	10	0
Total	849	1656	544	1496	-112	-10
% Mode Share	34	66	25	75	-9	+9

3.6 Initial Benefit-Cost Assessment

3.6.1. An indicative cost for the bridge link has been estimated comprising a capital cost of £25 million (see Section 4 of this Study) and predicted maintenance costs of around £7.5 million over 60 years (based on 0.5% of the capital cost per annum in current prices). Compared against the expected benefits of including the bridge link in the context of delivering the full Portsmouth Plan housing allocation/wider regeneration suggests a strong case for providing the bridge link.

3.6.2. The appraisal has been undertaken over a 60 year time period in line with DfT's WebTAG appraisal guidance. For the purposes of this initial feasibility study the appraisal has been undertaken at a high level (and not to the level of detail required for a major scheme business case) and therefore uses information directly from the strategic transport model (i.e. delays, congestion and distance) to derive the transport user benefits of the bridge link which is principally journey time savings.

3.6.3. This preliminary high level benefit to cost assessment under these conditions (i.e. assuming full Portsmouth Plan housing allocation) suggests a ratio of benefits to costs of around 10 to 1.

3.7 Summary

3.7.1. The modelling and transport evidence referred to above is intended to confirm or otherwise at an early stage the need for the bridge link to enable full development of the Port Solent and Horsea Island sites. The modelling exercise undertaken is on a comparative basis of two future scenarios (with and without the bridge) and is therefore intended to inform planning decisions. In this summary a number of key findings can be drawn from the assessments discussed above to inform the evidence base for the bridge link:

Enabling The Development

- Without the bridge link access to the Horsea Island and Port Solent development strategic sites would be reliant on the Port Way access road, whereas the main access point for the Tipner site would be retained via the proposed Tipner Interchange on the M275;

- In the absence of the bridge link development related traffic travelling between Horsea Island/Port Solent sites to central areas of the city centre (for example) will be subject to lengthy detours relative to a scenario which includes the bridge link. Average peak hour journey times to reach the central areas by car would increase by half an hour, resulting from a combination of increased distances travelled (four kilometres to the city centre) and higher levels of congestion and delays at key junctions;

- Without the bridge link the resulting poorer levels of accessibility and congestion mean that the development will be less attractive and therefore reduced take up of housing, commercial space and regeneration;

- In large part, the wider impact of not including the bridge link in delivering the Portsmouth Plan housing allocation within the western corridor area appears to be restricted to a couple of key junctions on the immediate highway network, including;

  - The M27 junction with Port Way; and

  - Johnson & Johnson Junction.

- It is noted that the traffic impact of excluding the bridge link is negligible beyond the immediately adjacent network junctions – identifying the bridge link as a local scheme based on the extent of its impacts;

Accessibility, Connectivity & Public Transport

- Similarly, without the bridge link, the Horsea Island and Port Solent sites would not be served directly by the express bus services; hence development related trips wishing to continue using public transport would be reliant on local bus services. As a result public transport travellers between the development sites and the central areas would be subject to increases in travel times of up to half an hour, and therefore the mode share of car trips increases to nearly 75% from around 65% with the link (i.e. public transport mode share drops from 35% to 25%). With increased accessibility to public transport, the inclusion of the bridge link therefore achieves greater mode shift to sustainable (non-car) modes of transport;

- Albeit a local scheme in transport modelling terms, the bridge link should be considered major infrastructure in a city-wide context as it is required to enable significant residential development and regeneration and would also enable access through Port Solent, Horsea Island and Tipner for regional / express bus routes principally from Waterlooville to Portsmouth and Fareham to Portsmouth (also known as BRT/ZIP).[3]

[3] **Bus Rapid Transit (BRT)**
The regional express bus services referred to in this report are part of a wider proposed Bus Rapid Transit (BRT) network for South Hampshire. One of the underlying objectives for sustainable development for Portsmouth is for public transport to have an impact on congestion both now and in the future on the approaches to the City Centre. To achieve a higher share of journeys using public transport, and significantly improved journey times for public transport users in the Western Corridor into the city will require a step change in the provision of public transport.

- The bridge link will connect Tipner and Horsea Island significantly reducing severance between the two development locations and improving site permeability and access to jobs, services and public transport. Thereby removing the present requirement for bus services to terminate at Tipner and Port Solent which would have the benefit of reduced journey times and increased operational efficiency. Furthermore, the omission of the bridge link would also have an acute impact on servicing Horsea Island from other areas in central Portsmouth;

Viability And Funding

- A number of methods of financing the new bridge are available owing to the broad range of local and regional benefits. A preliminary high level benefit to cost assessment under these conditions suggests a strong case for the bridge link with an indicative ratio of benefits to costs of around 10 to 1 which reflects on the points above

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Transport for South Hampshire has developed a conceptual BRT network for connections between the major centres in south Hampshire. The rationale behind the BRT network is that it should be designed to attract car users with competitive journey times and frequencies. It would operate where practical and feasible with the highest levels of segregation and priority over other vehicles and use high quality vehicles which are more like trams than buses.

Phase 1 of the South Hampshire BRT network between Gosport and Fareham has now received funding and it is hoped that it will be operational by 2011. Fastrack in Kent is the closest comparison to the BRT envisioned for south east Hampshire. The Cambridge Guided Bus Way, when completed, will also reflect this definition with strong links to new housing and employment development.

4 Engineering Feasibility and Alignment Options

4.1 Data Sources

4.1.1. Engineering feasibility and design options appraisal for the new bridge has been informed by the following data sets:

- OS data
- Aerial Mapping
- LIDAR Mapping
- Site visit and existing knowledge of the site and local area
- Concept Statements, high-level masterplanning and mapping information currently available from Savills
- Information currently available from Portsmouth City Council
- Information currently available from the major scheme process for the Tipner/M275 junction

4.1.2. Savills have provided Ordnance Survey mapping and high level masterplanning information in relation to the wider area and specifically their work in developing the Concept Statements and development options for the three sites at Tipner, Port Solent and Horsea Island. A joint site visit with members of the Savills team that had produced the Concept Statements was also undertaken.

4.1.3. At this high level assessment stage, detailed topographical data was considered to be premature. Therefore aerial photography of the site has been used to identify local features and in addition LIDAR mapping of the area was obtained to supplement the understanding of the local topography. This LIDAR mapping is recorded using an airborne laser profiling system. The results produce location and elevation data to define the surface of the area and the heights of above-ground features. The LIDAR data is processed to generate accurate "bare-earth" terrain model in which trees, vegetation, and manmade structures have been edited out. The LIDAR mapping has helped to further understand the topographical features of the area and to supplement the aerial photography, Ordnance Survey information and the topographical information available to the south of the study area that had been undertaken in association with the design for the major scheme bid for the Tipner junction.

4.2 Study Constraints & Assumptions

4.2.1. The engineering feasibility study has been undertaken on the basis that the bridge is required in a location to link Tipner Point and Horsea Island.

4.2.2. The bridge feasibility study is a civil engineering led assessment of the options, issues and possible alignments. It is recognised that the area identified for the bridge has a number of broader planning constraints relating to previous uses and ecological designations. However, for this initial feasibility study whilst these are recognised and acknowledged the assessment of these issues is not carried out in any detail. Other documents, including the Strategic Environmental Assessment of the Portsmouth Local Transport Plan and the Sustainability

Appraisal and initial Habitats Regulation Assessment Technical Note of the Concept Statement Options, have provided some further consideration of these issues. Future iterations of all these environmental assessments will consider the bridge options in further detail and with the additional benefit of the engineering solutions outlined in this document. In addition, any future planning application for the bridge will require an Environmental Impact Assessment and project level Habitats Regulations Assessment.[4]

4.2.3. The assessment of the bridge options includes the order of construction costs envisaged for the new bridge and the potential viability of development sites, whereby the cost of the bridge reflects one area of new infrastructure that new housing could provide (along with flood defences, schools, social housing, etc.). As scheme viability is one of the key areas of importance, the bridge and road concept designs are on the basis of providing relatively simple and cost effective engineering solutions. Therefore the design options including structural form, materials, length of span, etc are considered on this basis.

4.2.4. Drawing No. 24012/SK010 shows the local constraints within the study area for the new bridge and these are discussed in further detail below.

4.2.5. The land to the north is the former Paulsgrove landfill site. This area is undergoing its final remediation treatment and will become a Country Park (anticipated opening to the public in 2016). The former landfill has a drainage system that utilises a balancing pond in the south east corner of the site. The former landfill site is also reclaimed land. Following discussions it has been identified that the former landfill site and the balancing ponds are significant local constraints and that the bridge and connecting roads should, as a far as is practical, avoid these areas.

4.2.6. There are a number of Grade II listed buildings located at Tipner Point area. The listed buildings are in close proximity to some of the alignment options and a further understanding of the possible impacts is likely to be required if such options for the new bridge are progressed.

4.2.7. In addition to the listed buildings it is also important to consider the landscape implications of a new bridge on the wider area. To the west of Port Solent is Portchester Castle which is a medieval castle and former Roman fort. The castle is located at the head of Portsmouth Harbour and is a Scheduled Ancient Monument and a Grade I listed building. The setting of this listed building and the landscape implications of the new bridge and particularly those options to the west of the area, is likely to require further consideration in the event they are taken forward.

4.2.8. The whole of the Portsmouth Harbour area is designated as a Site of Special Scientific Interest (SSSI), a Special Protection Area for Birds (SPA) and a Ramsar site. At this initial engineering feasibility stage, whilst the designation of the Harbour is recognised, a detailed assessment of the impact of the bridge is not possible. The relative merits of the alignment options would be considered further when alignment options are pursued, along with methods to minimise the construction impacts of the bridge. Potential environmental challenges related to the Harbour are acknowledged but are not regarded as an obstacle to

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The **Habitats Directive** (more formally known as Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) is a European Union directive adopted in 1992 as an EU response to the Berne Convention. An application of **Appropriate Assessment** under Article 6(3) and (4) of the Habitats Directive 92/43/EEC to Development Plans is required where development plans or proposals are likely to have an affect on sites or species covered by the Habitats Directive. The *Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999* apply to development proposals which are likely to have significant environmental impacts or those covered by relevant schedules. **Environmental Impact Assessment** is required in cases where there are likely to be significant environmental effects

address within this engineering feasibility stage of assessment. The SSSI designation also covers the south side of Horsea Island, although this lies to the west of the bridge study area.

4.2.9. It is acknowledged that the previous uses of the Tipner Point area, which have included the salvaging and scrapping of boats and vessels over a considerable period of time, may have resulted in contamination of the land. However the information is not available for this to be assessed in detail at this stage. Similarly the nature of the ground conditions in the area is not known in detail. However, allowance is made in the construction cost estimates for the provision of piling for the new road.

4.2.10. Portsmouth Harbour is a navigable waterway and as such proposals for a new bridge are likely to require an 'Order' being made under the 'Transport and Works Act'.

4.2.11. The new bridge could carry all forms of traffic and be suitable for bus access. It would also provide a shared pedestrian and cycle provision on one side of the carriageway. Such provision will enable the traffic and public transport strategies for Port Solent and Tipner to be achieved. It has been agreed with Portsmouth City Council for the target design speed for highway design purposes to be limited at 50 kph. Future implementation of this design speed should not be exceeded for the new bridge or for the local roads leading to the bridge.

4.2.12. Each horizontal bridge alignment option includes consideration for both a 'High level' and 'Low level' structure in the vertical plane. It was agreed that the high level options would be on the basis of maintaining the clearance from the navigable waters to the same height as the M275 bridge, located to the east of the study area.

4.2.13. It was also agreed that the low level options should consider retaining some form of navigable channel under the bridge to allow for on-going inspections and maintenance of the M275 bridge. An alignment providing a clearance of 3.0m above the flood level therefore result in low level options that are approximately 1.5 metres lower than that of the high level (M275) options. Accordingly, the vertical alignment of the low level options will not be significantly different to the high level options. However some of the engineering temporary works and environmental considerations of the low level options may be different.

4.3 Opportunities

4.3.1. The study area for the feasibility of the new bridge is the area directly to the west of the M275 bridge across the harbour. Therefore it would be sensible for any new bridge to be viewed in the light of the existing motorway bridge. For example, during the construction of the M275 bridge (during the 1970's) there was an element of land reclamation from the harbour. The earthworks and embankments of the motorway will also provide opportunities for some of the alignment options.

4.3.2. To the south of Tipner Point, the City Council are promoting a new interchange junction with the M275 (the Tipner Interchange). The scheme is included as a regional priority. A funding application for the new interchange has been submitted. Presently the scheme is under review as part of the Comprehensive Spending Review although it is considered to have good prospects for funding relative to other competing proposals across the Country. The new interchange will provide an additional junction to the M275, a new Park and Ride site for Portsmouth city centre and bus priority to the south of the junction. The Tipner Interchange proposals can be seen as the first stage of infrastructure provision to support the housing growth at Tipner.

4.4 Design Requirements

4.4.1. Discussions with Officers at Portsmouth City Council have led to the agreements of the following design parameters for the new bridge:

- A 7.3m wide carriageway with a shared 3 metre footpath/cycleway along one side of highway and a 0.6 metre verge on the other side with a 0.5 metre allowance both sides for structural support to a parapet.
- A 50 kph (30 mph) design speed for both the new bridge crossing and the adjacent road network.
- The new bridge will be of concrete construction. Steel has been ruled out on the basis of the salinity of the air. It is well documented that weathering steel is not suitable in such an environment and PCC have experienced problems maintaining painted steel bridges within their bridge stock.
- The bridge and the local roads would be provided with street lighting.
- For the high level options the structural height will be in line with the existing M275 bridge.
- For the low level options the structural height should consider providing a clearance similar to an inland waterway. A 3 metre headroom above flood level results in an alignment approximately 1.5 metres lower than the existing M275 bridge.
- The road is raised to a suitable height to cater for the 1 in 1000 year flood event in order to provide a safe means of access for the new housing.
- From an aesthetic point of view, smooth curved lines are preferred over straight edges.
- The level of land reclamation for the new bridge should be as limited as possible.
- At this stage, due to historical knowledge of the area, an allowance should be made for piling to support the new roads leading to the bridge both north and south.
- The new bridge would be able to provide a connection for a new 300mm diameter sewer pipe (possibly required as part of the proposed East-West sewer upgrade). This can be accommodated either sleeved through the concrete box girder or precast concrete beams or alternatively suspended from the edge cantilever

4.4.2. It is against the above requirements along with the constraints and opportunities of the study area that the engineering feasibility and construction costing exercises have been undertaken.

4.5 Consideration of Alignment Options

Introduction

4.5.1. The brief for the engineering feasibility work identified two broad alignment options to be considered. Alignment Option A is adjacent to the M275 bridge. As discussed above both high and low level options are considered in relation to this option, although in reality the difference between the two, at 1.5 metres, is not material in terms of the alignment but it will require less earthworks. This option includes a new roundabout north of the bridge, south of the former landfill site, to allow the access road to change direction more acutely in to the land on Horsea Island.

4.5.2. A further sub option, Option Ai, has also been considered. This is the same as Option A, but with the roundabout described above substituted with a continuous transitional curve, access road.

4.5.3. The second bridge option is Option B and provides a crossing from the edge of Tipner Point. Again high and low options are considered on this alignment.

4.5.4. In addition to the two alignment options set out above, it was also agreed that PBA should consider any alternative alignment options. Consequently, two further alignment options have been considered on this basis. Option C is an alignment which has its southern approach close to the M275, and then crosses the harbour at an angle to the M275, instead of following the alignment of the motorway as in A. Option D is an option that provides a longer crossing to the west of Option B and not reliant on using Tipner Point.

4.5.5. All of the four horizontal alignment options are shown on Drawing No. 24012/SK010. Each of the options is discussed in greater detail in the following section of the report in terms of the key issues and high level design feasibility, alignment, road connections and earthworks and broad level of construction cost.

4.5.6. The high level version of each option rise to the same road level as the existing M275 bridge, to provide the same navigational clearance beneath.

4.5.7. The low level version of each option is proposed to provide a typical inland waterway clearance of 3m to allow for some navigational access below the bridge even if this is only required for bridge maintenance or emergency purposes.

4.5.8. In line with standard Environment Agency requirements, the other constraint on the vertical alignment is providing a minimum of 0.6m above the extreme tidal level to the soffit of all the bridge spans, limiting how low the vertical alignment can extend at the end of the bridge. This combined with the length of the bridge for most options means that the high level and low level options do not differ significantly with regard to their impact on the development land. This also applies for Option A, where the length of road runs along the M275 embankment.

4.5.9. The photograph overleaf shows the existing M275 bridge characteristics

Option A

(It is assumed that this option would use a new roundabout north of the bridge to change the road direction and route past the former landfill site rather than a continuous curve)

Key Issues and a High Level of Design Feasibility

4.5.10. This design option would result in a new bridge being built next to the existing M275 bridge. The new bridge would have an independent superstructure deck, but would utilise and modify the existing embankments for the motorway and possibly the existing piers and foundations. The new bridge would span the same distance as the existing motorway bridge and utilise an existing track to the north with modified embankments provided.

4.5.11. Bridge Drawings 24012/SK011 and 24012/SK012 show the Option A bridge in cross and long section. The bridge option for alignment Option A is a 104 metre long crossing, adjacent to the M275.

4.5.12. This alignment will have the least visual intrusion as it would be mostly viewed as part of the existing M275 crossing of the harbour.

4.5.13. The M275 is lit with high level lighting in the central reserve, as such the night time visual impact of this alignment option is also likely to be minimal.

4.5.14. Option A would result in two bridge structures being in close proximity to each other. In line with standard recommendations, the bridge decks have been separated by 2 metres to prevent people attempting to cross from one to the other. The bridge spans would be chosen to match existing to provide a new bridge that is sympathetic in appearance to the existing bridge, and minimise the impact on the harbour bed. It is likely that the piers, abutments and substructure would be formed as an extension to the existing ones.

Consideration as to the access requirements for future maintenance and repair of the both bridges would need to be considered in detail if this option is pursued.

4.5.15. To the south of the bridge the earthworks would tie back in to the area where there is a further structure carrying a local access lane under the M275. On both the high and low options the raised embankment for the road would have returned to the level required for a safe route in the 1:1000 year flood event. However this level would have some implications for the existing structure and these are discussed further below.

4.5.16. The height of the bridge with the Option A alignment is perhaps less sensitive in terms of the visual impact, but there is a further consideration to be made in terms of the views of drivers between the two bridges. The new bridge is being designed to a much lower design speed of 50kph (30mph). The M275 however has a speed restriction of 60 mph in place. With the high level bridge option drivers on the new bridge would be travelling on a very similar parallel route to the M275 at the same height and with motorway traffic visible to them, but expected to travel at half the speed. This could represent a safety issue, similarly motorists on the M275 may be distracted by a parallel two way bridge in close proximity. Attempts to mitigate this in the outline drawing have been applied by indicating a 1.8 metre tall solid parapet on the east verge of the new bridge. This in turn would however obscure the view of Portsmouth Harbour for traffic coming into the city along the M275 as it crosses the existing gateway structure. The lower bridge option for A would mean that there would be a metre and a half difference between the new bridge and the motorway, meaning that such visibility and driver awareness issues would be reduced.

4.5.17. Pedestrians and cyclists on the new bridge may also consider that the low option would provide an improved environment to that of the high level option where they would be vertically and horizontally adjacent to the busier M275 traffic with associated noise and exhaust emissions etc.

4.5.18. Similarly for both the low and the high level options on this alignment, the lighting of the new bridge would need careful consideration. Adding street lighting in close proximity to the existing motorway could cause confusion to motorists on the M275. In addition the lighting would also represent an environmental issue although this would have to be considered in context with the existing M275.

4.5.19. Providing a 50 metre central span in concrete to match the existing M275 presents some challenges with regard to the form of construction. This is outside the range of standard pre-cast pre-stressed beams, and there is currently a moratorium on pre-cast segmental concrete bridges in the UK. This length of crossing is considered outside the economic range of using incrementally launched concrete bridges. It is therefore considered that balanced cantilever in-situ construction is the most appropriate form of construction. This has the further advantage of allowing for a curved soffit, in sympathy with the existing bridge.

Alignment, Road Connections and Earthworks

4.5.20. The alignment of this option is shown in Drawing 24012/SK001. South of the new bridge roads connect with the existing Tipner Lane, the new Tipner interchange slip roads and finally the modified embankment to connect to the new bridge. The level of the new road will enable a safe means of access in the event of a 1 in 1000 year flood event occurring. This will mean that the levels will be raised above the existing level for the entire route by some degree. This has implications for the existing structure under the M275 where headroom would be reduced by approximately 1.5 metres from the current situation. The use of this structure as a local link may need to be considered in light of this and also the limited height that can be provided.

4.5.21. North of the new bridge crossing, the alignment again utilises the existing motorway embankment which would be modified in the location of the existing access track.

4.5.22. Further to the north there is a need for this Option to link westwards to the development area of Horsea Island. This northern area of the alignment is on a bend which would be situated on a new area of embankment. Options to reclaim more areas of land on this frontage could be possible. However, given the conservation status it is assumed that this would be an area of new embankment to support the road with a culverted drainage management strategy to enable the wetland to the north and east to be retained. The alignment continues to a roundabout, which is used to change the direction of the road westwards to the proposed new housing area at Horsea Island. This roundabout provides the ability to ensure that the alignment minimises any encroachment onto the former landfill site and balancing pond.

Option A – Broad Construction Cost Estimate

4.5.23. The broad level of construction cost for the Option A alignment has been calculated with the knowledge available of the locality and in relation to the scheme drawings and specification. At present there are a number of areas of cost that are excluded which would become more clear following more detailed study. Similarly, there are some broad assumptions made in terms of the requirement for piling for the new road.

4.5.24. The costs for all of the alignment options include all of the elements listed in Appendix A. The costing exercise excludes items listed in Appendix B.

4.5.25. In addition the costs for each option include an optimism bias equating to an 80% percentile uplift for fixed links, which has been added to the costs to reflect the uncertainty that exists at this stage of scheme design. This rate equates to an uplift to the basic cost of 55% which has been taken from 'The British Department for Transport Procedures for Dealing with Optimism Bias in Transport Planning Guidance Document' dated June 2004.

4.5.26. The construction cost for the Option A alignment with the high level crossing is estimated at £19.2 million. In material terms, the low level Option A alignment is likely to reduce the cost by less than half a million pounds, however there may be other cost benefits associated with the temporary works. An even lower option would look incongruous against the existing M275 bridge and still only reduce the cost by less than half a million pounds, with no other apparent benefit.

Option B Alignment

Key Issues and a High Level Design Feasibility

4.5.27. The Option B alignment would provide a new bridge at the narrowest point between Tipner Point and the Horsea Island coastline, although the length of the crossing is considerably greater than that of Option A.

4.5.28. Drawing 24012/SK013 shows the new Option B bridge with a cross section and long section provided. This option has a 265 metre bridge with a 40m main span. There are seven 25m side spans to the north and two 30m side spans to the south. A 40m main span has been chosen as the longest span available using precast prestressed beams. An allowance for GRP cladding to the elevations has been included in the cost estimate to enhance the visual appearance by providing an apparently varying soffit level.

4.5.29. An alternative method of construction would be to use an incrementally launched bridge, however this would be better suited to a series of equal spans and is likely to carry a cost premium. This alternative would result in a structure that would look more like a viaduct than

a bridge structure as it would lack a central main span as a visual focus point, and would result in taller longer approach embankments, due to the increased structural depth. However it could be used to form the bridge using fewer spans and therefore reduce the impact on the harbour bed. At present however this alternative has not been considered further.

4.5.30. This alignment will have a greater degree of visual intrusion as it would be viewed as a stand alone bridge to that of the M275 crossing of the harbour. This may offer the opportunity for the bridge to be considered as a more landmark feature associated with the developments but the landscape consideration of the listed buildings, both those at Tipner Point and at Portchester Castle, would need to be considered further. The new bridge would be lit and as such the visual impact of this alignment at night will also need to be considered.

4.5.31. The height of the bridge with the Option B alignment is perhaps more sensitive in terms of the wider visual impact on the harbour and coastline. This option also has greater implications for the listed buildings on Tipner Point, as the approach roads to the crossing will have to pass in close proximity to these listed buildings. The southern approach embankment is assumed to be in reinforced soil to minimise the footprint of the embankment to allow it to pass by these buildings.

4.5.32. To the south of the bridge the earthworks would tie in to the area where there is an existing structure carrying a local access lane under the M275. As with Option A, the need to provide a safe route in the event of a 1 in 1000 year flood event will mean that the levels of the existing roads will be raised through-out and this would have some implications for the existing structure under the M275.

4.5.33. The bridge would not have a visual interaction between motorists on the motorway, due to the separation and alignment of the two bridges.

4.5.34. This option presents an opportunity to create an active frontage ‘street’ running through the heart of the new development.

4.5.35. Pedestrians and cyclists on the new bridge would be likely to perceive this alignment more positively than an alignment which follows that of the motorway.

Alignment, Road Connections and Earthworks

4.5.36. The alignment of this option is shown in Drawing 24012/SK002. To the south the roads connect utilising the existing Tipner Lane to the Tipner Point before crossing the harbour using the new bridge. Significant new earthworks will be required on each approach to the bridge and in addition further earthworks to enable a safe means of access in the event of a 1 in 1000 year flood event occurring will also be required throughout the route.

4.5.37. North of the new bridge crossing this alignment utilises a new embankment with the new road linking to the Horsea Island development area. This bridge alignment is more central to the Horsea Island site meaning that the change in direction and issues of the former landfill site and its balancing pond are of less concern.

Broad Construction Cost Estimate for the Option B Alignment

4.5.38. The broad level of construction cost for the Option B alignment has been calculated in a similar way to Option A, utilising the knowledge available, the scheme drawings and specifications. The included elements are again those listed in Appendix A and exclusions are listed in Appendix B. The same optimism bias criteria has been applied to the costs to allow for the level of uncertainty that exists at this stage of scheme design.

4.5.39. The construction cost for the Option B alignment with the high level crossing is estimated at £21.4 million. This cost reflects the additional cost of the longer harbour crossing with this option and the reduced cost of linking to the Horsea Island site. In material terms, the low level Option B alignment is likely to reduce the cost by less than half a million pounds, however there may be other cost benefits associated with the temporary works.

4.5.40. An even lower option would lack the vertical curvature and result in a visually poor design, it would interfere further with the navigable water and would still provide an interruption to the view of Portchester Castle. Such an option would only reduce the cost by less than half a million pounds.

Other Bridge Alignment Options Considered

Option Ai - variation on Option A to route past the former landfill site and balancing pond through 'curved' approach to bridge (assumed to be 50 kph design speed)

Key Issues and a High level Design Feasibility

4.5.41. This option is really a sub-option of Option A utilising the same bridge crossing and approach adjacent to the M275. The difference between the options is that in place of the roundabout to the north of the route in Option A, the road connects westwards to the Horsea Island development through a standard curve. Many of the issues associated with the Option A alignment therefore apply to this option. Again to the north of the main span there is a need to link westwards by utilising a further embankment, with culverts provided to retain the coastline south of the former landfill site.

4.5.42. The northern alignment of this option is the only difference to Option A. The removal of the roundabout in this option is likely to lead to the issues discussed further below.

4.5.43. The roundabout provides some ability to control the speed of traffic, both travelling north into Horsea Island and that travelling south. The more sweeping curve may be less effective in this regard. In addition the roundabout would arguably offer a greater sense of arrival at Horsea Island than the curve solution.

4.5.44. The roundabout provides an ability to more radically alter the alignment of the road on Horsea Island. As such it enables greater scope to ensure that encroachment into the former landfill site is minimised. The curved alignment is dictated by the design criteria for the speed of road concerned and this necessitates that the alignment passes further north towards the southern edge of the former land fill site. At this stage the detail of how close the alignment is permitted to route past the former land fill site is yet to be clarified and therefore this could be an issue with this option.

4.5.45. The curved alignment provides some cost advantage as no new junction is required and the scale of the earthworks on the northern coastline are reduced, but this needs to be considered against the certainty that impact on the landfill site is minimised. Finally the curved alignment may offer some advantage in terms of a reduced environmental impact as the roundabout junction on the edge of the coastline is not included.

4.5.46. Otherwise the Option Ai alignment shares the majority of the same properties, advantages and issues as raised with alignment Option A.

Alignment, road connections and earthworks

4.5.47. The alignment of this option is shown in Drawing 24012/SK003. The southern area of the scheme is identical to that of Option A with only the connection north into Horsea Island dealt with differently. The route will enable a safe means of access in the event of a 1 in 1000 year flood event occurring. This will mean that the levels will be raised above the existing level through-out the route to some degree.

Broad Construction Cost Estimate for the Option Ai Alignment

4.5.48. The broad level of construction cost for the Option Ai alignment has been calculated on a similar basis to Option A with the same items included, excluded and the same optimism bias applied.

4.5.49. The construction cost for the Option Ai alignment with the high level crossing is estimated at £18.6 million. In material terms, the low level Option Ai alignment is likely to reduce the cost by less than half a million pounds, however there may be other cost benefits associated with the temporary works. An even lower option would look incongruous against the existing M275 bridge and only reduce the cost by less than half a million pounds, with no other apparent benefit.

Option C - 'angled' bridge towards Horsea Island

Key issues and a high level design feasibility

4.5.50. The Option A alignment, as discussed above, results in a need to route across to the south of the former landfill from the M275 to the Horsea Island development site. In addition there could be operational issues in being situated parallel to the M275. A further alternative to this is to maintain the southern approach to the bridge in a similar location to that of Option A, close to the Tipner junction, but then to cross the Harbour at a new crossing at an angle to that of the M275 to Horsea Island. The crossing would be increased to 440 metres in length with a main span of 40 metres and sixteen 25 metre side spans.

4.5.51. This option results in a significantly increased length of crossing across the Harbour but as a consequence avoids the need for the road re-alignment to the south of the former landfill site.

4.5.52. Option C would result in a new bridge being constructed in a similar nature to Option B. There would be limited interaction with the existing M275 under this option.

4.5.53. This alignment would have a reduced level of visual intrusion compared to Option B, although the length of the new crossing is likely to mean that it would not be viewed as part of the existing motorway crossing of the harbour.

4.5.54. The M275 would be relatively close to this alignment however and the visual impact of this option at night may be less than Option B.

4.5.55. The separation of the two structures would limit issues relating to future maintenance or the interaction of vehicles travelling at different speeds, as the bridge alignment would not follow the M275.

Alignment, road connections and earthworks

4.5.56. The alignment of this option is shown in Drawing 24012/SK005. To the north of the bridge this alignment option links directly into the Horsea Island site and there is no need to route to the south of the former landfill site.

4.5.57. To the south of the bridge the earthworks would tie back to the Tipner interchange. Both the high and low options for this alignment would return to the level required for a safe route in the 1:1000 year flood event.

Broad Construction Cost Estimate for the Option C Alignment

4.5.58. The broad level of construction cost for the Option C alignment has been calculated on a similar basis to Option A and B with the same items included, excluded and the same optimism bias applied.

4.5.59. The construction cost for the Option C alignment with the high level crossing is estimated at £29.3 million. In material terms, the low level Option C alignment is likely to reduce the cost by less than half a million pounds, however there may be other cost benefits associated with the temporary works. An even lower option would lack the vertical curvature that visually gives this option a sense of purpose whilst only reducing the cost by less than half a million pounds, with limited other apparent benefit.

Option D - Alternative Alignment to the west of Option B on PCC Land

Key issues and a high level design feasibility

4.5.60. Option D is the option farthest west in the Harbour. This option involves a very lengthy crossing of the Harbour, which would result in an overall crossing length of 540 metres with a main span of 40m and twenty 25m side spans.

4.5.61. The location of this alignment option is likely to have the greatest significant in terms of the visual impact on Portchester Castle and environmental impacts on the Harbour.

4.5.62. There would be very limited interaction with the M275 with this alignment option. The land ownership for this option utilises Portsmouth City Council's land to the south before crossing to Horsea Island.

Alignment, road connections and earthworks

4.5.63. The alignment of this option is shown in Drawing 24012/SK006. The alignment for Option D consists of a road connection between the Tipner interchange and the bridge crossing location to the west which would route to the south of the retained Harbour School. The alignment of the road is dictated by the need to route between the retained school to the north and the MOD firing range to the south.

4.5.64. To the north of the crossing this alignment meets Horsea Island some distance to the west of the other alignment options having crossed the harbour to the west of Tipner Point.

Broad Construction Cost Estimate for the Option D Alignment

4.5.65. The broad level of construction cost for the Option D alignment has been calculated on a similar basis to Option A, B and C with the same items included, excluded and the same optimism bias applied.

4.5.66. The construction cost for the Option D alignment with the high level crossing is estimated at £36.0 million. In material terms, the low level Option D alignment is likely to reduce the cost by less than half a million pounds, however there may be other cost benefits associated with the temporary works. An even lower option would lack the vertical curvature that visually gives this option a sense of purpose whilst still providing an interruption to the view of Portchester Castle and only reducing the cost by less than half a million pounds, with limited other apparent benefit.

Lifting Bridge Options

4.5.67. A lifting bridge can be used when the aim is to provide a low level fixed link that still allows for the occasional navigation of craft underneath. The most famous example of this form of bridge is Tower Bridge in London. However these come with a high initial and maintenance cost burden, especially in a saline atmosphere. This report has shown that the topography means that the existing navigational clearance can be achieved without the problems associated with a lifting bridge. Therefore this form of bridge is unnecessary and has not been considered any further in this report.

Long Span Options

4.5.68. Alignment options B, C and D could be bridged using a long span bridge, for example a cable stayed crossing. The following disadvantages mean that this option has not been considered any further in this report:

- Significant cost increase;
- Greater visual intrusion, when a landmark bridge is not envisaged;
- Greater structural depth at the abutment, leading to longer approach embankments and loss of development land.

4.6 Connection between Port Solent and Horsea Island

4.6.1. In addition to the bridge alignment option an additional part of PBA's brief was to consider the provision of a connection between the Horsea Island and Port Solent sites that would provide bus priority, pedestrian / cycle link and emergency access. This link will be required to gain public transport access to Port Solent and Horsea Island and to provide a strategic public transport corridor linking into Portsmouth city centre and beyond.

Key issues and a high level design feasibility

4.6.2. At this stage the details of the control of this route to deter general traffic have not been considered in detail and the specification assumed for this route is for a standard 7.3 carriageway with a shared footway / cycleway provided.

4.6.3. There is a need to minimise the impact of this link on the open grass area to the west as it is a site of major importance to Brent Geese. There is also a need to provide the link to

minimise the impact on the former landfill site located to the east. The precise extend of the landfill is unknown at present and will require more detailed investigation, it is intended that the location of the link road will be on the edge of the capped landfill.

4.6.4. The topography in this locality means that some earthworks will be required but the alignment has been provided to minimise this and as far as possible to work with the existing topography.

Alignment, road connections and earthworks

4.6.5. The alignment of this connection is shown in Drawing 24012/SK004. To the north this link would provide a connection to the existing roundabout on Port Way/Marina Keep. To the south a new roundabout within the Horsea Island would be formed.

Broad Construction Cost Estimate for the Connection between Horsea Island and Port Solent

4.6.6. The broad level of construction cost for link between Horsea Island and Port Solent has been calculated on a similar basis as the roads within the main bridge crossing with the same items included, excluded and the same optimism bias applied. It should be noted that for a road only item the guidance recommends a lower uplift figure of 32% is applied, but given the uncertainty surrounding ground conditions the higher 80% figure has been retained.

4.6.7. The construction cost for the new link is estimated at £4.5 million. This will be an additional cost to each of the bridge crossing totals.

4.7 Summary of each Alignment Option and Options that can be discounted at this high level feasibility stage

4.7.1. The four broad options for the alignment of the new bridge (A, B, C and D) have been considered in relation to the assessment of the engineering feasibility above, the environmental implications and the cost / viability.

4.7.2. The tables below provide a summary of the pros and cons of the four alignment options.

OPTION A

Key Bridge Statistics:

- Bridge – approx 104m long as existing adjacent M275 bridge (50m main span, with 2 no. 27m side spans)
- Approach retaining walls within M275 embankment – approx 260m long
- Culverted embankment across mudflats – approx 140m long

Pros

- Shortest bridge crossing route
- Utilises existing reclaimed land at the toe of M275 embankment
- Most discrete crossing
- Likely form of construction enables bridge to vary in depth, improving the aesthetics of the bridge elevation
- Northern and Southern approaches can remain within Portsmouth City Council land

Cons

- Impact on adjacent motorway operation during construction
- Adjacent motorway traffic encourages link road traffic to travel faster (low level version could provide some mitigation for this)
- Long retaining walls required for approaches
- Interaction with Highways Agency required on the northern approach
- Interface with existing architectural feature on M275 bridge
- Main span length would need to match existing M275 bridge, putting it outside the range of common UK construction techniques for concrete bridges. For example, insitu balanced cantilever construction, rather than precast prestressed beams would be used
- Environmental impact of significant embankment across mudflats

OPTION B

Key Bridge Statistics:

- Bridge – approx 250m long (40m main span, with 6 no. 25m side spans and 2 no 30m side spans)
- Reduced main span length of 40m assumed acceptable due to separation from M275 bridge
- 75m southern approach ramp on reinforced soil to reduce footprint and mitigate impact on listed building as the road to lowers to extreme tidal level of 4.5mAOD
- 45m northern approach ramp for road to lower to extreme tidal level of 4.5mAOD

Pros

- Shortest overall length (compared with combined length in Option A of bridge, approach retaining walls and embankment across mudflats)
- Assuming 40m main span permissible, can be constructing using common UK construction techniques for concrete bridges (i.e. precast prestressed beams)
- Separation from M275 would allow development of a landmark gateway structure (for additional cost)

Cons

- Environmental disturbance to harbour bed from construction of 8 no. piers
- Most economic form of construction leads to aesthetic challenge of flat soffits (GRP cladding included to provide some mitigation for this)
- Requires land negotiation for the southern approach
- Proximity of listed buildings on the south side gives rise to a challenging horizontal alignment

OPTION C

Key Bridge Statistics:

- Bridge – approx 440m long (40m main span, with 16 no. 25m side spans)
- Reduced main span length of 40m assumed acceptable due to separation from M275 bridge
- 45m approach ramps at each end for road to lower to extreme tidal level of 4.5mAOD

Pros

- Assuming 40m main span permissible, can be constructing using common UK construction techniques for concrete bridges (i.e. precast prestressed beams)
- Separation from M275 would allow development of a landmark gateway structure (for additional cost)
- Southern approach alignment could be adjusted to remain within Portsmouth City Council land (some approach retaining wall would be required along the M275 embankment)

Cons

- Environmental disturbance to harbour bed from construction of 16 no. piers
- Most economic form of construction leads to aesthetic challenge of flat soffits (GRP cladding indicated to provide some mitigation for this)
- Higher cost crossing

OPTION D

Key Bridge Statistics:

- Bridge – approx 540m long (40m main span, with 20 no. 25m side spans)
- Reduced main span length of 40m assumed acceptable due to separation from M275 bridge
- 60m approach ramps at each end for road to lower to extreme tidal level of 4.5mAOD

Pros

- Assuming 40m main span permissible, can be constructing using common UK construction techniques for concrete bridges (i.e. precast prestressed beams)
- Separation from M275 would allow development of a landmark gateway structure (for additional cost)
- Southern approach remains within Portsmouth City Council land

Cons

- Environmental disturbance to harbour bed from construction of 20 no. piers
- Most economic form of construction leads to aesthetic challenge of flat soffits (GRP cladding indicated to provide some mitigation for this)
- Higher cost crossing

4.7.3. It is considered that both Option A and Option B are likely to be feasible options to take forwards. They are also both of a similar order of construction cost. On balance there is a marginal preference for the Option A low level scheme, taking into account the environmental issues as well as the engineering feasibility aspects. The temporary works and construction methodology would contribute a great degree to the delivery of the bridge and it is recommended that discussions with a major contractor with recent experience of a major water bridge crossing are entering into in taking the scheme forward. At this stage of engineering feasibility investigation it is recommended that both Option A and Option B should remain in consideration at the current stage of investigation and further progressed.

4.7.4. Option C and D are considered to be able to be discounted at this stage, primarily as the viability case of such options is likely to be more challenging to achieve and as the environmental issues are more challenging.

4.7.5. The Figure below illustrates a summary of the relative performance of each of the alignment options, based upon professional judgement and comparing the cost, environmental considerations and engineering feasibility for each of the four options, as discussed above.

Bridge alignment options	Summary of bridge alignment options feasibility
Option A	**Option A** may result in a lower degree of environmental issues and is the lowest cost option. It would however provide much less of a land mark to serve the development and would require additional works to minimise the intrusion into the former landfill site to the north.
Option B	**Option B** would provide more of a land mark gateway into the development but may have more environmental challenges to overcome, including routing close to the listed buildings. The cost is broadly similar to Option A. This option may be more visually intrusive in terms of Portchester Castle.
Option C	**Option C** would result in a very lengthy crossing of the harbour and as such the cost of this option is high. The environmental implications of this option are likely to be somewhere between those of Options A and B. This option avoids the need for the road re-alignment to the south of the former land fill site and would have less implications for the listed buildings on Tipner Point.
Option D	**Option D** would provide a very lengthy crossing and would be expected to have the greatest visual implications to Portchester Castle and environmental implications. It would also have the highest construction cost of the options.

4.8 Significant risks associated with the options

4.8.1. There are a number of significant risks associated with the bridge that need to be considered as the scheme is taken forward. These are highlighted below:-

Former landfill and balancing pond

4.8.2. There is a need to minimise the impact on the former landfill site and as the design progresses further understanding and consideration of this as a constraint and the implications of earthworks and construction in close proximity to the southern side of the former landfill site will be required.

Land ownership and acquisition

4.8.3. Any alignment of the bridge involves a number of land owners therefore the City Council will need to seek their agreement and or acquire the land to deliver the new bridge.

Environmental constraints

4.8.4. The ecological value of the area in and around Portsmouth Harbour is significant. As previously stated it is designated as a Site of Special Scientific Interest (SSSI), a Special Protection Area (SPA) and a Ramsar site. The land to the south of Marina Keep is also designated as a site of major importance to Brent Geese.

4.8.5. Future assessment work (including hydro dynamic modelling) to understand the implications of the bridge side spans within the channel would need to be undertaken to determine the implications of changes to the flow regime, erosion and deposition. These could result in changes to the conditions and feeding potential for birds. Consideration of the impact of noise (including during construction) and lighting on the birds would also be required, as well as consideration of the construction impacts within the tidal channel.

4.8.6. Implications of the bridge both on the groundwater and in relation to the drainage from the new bridge would also need to be considered in detail. In addition the landscape impact and impact on the setting of the listed buildings (both at Tipner Point and Portchester Castle) would also be required. Option B passes very close to the listed buildings on Tipner Point, and requires the use of reinforced soil to support the embankment necessary to raise the road to flood defence level whilst clearing the listed building.

4.8.7. The environmental constraints could have implications for the design, programme (timing of works) and cost of the bridge. Mitigation measures could be considered, including increasing the span distances of the side spans, but these would increase the cost of the bridge substantially.

4.8.8. There are therefore a considerable number of environmental constraints which relate to the scheme and these will need thorough investigation to understand the impact of the proposals and what mitigation can be provided. Any mitigation measures would also need to be costed and understood fully.

Ground condition and contamination

4.8.9. Whilst some information is available on the land, the fact that much of the land is reclaimed and potential contamination (historical land uses and land reclamation), the precise ground conditions and contamination are largely unknown at this stage but are understood to be

poor / unfavourable, therefore allowance has been made for piling of the new roads. Further investigation of the ground conditions and contamination will be required to understand the nature of the conditions, the challenges that this represents and cost implications.

Navigable Waterways

4.8.10. As the new bridge will result in a change being made to the navigable waterway it is likely that this will have a bearing on its promotion and it may necessitate an Order under the Transport and Works Act (TWA) 1992. TWA orders can be made in relation to works that interfere with rights of navigation in waters up to the limits of the territorial sea, such is the case with the new bridge. The TWA allows a promoter powers to carry out and use works that interfere with navigation rights. They also may be used to enable compulsory powers to buy land or the right to use land during construction.

4.8.11. The relevant Secretary of State, in this case for Transport, would be responsible for deciding whether to make the Order, or not. The TWA order itself does not grant planning permission which could be applied for separately to Portsmouth City Council in the usual manner or applied for within the TWA application, directly to the Secretary of State.

4.8.12. Documents required to make a TWA Order application would include an environmental statement, a statement of the aims of the proposal, scheme drawings, costings, funding arrangements, etc.

4.8.13. The timescales for this process can vary significantly, but could take up to 2 years; which would be factored within the overall phasing and delivery of the scheme, in line with the housing delivery at Tipner, Horsea Island and Port Solent.

Achieving funding & timescale of delivery

4.8.14. This is covered in the following Section of this report. The Concept Statement identifies the Tipner, Port Solent and Horsea Island sites as delivering new housing over a period from 2013 to 2027. The bridge will be required to be delivered within this period of time to provide the benefits as set out in Section 2 of this report. Delay to the delivery of the infrastructure of the bridge could result in a proportion of housing delivery being delayed.

4.9 Summary

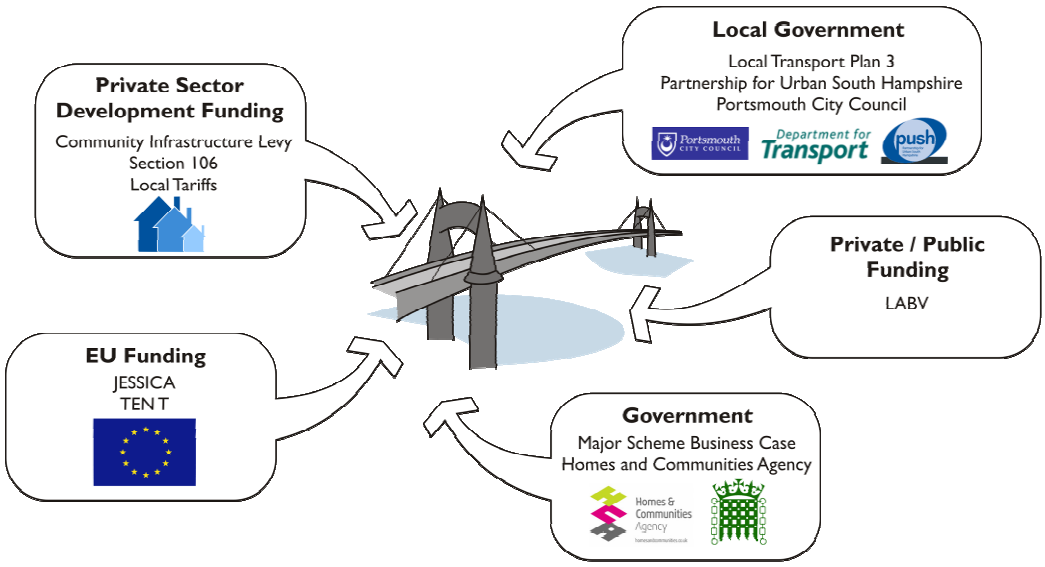
4.9.1. Both Option A and Option B are considered to remain viable options for the proposed new bridge.

4.9.2. The comparative construction costs are considered to be broadly similar between Options A and B.

4.9.3. Future assessment required to understand the key risks better and take forward the scheme have been identified above.

4.9.4. In addition, work to gain funding for the scheme should be progressed in light of the timescales (as set out in the following Section of this report) and the requirement for the bridge to facilitate new housing (as covered in Section 2 of this report)

5 Scheme Delivery and Promotion



5.1.1. The bridge link will be required to enable all of the development growth planned at Horsea Island and Port Solent as outlined in the Portsmouth Plan. Its implementation is a key condition of the planning in the area, however, the timing of implementation will be phased to reflect procurement and commercial delivery considerations. There are a number of sources of funding for the bridge including (and not restricted to):

- Developer Funding (CIL/Local Levy/Section 106)
- Public Subsidy (Local, Regional, National)
- Local Asset Based Vehicles (LABV) / Tax Incremental Funding

5.1.2. At this stage in the Portsmouth Plan preparation process the Feasibility Study acts to illustrate the broad range of potential delivery mechanisms to enable the bridge link. This includes technical engineering and high level costs. The study outlines potential mechanisms of delivery.

5.1.3. Table 5-1 below sets out the potential funding sources and the possible risks currently known for each option. It has been assumed that a key driver of successful funding and delivery will be the economic case for the scheme. This, in combination with the development of the scheme within the national funding process (post 2014 and beyond) means that an early indication of economic benefits would be highly advisable. This would provide the basis for a high level review of the combination of different funding streams that might be required to deliver the project. In turn this would inform the Funding Route Map (see Figure 5-1). Appendix C sets out some further details on Major Scheme Business Case, Community Infrastructure Levy and S106 contributions as potential areas of funding for the new bridge.

Table 5-1: Potential Funding Sources and Indicative Ranking

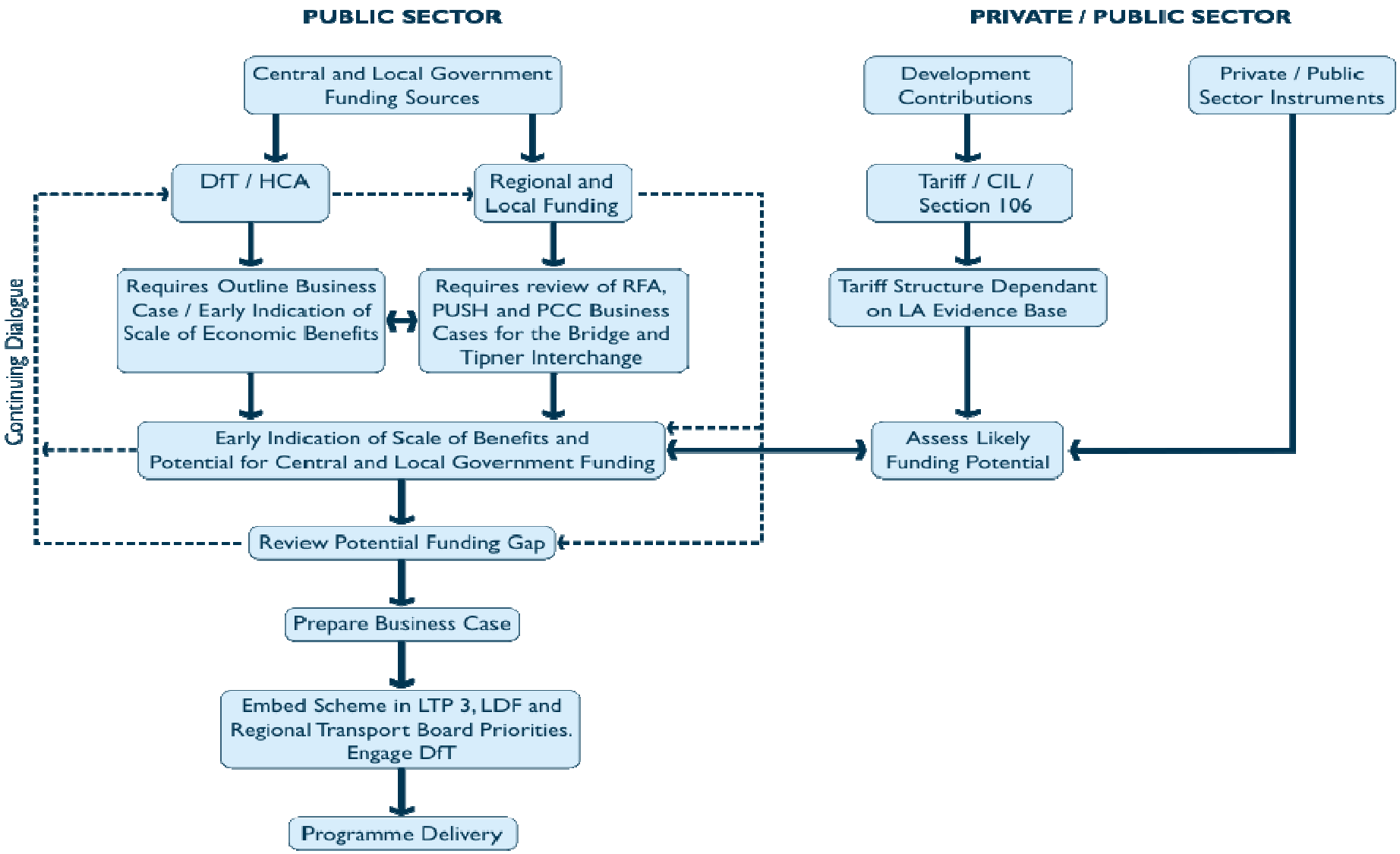
Funding Source/ Agency	Delivery Mechanism	Comments	Risks
Central Government			
DfT	Major Scheme Funding	Would form the majority of the funding package if approved. Requires the development of a Major Scheme Business Case. Major scheme funding would need to be justified by the improvement of accessibility, enabling development and linking development areas	Dependant on approval of Tipner Interchange DfT MSB funding approval. May be subject to [5]DaSTS outcomes. Business Case with [6]BCR in excess of 2.5 required or higher. Pressures on Central Government funding up to 2015
DfT	[7]Urban Challenge Fund	Previous government proposal to replace TiF, subject to new administration review	Uncertain in the short term, likely that some mechanism will be put in place
HCA	Kick Start/ other programmes?		Quantum of funding uncertain
Regional and Local Funding			
	Integrated Transport Block / Local Transport Plan contribution	Likely to be around 10%	Dependant on Regional funding priorities
	[8]TfSH/PUSH	Contributions dependent on central government funding. Tipner is a priority allocation. The new bridge will enable a public transport corridor to be delivered along with pedestrian and cycle routes	Dependant on funding priorities but priority scheme
Regional Investment Fund (RIF)	RIF	RIF is likely to be very modest and dependent on funding priorities	Competes with many other schemes
Portsmouth City Council		Provides benefits for walking, cycling and public transport. Enabler housing delivery.	The scheme is a priority for the Council subject to wider funding considerations
EU Funding			
Regional Board/ Entity	JESSICA (Joint European Support for Sustainable Investment in City Areas)	European Investment Bank driven development fund. Allows Managing Authorities to use a proportion of European Structural Funds to invest in revolving funds.	Research required on current status, if any with the region. May take the form of equity, loans and / or guarantees delivered to projects via Urban Development Funds
Regional Board/ Entity	TENT – TEA	Trans- European Network grant funding. EU co-financing of 20% to 50% for priority transport projects and 10% for non priority projects	Whilst the Tipner interchange is on the TENS network calls on these fund are intensely competitive. Project eligibility would need further examination

[5] DaSTS: Delivering as sustainable Transport system review of Transport Priorities. Currently under review within SEEDA but phase 2 (options development)may be cancelled by new administration.
[6] Benefit Cost Ratio
[7] The Urban Challenge Fund is the proposed replacement for TiF (transport Innovation Fund, currently out to consultation)
[8] TfSH (Transport for South Hampshire is the delivery mechanism for economic growth and leads on transport)

Funding Source/ Agency	Delivery Mechanism	Comments	Risks
Private Sector Development Contributions			
Tariff /CIL contributions	Agreed Tariff	The new bridge will increase the accessibility by public transport of the sites and will also provide pedestrian and cycle connection between the sites. The bridge will also provide vehicular access for the Horsea Island site.	CIL may be replaced by a Local Levy although details have not been provided. The justification of a charge is to realise the development value created by the grant of planning permission, and utilise this for projects which directly aid new development and the existing community. High level evidence on infrastructure delivery has been created supporting the Portsmouth Plan, however, no detailed CIL work has been advanced.
Pooled Development Contributions (Section 106)	Section 106	Dependent on land assembly process and ability of landowners to pay The new bridge will increase the accessibility by public transport of the sites and will also provide pedestrian and cycle connection between the sites. The bridge will also provide vehicular access for the Horsea Island site.	'Pooled S.106' contributions will no longer be permitted from 1st April 2014 under the CIL proposals, although this may be subject to change. It is likely that some form of Levy will replace the widespread use of S.106
Private/ Public Sector Financial Instruments			
[9]LABV	Agreement	Agreement drawn up between landowners and local authority/ agencies	Relatively new mechanism
Tax Increment Financing	Agreement	Agreement drawn up between landowners and local authority/ agencies	Untried in UK. Being considered by some authorities/ Treasury

[9] Local Asset backed Vehicle

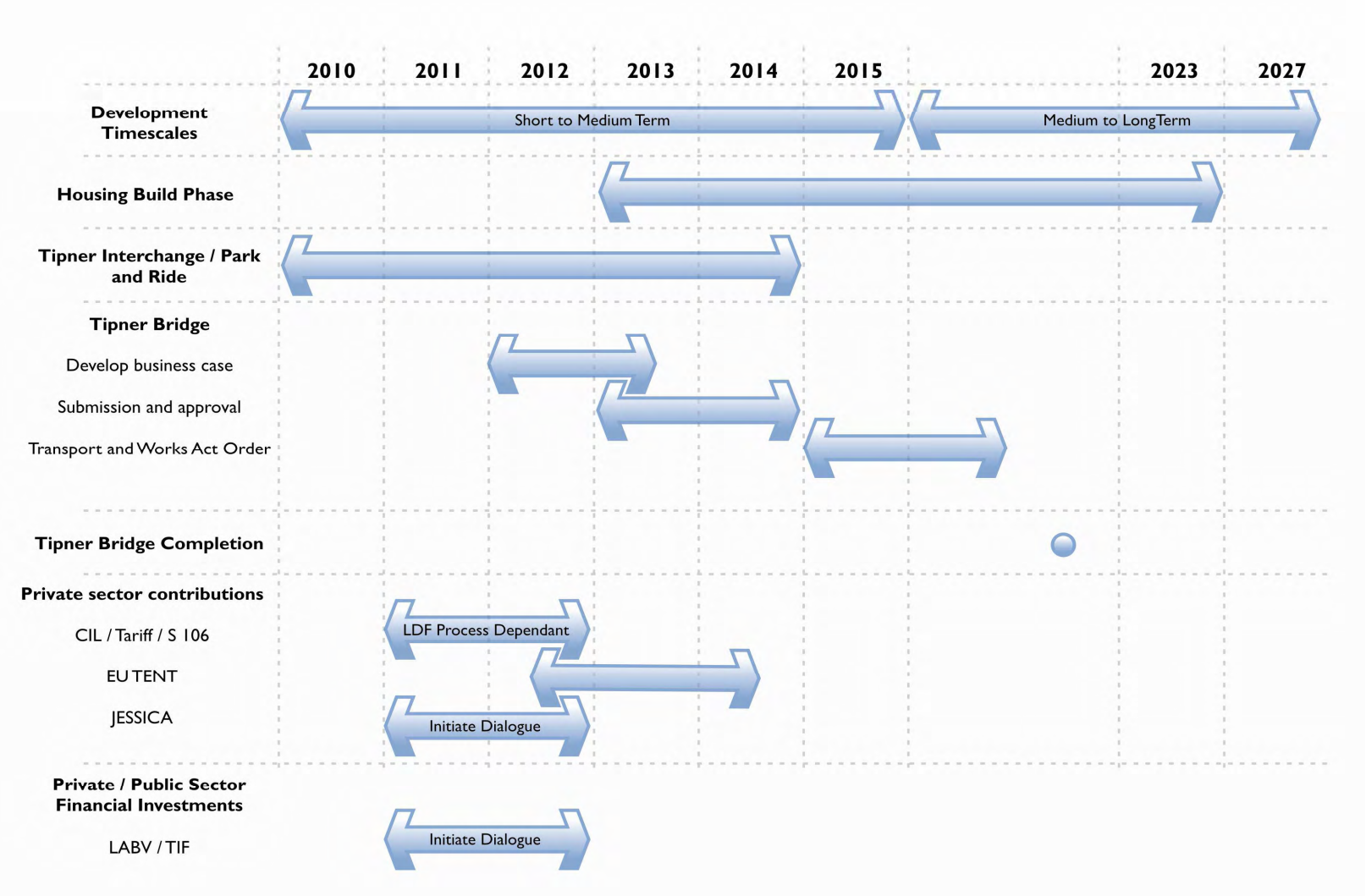
Figure 5-1: Potential Funding Route Map



5.1.4. Figure 5-2 overleaf illustrates the relationship between development timescales. The figure demonstrates the dependencies of funding applications and other local critical infrastructure, such as the Tipner interchange. Timescales are indicative but illustrate the process and possible delivery timescales.

5.1.5. The recent election of the Coalition Government has resulted in a degree of uncertainty about the future of CIL. It could be that CIL is replaced by a 'Local Levy' which operates on a similar basis of 'capturing' increases of land value to fund infrastructure delivery. The present CIL regulations restrict the use of Section 106, notably from 1st April 2014, where the use of 'pooled contributions' will cease. Given the timescales of implementation, and owing to this it is advised that the City Council strongly considers the use of CIL or Local Levy equivalent to enable fair and reasonable contributions from all new development in the city to assist with the funding of the bridge, which in a sub regional sense will have wider strategic benefits (notably for access to the city centre). Regardless of the CIL/ Local Levy system imposed, the principle of development which requires the bridge to mitigate its transport impacts contributing towards its implementation is established, and can be mitigated via conventional Section 106 contributions. This will likely be the case for some development at Port Solent and all at Horsea Island.

Figure 5-2: Funding Options and Outline Timescales



6 Summary and Conclusions

6.1 Summary points relating to justification of the scheme

6.1.1. The modelling and transport evidence referred to in this report is intended to confirm or otherwise at an early stage the need for the bridge link to enable full development of the Port Solent and Horsea Island sites. The modelling exercise undertaken is on a comparative basis of two future scenarios (with and without the bridge) and is therefore intended to inform planning decisions. In this summary a number of key findings can be drawn from the assessments discussed above to inform the evidence base for the bridge link:

Enabling The Development

- Without the bridge link access to the Horsea Island and Port Solent development strategic sites would be reliant on the Port Way access road, whereas the main access point for the Tipner site would be retained via the proposed Tipner Interchange on the M275;

- In the absence of the bridge link development related traffic travelling between Horsea Island/Port Solent sites to central areas of the city centre (for example) will be subject to lengthy detours relative to a scenario which includes the bridge link. Average peak hour journey times to reach the central areas by car would increase by half an hour, resulting from a combination of increased distances travelled (four kilometres to the city centre) and higher levels of congestion and delays at key junctions;

- Without the bridge link the resulting poorer levels of accessibility and congestion mean that the development will be less attractive and therefore reduced take up of housing, commercial space and regeneration;

- In large part, the wider impact of not including the bridge link in delivering the Portsmouth Plan housing allocation within the western corridor area appears to be restricted to a couple of key junctions on the immediate highway network, including;

  - The M27 junction with Port Way; and

  - Johnson & Johnson Junction.

- It is noted that the traffic impact of excluding the bridge link is negligible beyond the immediately adjacent network junctions – identifying the bridge link as a local scheme based on the extent of its impacts;

Accessibility, Connectivity & Public Transport

- Similarly, without the bridge link, the Horsea Island and Port Solent sites would not be served directly by the express bus services; hence development related trips wishing to continue using public transport would be reliant on local bus services. As a result public transport travellers between the development sites and the central areas would be subject to increases in travel times of up to half an hour, and therefore the mode share of car trips increases to nearly 75% from around 65% with the link (i.e. public transport mode share drops from 35% to 25%). With increased accessibility to public transport, the inclusion of the bridge link therefore achieves greater mode shift to sustainable (non-car) modes of transport;

- Albeit a local scheme in transport modelling terms, the bridge link should be considered major infrastructure in a city-wide context as it is required to enable significant residential development and regeneration and would also enable access through Port Solent, Horsea Island and Tipner for regional / express bus routes principally from Waterlooville to Portsmouth and Fareham to Portsmouth (also known as BRT/ZIP).

- The bridge link will connect Tipner and Horsea Island significantly reducing severance between the two development locations and improving site permeability and access to jobs, services and public transport. Thereby removing the present requirement for bus services to terminate at Tipner and Port Solent which would have the benefit of reduced journey times and increased operational efficiency. Furthermore, the omission of the bridge link would also have an acute impact on servicing Horsea Island from other areas in central Portsmouth;

Viability And Funding

- A number of methods of financing the new bridge are available owing to the broad range of local and regional benefits. A preliminary high level benefit to cost assessment under these conditions suggests a strong case for the bridge link with an indicative ratio of benefits to costs of around 10 to 1 which reflects on the points above.

6.2 Summary points relating to engineering feasibility and alignment options

6.2.1. The engineering feasibility has assessed four broad alignment options utilising the information available at this high level design stage.

6.2.2. There are pros and cons of each alignment option which have been identified and discussed within the report. Both Option A and B are considered viable options at this initial feasibility stage.

6.2.3. The broad costs of all the options has been considered within Option A identified as approximately £19.2 million to construct. Option B is costed at £21.4 million.

6.2.4. The walk, cycle, bus and emergency link, which is integral to the implementation of the bridge to deliver access to and between the Horsea Island and Port Solent sites, has also been assessed and costed at a further £4.5 million.

6.2.5. A list of significant risk items for future investigation has been provided, these include the former landfill site, land ownership, environmental constraints, ground conditions / contamination and the potential need for a TWA Order.

6.3 Summary points on scheme delivery and promotion

6.3.1. There are a number of potential sources of funding for the bridge ranging from a local tariff on development, local authority funding, EU grants and Central Government funding. These options will be explored as the scheme is promoted further.

Figures and Drawings

Figure 1 – Transport Consultants Brief Study Area

24012/SK010 - Constraints and Alignment Options

24012/SK011 and SK012 – Option A Alignment Details of Cross Section and Long Section

24012/SK001 – Option A Alignment

24012/SK013 – Option B Alignment Details of Cross Section and Long Section

24012/SK002 – Option B Alignment

24012/SK003 – Option Ai Alignment

24012/SK005 – Option C Alignment

24012/SK006 – Option D Alignment

24012/SK004 – Bus Only Connection between Horsea Island and Port Solent

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TIPNER, PORT SOLENT AND HORSEA ISLAND BRIDGE FEASIBILITY

BRIDGE AREA

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FIGURE 1

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LEGEND

- OPTION A — BRIDGE APPROXIMATELY 104m LONG; APPROACH RETAINING WALLS APPROXIMATELY 260m; EMBANKMENT ACROSS MUD FLAT APPROXIMATELY 140m
- OPTION B — BRIDGE APPROXIMATELY 250m LONG; SOUTH REINFORCED SOIL APPROACH APPROXIMATELY 75m LONG, EMBANKMENT APPROACH APPROXIMATELY 45m LONG
- OPTION C — BRIDGE APPROXIMATELY 440m LONG; EMBANKMENT APPROACHES APPROXIMATELY 45m LONG
- OPTION D — BRIDGE APPROXIMATELY 540m LONG; EMBANKMENT APPROACHES APPROXIMATELY 45m LONG
- BOUNDARY OF TIPNER REGENERATION COMPANY LAND
- LISTED BUILDINGS — PORTCHESTER CASTLE LOCATED APPROXIMATELY 1.8km WNW OF M275 BRIDGE (OUTSIDE OF PHOTO)
- SCHOOL
- SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI) — ALL OF PORTSMOUTH HARBOUR INCLUDING TIPNER LAKE IS A SSSI, A SPECIAL PROTECTION AREA (SPA), A RAMSAR SITE AND AN IMPORTANT BIRD AREA (IBA). THIS IS NOT SHADED FOR CLARITY.
- LANDFILL AREA
- MOD AREA (SOUTH SIDE ONLY) — NON SHADED AREA OF HORSEA ISLAND ALSO MOD LAND, BUT ASSUMED AVAILABLE FOR DEVELOPMENT. THIS IS NOT SHADED FOR CLARITY.

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TIPNER, PORT SOLENT & HORSEA ISLAND BRIDGE FEASIBILITY STUDY

CONSTRAINTS & ALIGNMENT OPTIONS

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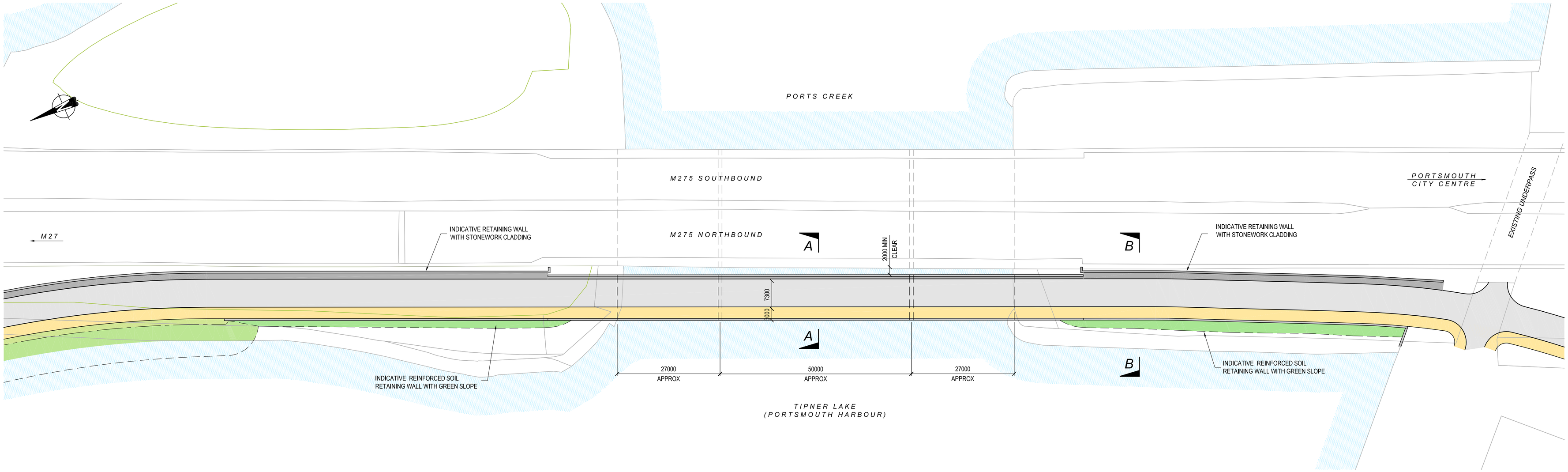

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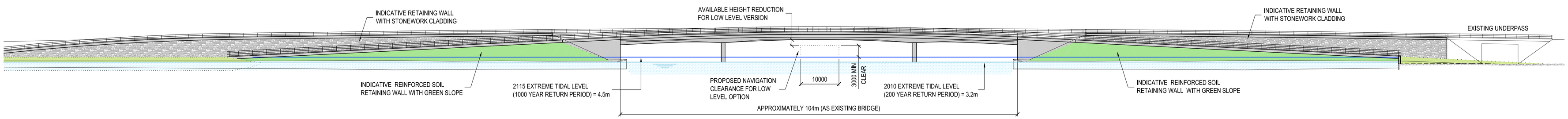

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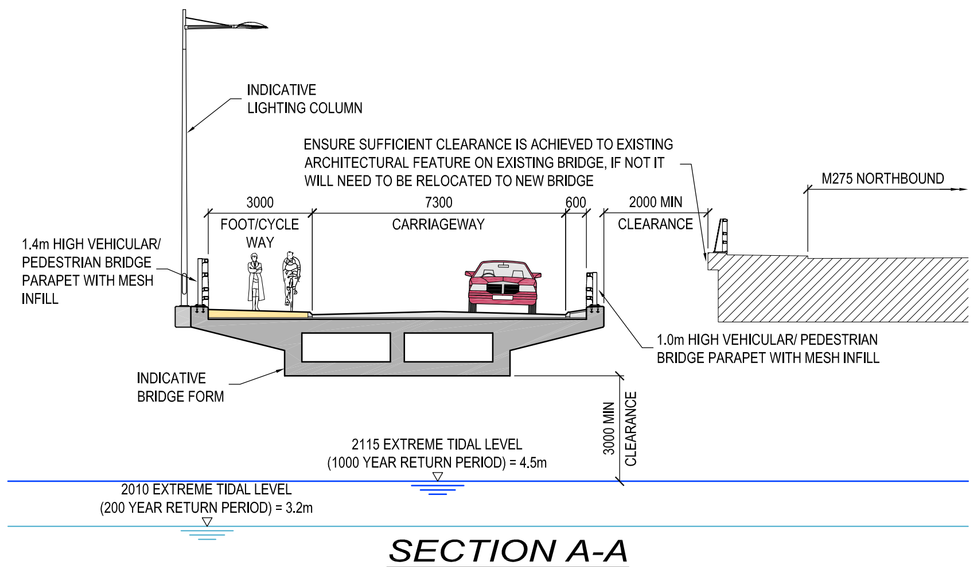

SECTION A-A
OPTION A - LOW LEVEL
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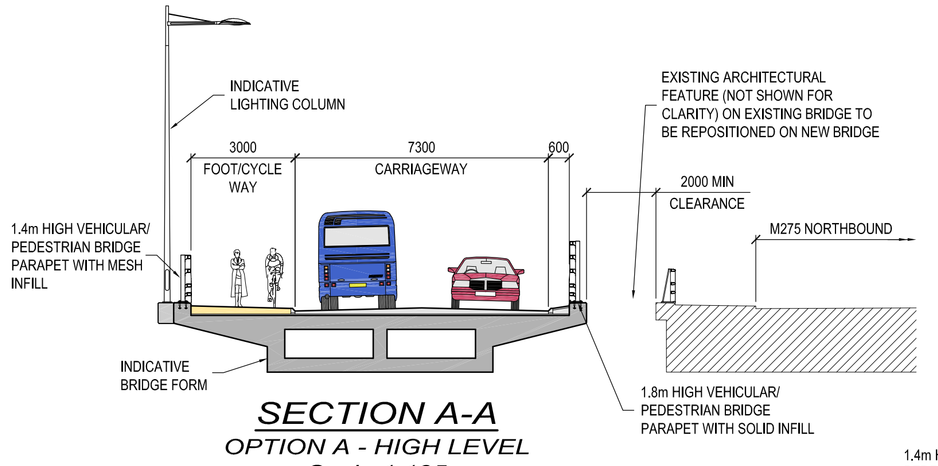

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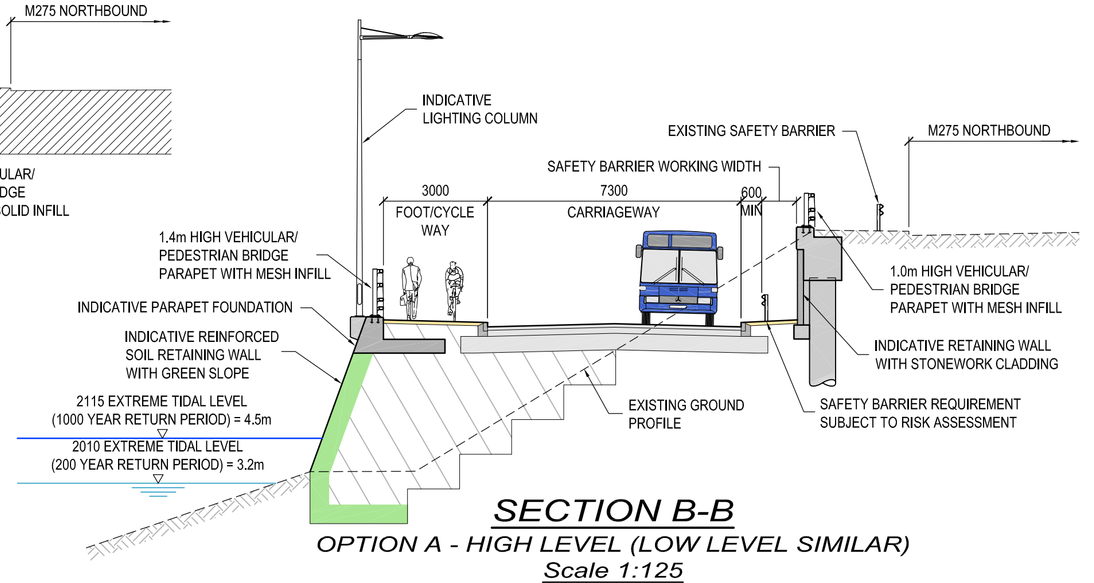

SECTION B-B
OPTION A - HIGH LEVEL (LOW LEVEL SIMILAR)
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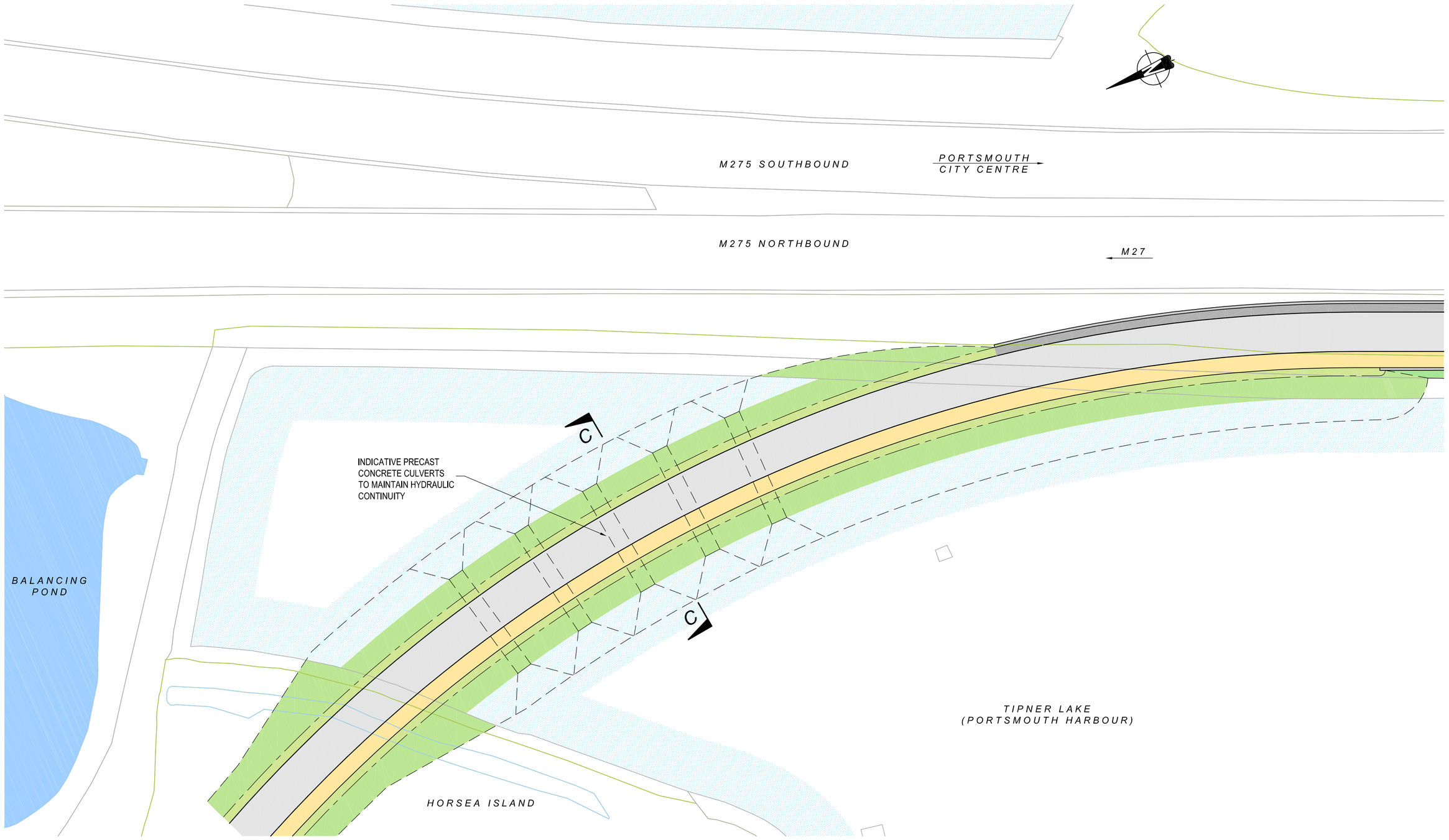

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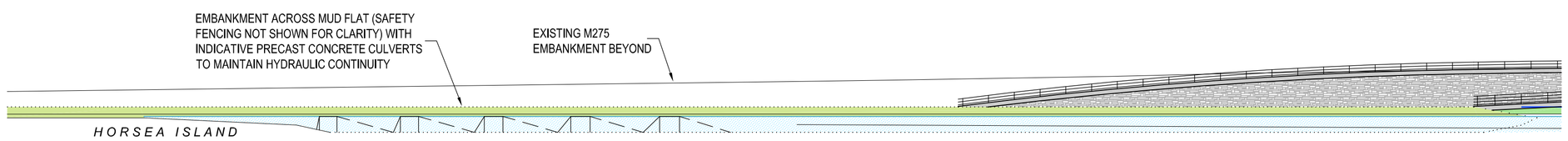

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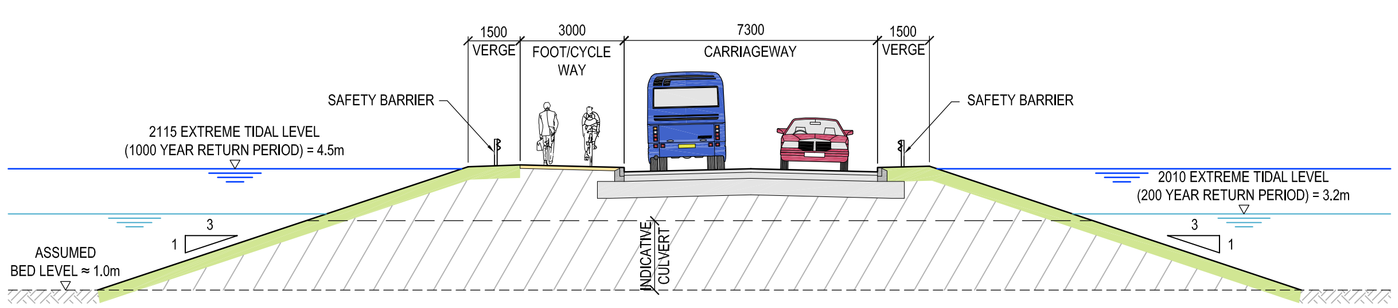

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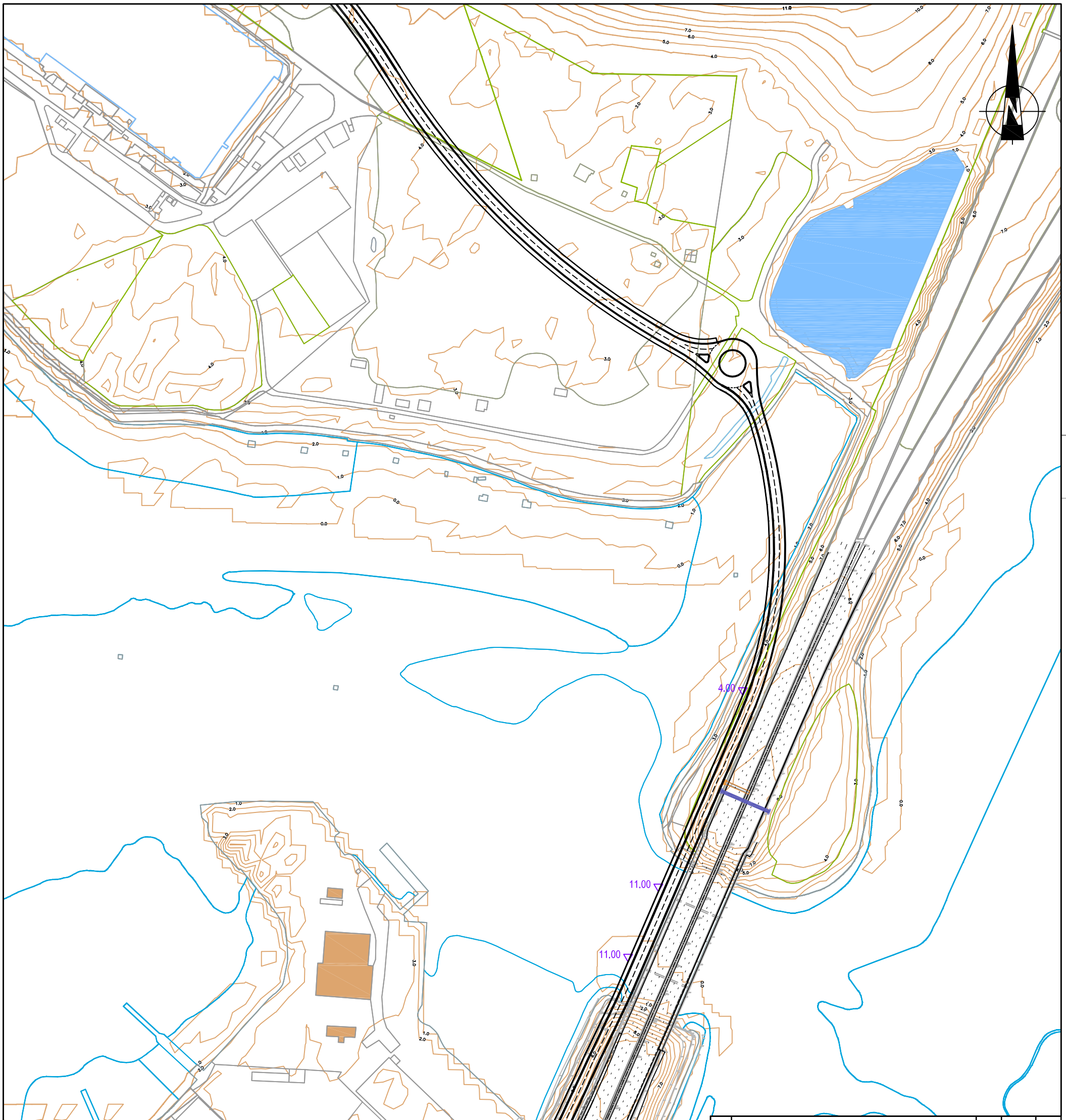

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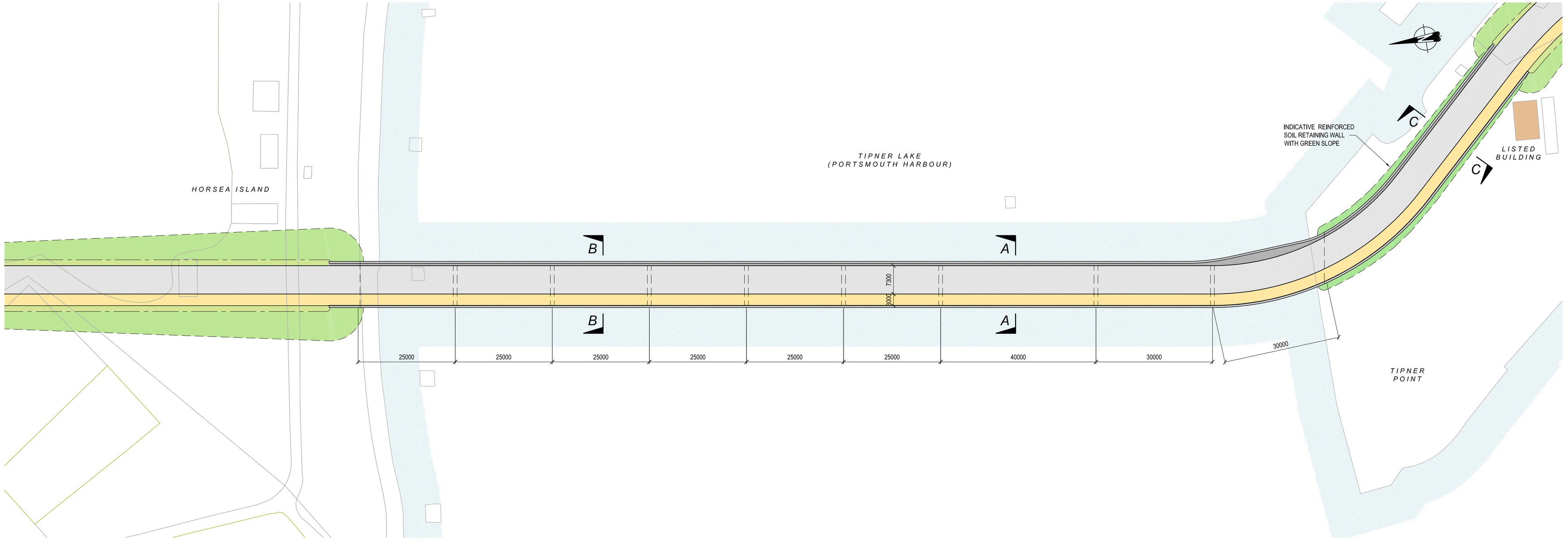

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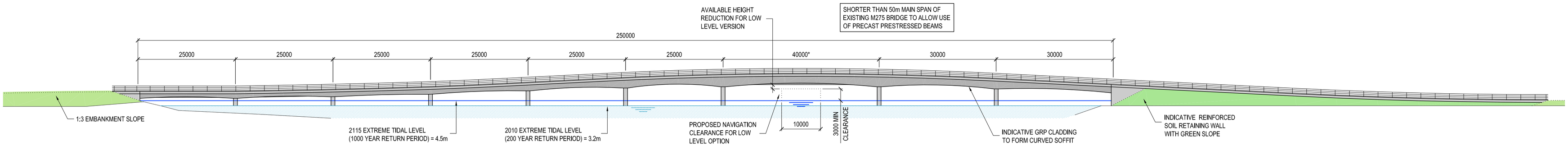

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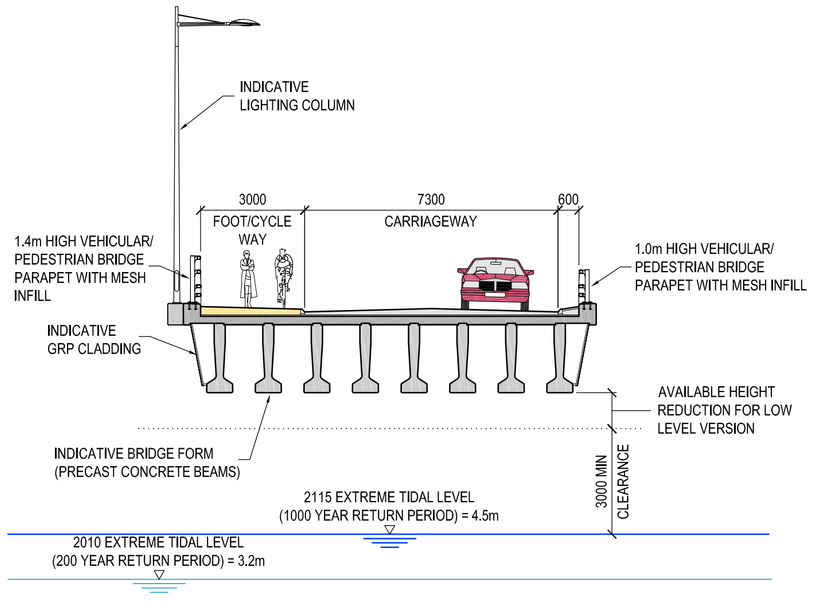

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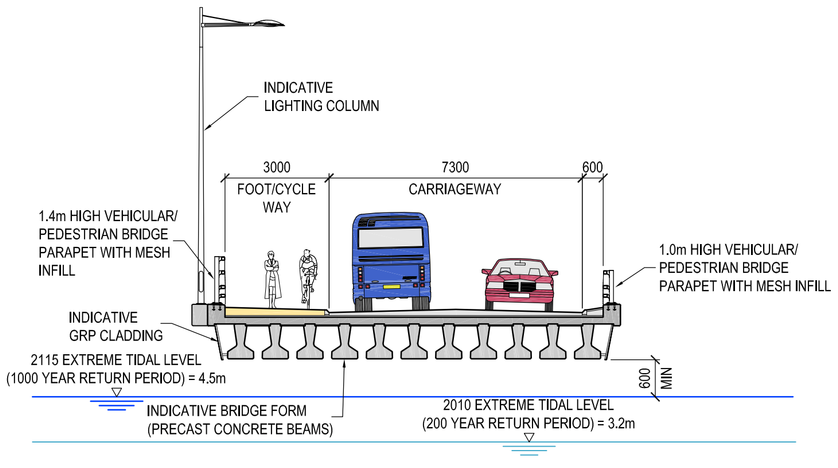

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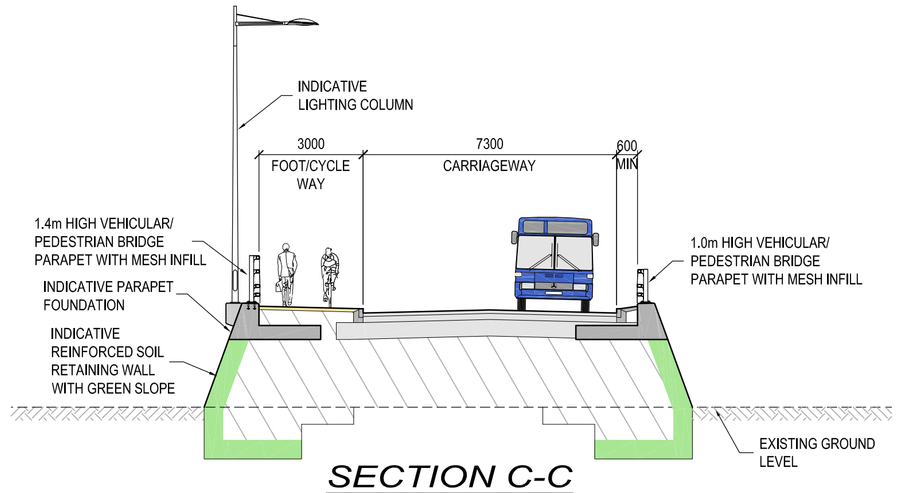

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OPTION B

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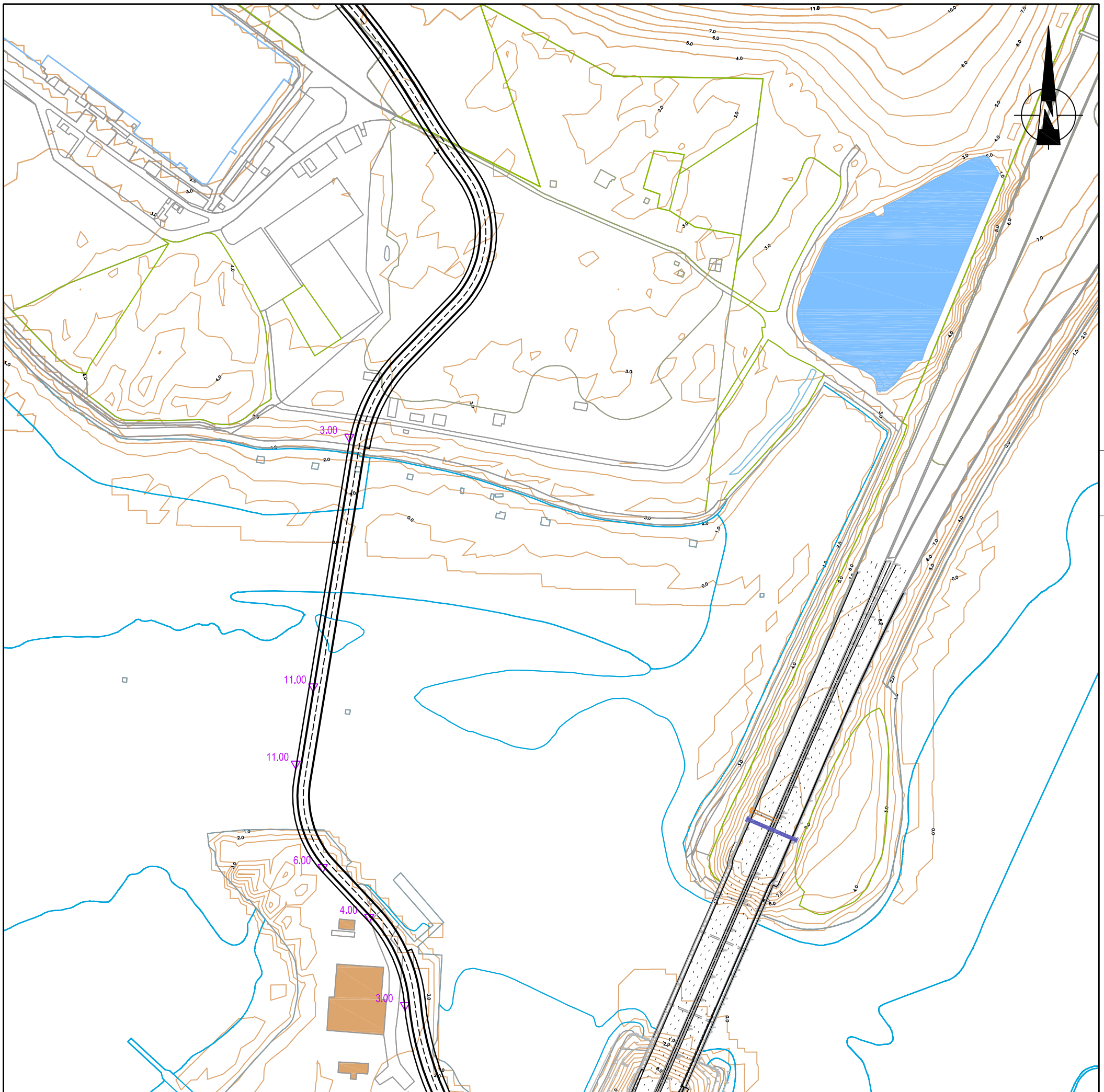

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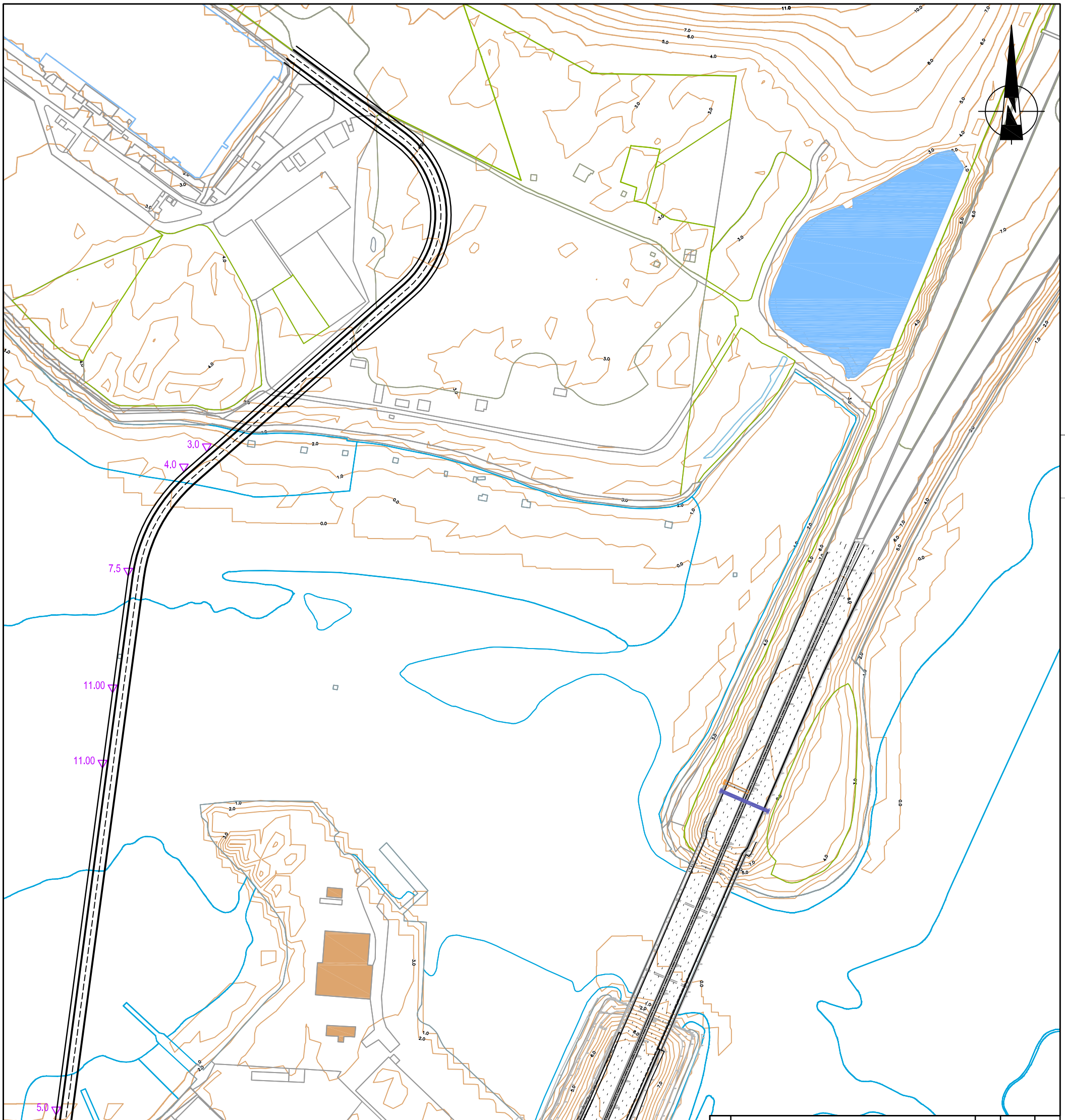

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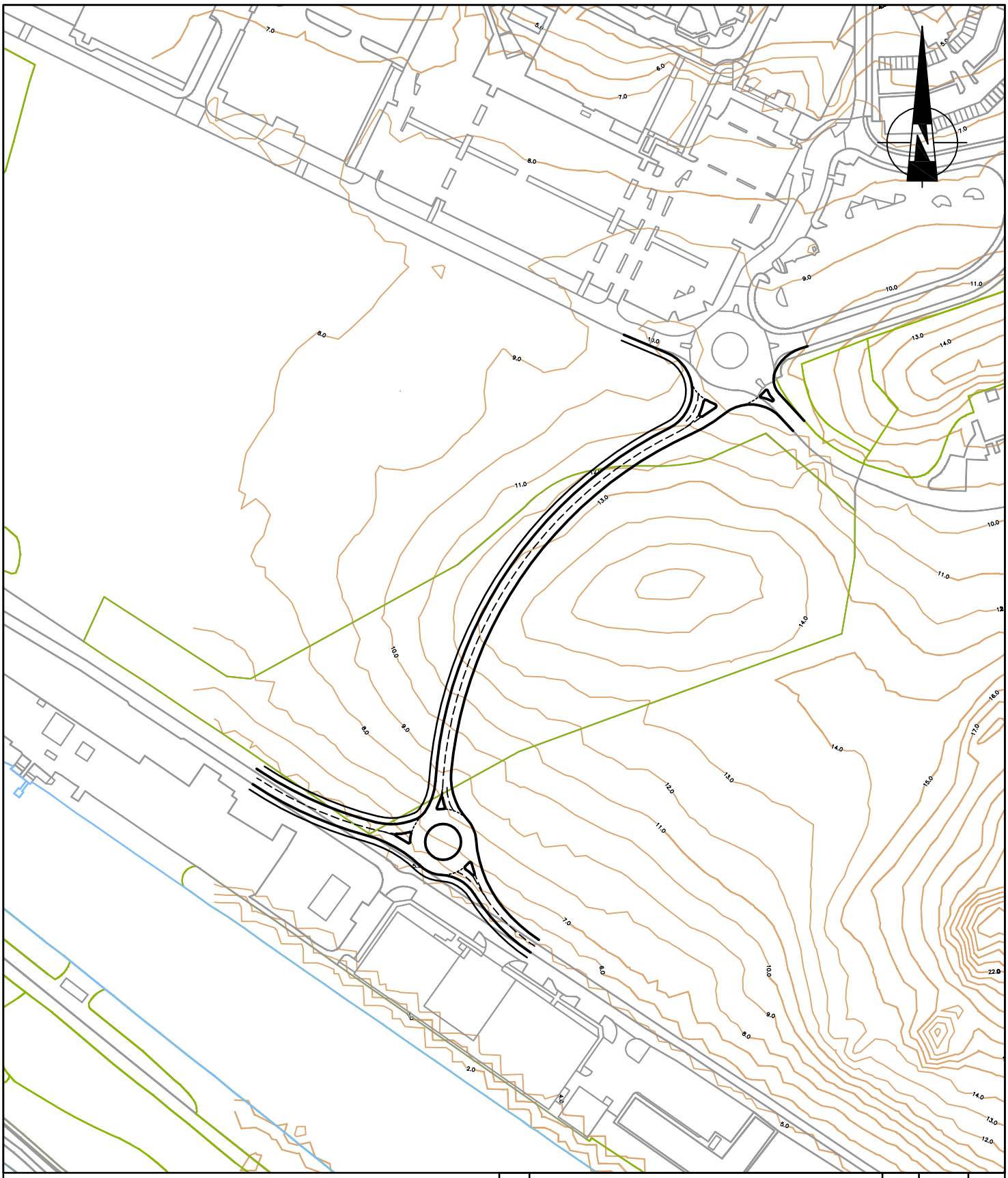

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Appendix A - Construction Costing Inclusion

Site Clearance
- Clearing site vegetation (mechanical)
- Disposal
- Excavating top soil average depth 150mm

Road Restraint Systems
- Safety Barrier
- Parapet along reinforced soil embankment & wingwalls
- Parapet along M275 edge

Earthworks
- Geogrid at base of embankment
- Embankment fill to 4.5m flood defence level
- Mudflat embankment
- Geogrid for reinforced soil retaining wall (by face area)
- Fill for approach embankments (by volume)

Pavements
- Seeding of verge
- Urban two lane 7.3m wide link road
- 32m ICD Roundabout

Piling
- Piled grid for road support (per metre of road)
- Piles to bridge main span pier
- Piles to bridge intermediate pier
- Piles to bridge abutments
- Cofferdam to install piles/pilecap/pier
- CFA piled retaining wall along M275 (per metre of road)

Structural Concrete
- Bridge deck
- Extra for balanced cantilever in-situ construction
- Extra for precast beam installation over water per span
- Retaining wall pilecap
- Reinforced earth embankment parapet foundation
- Wingwalls
- Mudflat culverts

Stonework
- Stonework facing to retaining wall

Miscellaneous
- GRP cladding

Preliminaries, overhead and profit
- 25%
- *80% Percentile Optimism Bias*
- 55% for fixed links (bridge options)
- 32% for roads (bus link)

Engineering contribution costs and reasonable maintenance costs
Atkins requested that engineering contribution costs and reasonable maintenance costs be added to the figure they received. These are in addition to the construction costs quoted in the report and have been solely used in Atkins' initial benefit / cost ratio assessment.

Reasonable maintenance costs have been taken to be equivalent to a commuted sum for maintenance. This has been calculated based on 20% of structural costs.

Engineering contributions costs have been taken to be site investigation and design fees. These have been estimated as 2% and 6% respectively for the bridge options, with a lower design fee of 4% for the bus link.

Summary of costs on this basis:

Option	Description	Construction Total	Other Costs Total	Grand Total Rounded
Option A	Adjacent to M275 with roundabout	£19,162,045	£2,284,044	£21,500,000
Option A(i)	Adjacent to M275 no roundabout	£18,558,555	£2,269,820	£20,900,000
Option B	Bridge from Tipner Point	£21,440,778	£2,657,518	£24,100,000
Option C	Between Tipner Point and M275	£29,294,464	£3,885,773	£33,200,000
Option D	West of Tipner Point	£35,981,292	£4,779,267	£40,800,000
Bus Link	Port Solent to Horsea Island	£4,447,861	£169,978	£4,700,000

(Exclusions as listed in Appendix B)

Appendix B - Construction Costing Exclusion

Excluded items from overall construction cost estimates

i. VAT

ii. Land purchase

iii. Non design related Professional Fees

iv. Approvals

v. Utility diversions

vi. New utility supplies

vii. Surveys

viii. Remediation of pollution / contaminated land

ix. Remediation of former landfill site

x. Environmental mitigation

xi. Council / approvals/ inspection/ legal / CPO / Transport Works Act Order fees

xii. It has been assumed that access to the area for construction will not be unreasonably restrained

xiii. A site investigation should be undertaken to determine ground conditions to provide a more accurate estimate

Appendix C - Major Scheme Business Case, CIL and S106 Information

Major Scheme Business Case

The Regional Transport Board sets regional priorities for investment in new transport infrastructure in the south east.

In order to promote a major scheme (those costing over £5 million pounds) a Major Scheme Business Case (MSBC) is required in order to secure funding from the Department for Transport

For each scheme promoted through the MSBC it is necessary to demonstrate that the scheme is justified and that it:-

- Is the best solution to the identified problems / meeting the objectives
- Has a reasonable chance of success
- Has confirmed funding
- Remains justifiable under a range of outcomes

The MSBC funding allocations are undertaken on a 3 staged process, as follows:-

- Programme entry – equivalent to provisional approval once initial case made to the DfT. The timescales for the preparation of a MSBC are approximately 12 -18 months with a following period of review by the Department of 6 months prior to a decision being announced.
- Conditional Approval – this is reached once statutory powers are in place in relation to the scheme. This is likely to take a minimum of 6 months but would be dependant on the scale and scope of assessment required to support a planning application.
- Full Approval – achieved once the final supplier prices are secured in relation to the scheme. In terms of timescales this is likely to be a further 3 - 6 months to prepare. It is possible to prepare and submit a joint Conditional and Full Approval Business Case to further

For the Programme Entry Submission the MSBC would usually address the following:-

- The Strategic Case – identifying problems, opportunities and objectives which the scheme would address, process of option generation and selection
- The Value for Money Case – monetary comparison of positive and negative impacts of the scheme
- The Delivery Case – demonstrating how the scheme would be delivered to time and budget
- The Commercial Case – procurement strategy and commercial risks
- The Financial Case – demonstrating that the costs estimate is robust and the funding strategy

Community Infrastructure Levy (CIL)

The enabling legislation for the CIL came into operation in April 2010. The CIL aims to introduce a fairer, more transparent and more certain system of capturing developer contributions. At the heart of a CIL is a charging schedule setting out the mandatory levy for each type of development based on a rate per square metre or 'metric'.

A CIL is aimed to supplement public funding in line with a local authority's Development Plan. To introduce a CIL the following will need to be in place:-

- An adopted Core Strategy
- An evidence base demonstrating the cost of infrastructure needed to support development
- An understanding of the viability implications of a CIL on development within the area

It is possible that the introduction of a CIL could part contribute to the cost of funding the new bridge but it is likely that this contribution would only meet a proportion of the overall cost involved given the need to ensure viability of the sites concerned. The future of CIL is somewhat uncertain at present as a result of the change in Government and this may have implications in the future or an alternative tariff system may result.

S106 Contributions

S106 obligations could be sought on a site by site basis, although this is likely to be less transparent and open. Given the need to improve the accessibility of all of the sites along the western corridor through a step change in public transport provision to attempt to apportion a strategic element of infrastructure such as the new bridge would require a site by site approach.

Any S106 contribution needs to meet the 5 tests as set out within Circular 05/2005 of being

'(i) relevant to planning;

(ii) necessary to make the proposed development acceptable in planning terms;

(iii) directly related to the proposed development;

(iv) fairly and reasonably related in scale and kind to the proposed development; and

(v) reasonable in all other respects'

In seeking S106 contributions towards the new bridge the link between the benefits of the bridge in terms of improved accessibility, as outlined earlier in this report, would have to be quantified and related to the S106 sum in an equitable and auditable manner.

A11: European Commission IROPI Opinion (Art.6.4.2) Decisions:

(a) Deepening the Danube waterway between Straubing and Vilshofen; section Straubing-Deggendorf (Germany/Bavaria);

(b) Concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port of Granadilla (Tenerife)

EUROPEAN
COMMISSION

Brussels, 19.11.2019
C(2019) 8090 final

COMMISSION OPINION

of 19.11.2019

issued at the request of Germany pursuant to the second subparagraph of Article 6(4) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora: deepening the Danube waterway between Straubing and Vilshofen; section Straubing-Deggendorf (Germany/Bavaria)

(Only the German text is authentic)

COMMISSION OPINION

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(Only the German text is authentic)

1. Legal framework

Article 6(3) of Directive 92/43/EEC (the 'Habitats Directive') requires that any plan or project not directly connected with or necessary to the management of a Natura 2000 site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of its implications for the site and subject to the provisions of paragraph 4, the competent national authorities may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Under Article 6(4) of Directive 92/43/EEC, a plan or a project may be carried out in spite of a negative assessment of the implications for a Natura 2000 site and in the absence of alternative solutions if it is justified for imperative reasons of overriding public interest, including those of a social or economic nature. In this case the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected and it shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, and if considerations relating to human health, public safety or beneficial consequences of primary importance for the environment cannot be invoked, the project may be justified, further to an opinion from the Commission, by other imperative reasons of overriding public interest.

2. Germany's request

On 5 January 2018, the Commission received a letter from the German Permanent Representation requesting the Commission's opinion, pursuant to Article 6(4) of the Habitats Directive, on deepening the Danube waterway between Straubing and Vilshofen, section Straubing-Deggendorf (Germany/Bavaria). Following a preliminary examination, on 8 February 2018 the Commission requested a technical meeting to discuss the proposed compensatory measures and the technical aspects of the appropriate assessment. That meeting took place on 3 July 2018. On 20 September 2018, the German Permanent Representation submitted additional documents on the proposed compensatory measures and technical clarifications on the appropriate assessment. On 25 February 2019, the competent authority submitted further additional documents on the proposed compensatory measures.

2.1. The project

Rhein-Main-Donau Wasserstraßen GmbH, representing the Waterways and Shipping Administration of the Federal Republic of Germany and the Water Management Administration of the Free State of Bavaria, is planning to deepen the Danube ship fairway from 0.20 m to 0.65 m in the section from Straubing to Deggendorf (Danube km 2321.7 to 2282.5 – see figure 1). The project includes adapting the regulating structures and dredging and stabilising the riverbed. The national authorities also intend to increase the flood protection level from HW_{30} to HW_{100}, which means that flooding would only be expected to happen – statistically – every 100 years instead of every 30 years once the new flood protection measures are in place.

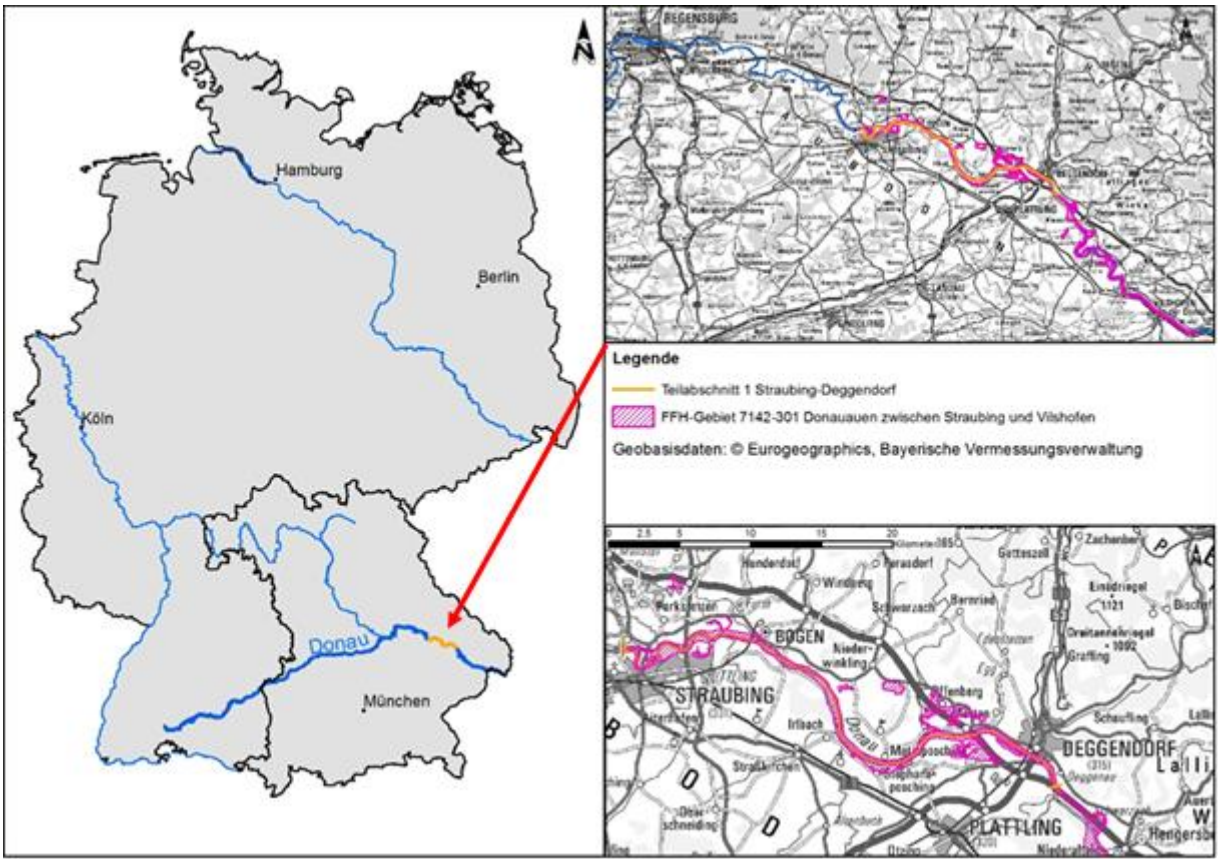

Figure 1: Location of the project section and the affected Natura 2000 site (pink hatched areas).

2.2. The sites

Natura 2000 site DE 7142-301, 'Donauauen zwischen Straubing und Vilshofen' was confirmed as a Site of Community Importance under the Habitats Directive on 7 December 2004[1] and was designated as a Special Protection Area by the Bavarian State Ministry for the

[1] 2004/798/EC: Commission Decision of 7 December 2004 adopting, pursuant to Council Directive 92/43/EEC, the list of sites of Community importance for the Continental biogeographical region (notified under document number C(2004) 4031); OJ L 382, 28.12.2004, p. 1: https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:32004D0798&from=DE

Environment and Consumer Protection on 12 July 2006[2]. The site is located in the Continental bio-geographical region and has an area of 4 721 ha. It is a largely natural river landscape with pronounced river and alluvial dynamics and abundant alluvial forests, oxbow lakes, reed beds and alluvial meadows.

For the Natura 2000 site, 12 habitat types in Annex 1 and 22 plant and animal species in Annex II to the Habitats Directive were identified as protected elements, including the priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)' listed in Annex I to the Habitats Directive. According to the site-specific conservation objective[3], the site was designated mainly for the conservation of the following habitat types and species of Community interest:

Habitat types listed in Annex I to the Habitats Directive (site conservation status A, B or C):

- 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoeto-Nanojuncetea*, (B),
- 3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation, (B),
- 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation, (B),
- 3270 Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation, (B),
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*), (B),
- 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*), (B),
- 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels, (B),
- 6440 Alluvial meadows of river valleys of the *Cnidion dubii*, (B),
- 6510 Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*), (B),
- 9170 *Galio-Carpinetum* oak-hornbeam forests, (B),
- 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*), (B),
- 91F0 Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*), (B).

Species listed in Annex II to the Habitats Directive: *Unio crassus, Castor fiber, Rhodeus amarus, Gymnocephalus baloni, Maculinea nausithous, *Osmoderma eremita, Rutilus pigus, Bombina variegata, Ophiogomphus cecilia, Maculinea teleius, Hucho hucho, Triturus cristatus, Apium repens, Aspius aspius, Cucujus cinnaberinus, Misgurnus fossilis, Gymnocephalus schraetser, *Euplagia quadripunctaria, Zingel streber, Romanogobio albipinnatus, Anisus vorticulus* and *Zingel zingel.*

[2] Bavarian Natura 2000 Regulation (*Bayerische Natura 2000-Verordnung* – BayNat2000V) of 12 July 2006 (GVBl. p. 524, BayRS 791-8-1-U): https://www.gesetze-bayern.de/Content/Document/BayVoGEV06.

[3] Bavarian Natura 2000 Regulation (*Bayerische Natura 2000-Verordnung* – BayNat2000V) of 12 July 2006 (GVBl. p. 524, BayRS 791-8-1-U): https://www.gesetze-bayern.de/Content/Document/BayVoGEV06.

Of the above species, the following are also strictly protected species listed in Annex IV to the Habitats Directive: *Unio crassus, Castor fiber, Gymnocephalus baloni, Maculinea nausithous, *Osmoderma eremita, Bombina variegata, Ophiogomphus cecilia, Maculinea teleius, Triturus cristatus, Cucujus cinnaberinus* and *Anisus vorticulus.*

There are currently no conservation measures in place for the Natura 2000 site under Article 6(1) of the Habitats Directive. The Government of Lower Bavaria is currently drawing up a management plan, which is due to be finalised by 2020.

On 29 February 2016, the Bavarian State Ministry of the Environment and Consumer Protection set out the conservation objectives for the Natura 2000 site[4]. However, they are not designed to achieve a quantified objective and do not distinguish between the conservation and restoration of protected assets.

The standard data form for the Natura 2000 site could not be used as a reference for an appropriate assessment, as the project promoter's biotope mapping showed that the results differ considerably from the standard data form. The project promoter therefore re-mapped the protected site and used this as the basis for the appropriate assessment.

In the Continental bio-geographical region in Germany, the conservation status of the priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*' is 'unfavourable – bad'[5]. However, the habitat type 91E0* in the Natura 2000 site has 'favourable' conservation status, which highlights the importance of the site for the Natura 2000 network.

The Natura 2000 site DE 7142-301 for the most part overlaps with the Special Protection Area (SPA) DE 7142-471[6] 'Donau zwischen Straubing und Vilshofen'. According to the standard data form, the SPA is designated for the following bird species: *Acrocephalus schoenobaenus, Acrocephalus scirpaceus, Actitis hypoleucos, Alcedo atthis, Anas crecca, Anas querquedula, Anas strepera, Ardea cinerea, Charadrius dubius, Ciconia ciconia, Ciconia nigra, Circus aeruginosus, Circus cyaneus, Circus pygargus, Crex crex, Dryocopus martius, Egretta alba, Egretta garzetta, Falco subbuteo, Ficedula albicollis, Gallinago gallinago, Glaucidium passerinum, Haliaeetus albicilla, Lanius collurio, Larus melanocephalus, Limosa limosa, Luscinia svecica, Mergus merganser, Milvus migrans, Milvus milvus, Motacilla flava, Numenius arquata, Pandion haliaetus, Pernis apivorus, Picoides medius, Picus canus, Pluvialis apricaria, Porzana porzana, Saxicola rubetra, Sylvia communis* and *Vanellus vanellus.*

2.3. Implications of the project on the site

An assessment of the project's implications has been carried out pursuant to Article 6(3) of the Habitats Directive. It found that the Natura 2000 site DE 7142-301 'Donauauen zwischen Straubing und Vilshofen' and the European SPA DE 7142-471 'Donau zwischen Straubing und Vilshofen' will be significantly affected. This is due to the fact that protected habitat

[4] Instructions on setting site-specific conservation objectives for Bavarian Natura 2000 sites, Notice of 29 February 2016 from the Bavarian State Ministry of the Environment and Consumer Protection (ref. 62-U8629.54-2016/1): https://www.lfu.bayern.de/natur/natura_2000_vollzugshinweise_erhaltungsziele/

[5] https://www.bfn.de/fileadmin/BfN/natura2000/Dokumente/lrt_kontinental.pdf [accessed on 4 February 2019].

[6] Bavarian Natura 2000 Regulation (*Bayerische Natura 2000-Verordnung* – BayNat2000V) of 12 July 2006 (GVBl. p. 524, BayRS 791-8-1-U): https://www.gesetze-bayern.de/Content/Document/BayVoGEV06.

types will be built on and therefore lost, the construction works themselves and the loss of the protected assets' ecological function once the project is complete.

According to the German authorities and their reference book on the determination of significant impact[7], the following habitat types (in hectares) will be significantly affected either directly or indirectly by the project:

3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation: 4.32 ha,

3260 Water courses of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation: 0.95 ha,

3270 Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation: 3.4 ha,

6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels: 0.06 ha,

6510 Lowland hay meadows: 18.03 ha,

91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*: 7.3 ha,

91F0 Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers: 0.98 ha.

In addition, the occurrences, structures and breeding habitats of the following protected species will also be significantly affected: *Maculinea nausithous, Unio crassus, Zingel streber, Zingel zingel, Gymnocephalus schraetser, Romanogobio albipinnatus, Rutilus pigus* and *Gymnocephalus baloni*.

An assessment of the cumulative effects of other plans and projects has been carried out, the results of which indicate that the following habitat types will also be significantly affected:

6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates: 2.07 ha, and

9170 *Galio-Carpinetum* oak-hornbeam forests: 0.06 ha, and the protected species *Maculinea teleius*.

According to the explanatory report of the planning permission document, in the SPA DE 7142-471 'Donau zwischen Straubing und Vilshofen', the habitats of the following species will be significantly affected: *Remiz pendulinus, Actitis hypoleucos, Anas querquedula, Picus canus, Ficedula albicollis, Falco subbuteo, Circus aeruginosus* and *Numenius arquata*.

According to the impact assessment, a range of planned mitigation measures have already been incorporated in the project planning, such as restricting building works during spawning and larval season, which will limit the negative impact on protected fish species.

The German authorities take the view that the project would significantly affect a Natura 2000 site which is home to a protected priority habitat type (91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*'). It may therefore be approved only if it fulfils the

[7] Lambrecht, H. & Trautner, J. (2007): '*Fachinformationssystem und Fachkonventionen zur Bestimmung der Erheblichkeit. FuE-Vorhaben im Rahmen des Umweltforschungsplanes des Bundesministeriums für Umwelt, Naturschutz und Reaktorsicherheit*', report commissioned by the Federal Agency for Nature Conservation in the context of the Agency's assessment of implications under the Habitats Directive.
Link: http://www.bfn.de/fileadmin/MDB/images/themen/eingriffsregelung/BfN-FuE_FFH-FKV_Bericht_und_Anhang_Juni_2007.pdf [accessed on 5 February 2019].

requirements set out in Article 6(4) of the Directive and the Commission has issued an opinion.

2.4. Fulfilment of the requirements of Article 6(4)

- Imperative reasons of overriding public interest identified by the German authorities

a) Objective of national and European transport policy: Deepening the Danube between Straubing and Vilshofen closes a gap in the existing waterway connection linking the North Sea to the Black Sea via the Rhine, the Main, the Main-Danube Canal and the Danube. Under Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network, the Danube federal waterway forms part of the core network of the European TEN-T network, and is of high economic interest for Europe.

b) Better connectivity for inland ports[8]: The project will improve navigation conditions in the project area when water levels in the Danube are low. Unlike other modes of transport, shipping on the Danube still has free transport capacity, which could be used more efficiently by deepening the ship fairway. The current project site of Straubing-Vilshofen is a navigation bottleneck.

c) Safety and ease of navigation[9]: The project section of Straubing-Vilshofen has the highest number of accidents due to the current profile of the ship fairway. The study puts the number of accidents at 39 per year (2004), increasing to 55.4 by 2025 due to the increasing volume of transport. The implementation of the project could reduce the frequency of accidents to 42.4 per year, despite the increase in traffic.

d) Predicted increase in transport[10]: According to the German authorities, the freight volume is expected to increase from 7.0 million tonnes/year (2007) to 9.7 million tonnes/year by 2025 or to increase by 50% to 10.5 million tonnes/year.

- Alternative solutions

The German authorities have examined alternative solutions as part of the land-use planning procedure (ROV 2003-2006[11]), as well as the 'zero alternative'. The studies were co-financed by the European Union and are publicly available[12].

In the German authorities' view, all alternative solutions would significantly affect the Natura 2000 sites, including the priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*'. All solutions would also significantly affect the Natura 2000 site DE 7142-301 'Donau zwischen Straubing und Vilshofen'. None of the

[8] http://www.donauausbau.wsv.de/anlagen/Bericht_EU-Studie/B_I_Ist_Zustand/Bericht_B_I.pdf [accessed on 14 August 2019]

[9] http://www.donauausbau.wsv.de/anlagen/Bericht_EU-Studie/B_I_Ist_Zustand/Anlage_I_03.pdf [accessed on 20 August 2019]

[10] http://www.donauausbau.wsv.de/anlagen/Bericht_EU-Studie/B_III_Variante_C280/Anlage_III_04.pdf [accessed on 20 August 2019]

[11] https://www.regierung.niederbayern.bayern.de/internet/media/aufgabenbereiche/2/raumordnung/rov_ausbau_der_donau.pdf [accessed on 5 September 2019]

[12] https://www.regierung.niederbayern.bayern.de/internet/media/aufgabenbereiche/2/raumordnung/rov_ausbau_der_donau.pdf [accessed on 5 September 2019]

alternatives would give rise to a significantly lower impact than the chosen option because they would either cover a larger area of the Natura 2000 site than the proposed project or would significantly affect a larger habitat for protected species. The zero alternative does not achieve the project's objectives of improving the safety of navigation conditions, increasing transport capacity on the Danube between Straubing and Deggendorf and optimising conditions in respect of the ongoing erosion of the riverbed.

The competent authorities therefore consider that the current proposed solution offers the best balance between ecological considerations and the objectives of the project.

- Compensatory measures

Under the German authorities' plans, the expected negative impact of the project on the coherence of the Natura 2000 site will be compensated for the affected priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*'. It is expected to take 5-10 years to achieve conservation status C and 30 years to achieve conversation status B. Habitat type 91E0* will be compensated at a ratio of 3:1, bearing in mind that this habitat type requires a very long period of time – several decades – to become fully functional. As the local situation corresponds to the ecological needs of habitat type 91E0*, there are realistic prospects of a successful new development as a compensatory measure. The proposed compensatory measures will extend the affected Natura 2000 site, with the additional areas being designated by the Member State.

The habitat types 3150 'Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*', 3260 'Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation', 3270 'Rivers with muddy banks with *Chenopodion rubric* p.p. and *Bidention* p.p. vegetation', 6210 'Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)', 6430 'Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels' and 6510 'Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)' will be compensated at a ratio of 2:1, while the habitat types 9170 '*Galio-Carpinetum* oak-hornbeam forests' and 91F0 'Riparian mixed forests of *Quercus robur, Ulmus laevis* and *Ulmus minor, Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)' will be compensated at a ratio of 3:1. It will take between 3 and 20 years to reach conservation status C and between 10 and 60 years to reach conservation status B. The measures will all be implemented within the existing Natura 2000 site.

The compensatory measures for the protected species are expected to become fully effective within a few months, except in the case of *Maculinea nausithous*, which is expected to take 5-10 years to reach conservation status B due to the need to create species-rich extensive grassland. Three occurrences of the mussel *Unio crassus* will be affected, in the 'Sand' areas and at the eastern tip of 'Metten Island'. The authorities understand that these populations could be destroyed. For this reason, new habitats will be provided through the creation of new river islands and river branches. Because of the ageing mussel population and the lack of reproductive capacity due to the bad conservation status of the host fish, the authorities have been unable to identify measures that would guarantee their long-term survival.

3. Commission opinion

According to the information provided by Germany, the deepening of the Danube waterway between Straubing and Vilshofen, section Straubing-Deggendorf is an important project of overriding public interest for which there is no better alternative. The project forms part of the

national implementation of the European Union Strategy for the Danube Region[13], which, among other things, calls for the removal of existing navigability bottlenecks on rivers so as to accommodate inland waterway vessels with a draught of up to 2.5 m. Mitigation measures will be implemented to limit the negative impact of the project. Nevertheless, the project will significantly affect the integrity of a Natura 2000 site.

According to the competent national authorities, the appropriate assessment under Article 6(3) of the Habitats Directive found that multiple protected habitat types and protected species would be significantly affected by the project. However, in the absence of quantitative and qualitative objectives, the appropriate assessment was not based on the site-specific conservation objectives for the affected species and habitat types, as is provided for by Article 6(3) of the Habitats Directive[14]. It was also not possible to use the information in the standard data form for the site. Instead, the competent authorities used data from their updated and detailed biotope mapping, which in places differs significantly from the information provided in the standard data form. For example, habitat type 6430 'Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels' has almost completely disappeared, having lost 93% of its original area.

Setting quantitative and qualitative conservation objectives should, among other things, provide information on the development potential of the protected habitat types and species in the site, and is therefore an important basis for the assessment under Article 6(3) of the Habitats Directive. The assessment of the proposed compensatory measures under Article 6(4) to ensure that the Member State has taken all compensatory measures necessary to protect the overall coherence of Natura 2000 should be done on the basis of clearly formulated conservation objectives.

Nevertheless, for most of the significantly affected habitat types and species, the extent and ratio of the compensatory measures proposed take sufficient account of the development of potential habitat types and species in the site. It can therefore be assumed that the impact on these habitat types and species will be adequately compensated.

However, for certain habitat types or species which are particularly significantly affected, the Commission considers that additional measures are needed in order to comply with the requirements of Article 6(4) of the Habitats Directive:

– priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*'.

According to the German authorities, the project will have a significant impact on the priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*', which means that compensatory measures under Article 6(4) of the Habitats Directive are required. Compensatory measures under Article 6(4) of the Habitats Directive must be clearly distinguished from the conservation measures, which in any event should have been implemented as part of the site management under Article 6(1) of the Habitats Directive.

[13] COM(2010)715: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: European Union Strategy for the Danube Region.

[14] C(2018)7621: Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, p. 55-56. Link: http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_6_nov_2018_de.pdf

For the Natura 2000 site DE 7142-301 'Donauauen zwischen Straubing und Vilshofen', no necessary conservation measures under Article 6(1) of the Habitats Directive have yet been established on the basis of detailed conservation objectives for this priority habitat type in the site. According to the Bavarian authorities, this will be done as part of a management plan, although this is not scheduled to take place until 2020. Germany's original request for an opinion under Article 6(4) of the Habitats Directive provided for all compensatory measures to be implemented within the existing Natura 2000 site. A technical distinction between the priority habitat type 91E0* 'Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*' and the necessary conservation measures was not possible as no conservation measures under Article 6(1) had been established. The competent authorities have therefore decided to implement the measure compensating for the destruction of this habitat type outside the existing Natura 2000 site and to extend the site. This amended measure can therefore be considered a compensatory measure, as it goes further than the necessary conservation measures due to the extension of the existing protected site.

The proposed compensatory measures in the new site will be implemented at a ratio of 3:1. Under Article 6(4), the Member State must take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. In particular, if the original condition of the site will take a very long time to be restored, a higher compensation factor will be required, given that the success of compensatory measures is difficult to predict. According to the authorities, the planned compensatory measure will take 30 years to achieve conservation status B. Given the current favourable conservation status of the protected priority habitat type and the significant length of time it is expected to take for the compensatory measure to restore the site to its original conservation status – and the uncertainty this brings with it – the Commission considers it appropriate to propose further measures with a compensation ratio greater than 3:1. Therefore, compensatory measures must also be taken within the protected site, as the authorities originally planned, given that these areas are ecologically suited to the habitat type. This would increase the compensation ratio to 6:1 and improve the prospects of the compensatory measures being successful.

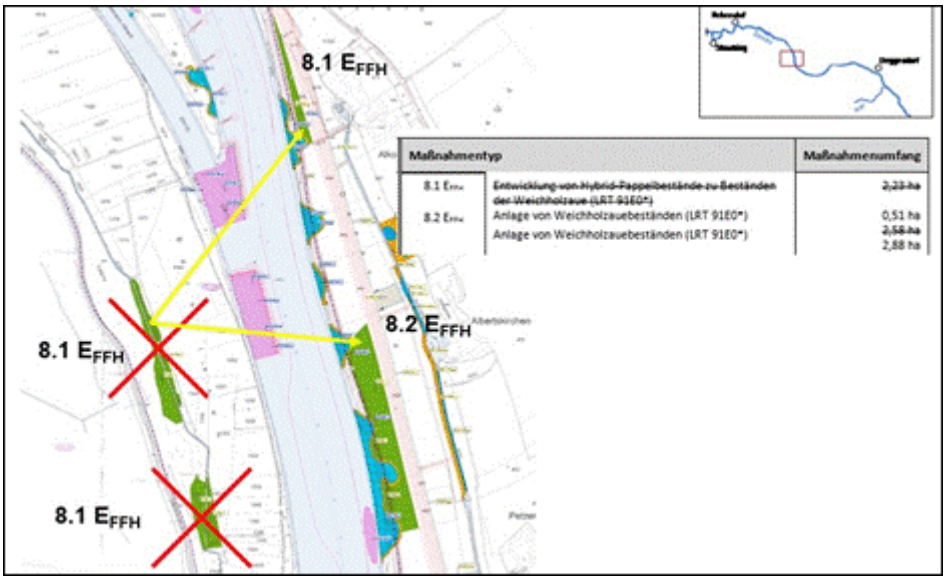

Figure 2: Compensatory measure No 8.1 E_{FFH} for the priority habitat type 91E0* was moved in the authorities' plans from the right-hand side of the river (within the Natura 2000 area) to the left-hand bank of the Danube (outside the Natura 2000 site). In accordance with the

conditions laid down in this Commission opinion, the compensatory measure is still required on the right-hand side of the river.

– Thick shelled river mussel (*Unio crassus*)

No effective management measures have been put in place for the occurrence of thick shelled river mussels, which is one of the last remaining in the Danube. Due to the bad conservation status of the host fish, which are necessary for reproduction, the population can no longer rejuvenate. The project operator has not proposed any compensatory measures other than those currently planned, according to which new habitats will be provided in the form of new river islands and river branches. No measures could be identified that would guarantee the long-term survival of the population.

For this reason, the compensatory measures for the river mussels must be further specified to ensure that the population can recover – either through breeding[15] or by removing the stress factors that would continue to prevent the species from reproducing in the future – and the mussels are preventing from dying out. Otherwise, the proposed creation of new habitats and the relocation of the mussels cannot be considered a compensatory measure if the population would be expected to die out without accompanying measures.

– **Osmoderma eremita*

According to the standard data form, the priority protected species **Osmoderma eremita* also occurs in the site. Due to the particular way that **Osmoderma eremita* live in old deciduous trees, which form part of the protected habitat types, the loss of a single tree in which they live is equivalent to destroying their natural habitat. According to the German reference book on the determination of significant impact[6], felling such trees would be considered to have a significant impact. Given the insufficient quality of the data in the standard data form, it cannot be ruled out that trees that serve as a habitat for **Osmoderma eremita* may need to be cleared during the project. It is therefore necessary to ensure that the project operator carries out environmental monitoring during the felling work and to establish additional compensatory measures[16].

In general, the proposed compensatory measures for many of the species and habitat types affected by the project will take a very long time to develop, sometimes several decades.

The German authorities are responsible for implementation and monitoring, and may be required to adjust compensatory measures or introduce additional ones if the need for compensation changes or the measures prove ineffective or insufficient. The additional conditions set out in this opinion will ensure that the overall coherence of the Natura 2000 network is protected.

On the basis of the detailed information and explanations provided by the German authorities, and taking particular account of the issues set out above, the Commission is

[15] Life Project LIFE11 NAT/LU/000857. Link: https://www.unio.lu/life-natura/life-unio-crassus/lage-der-projektgebiete/

[16] See the documents submitted in relation to Germany's request for a Commission opinion in accordance with Article 6(4) of the Habitats Directive, C(2018)466: long distance and suburban railway connection from Bad Cannstatt to Stuttgart via the Rosenstein portal (Germany/Baden-Württemberg).

of the opinion that the adverse effects of deepening the Danube waterway between Straubing and Vilshofen, section Straubing-Deggendorf, on the Natura 2000 sites are justified by imperative reasons of overriding public interest.

This opinion is subject to the following conditions:

– The mitigation and compensatory measures must be implemented and monitored in accordance with the information submitted by the German authorities with their request to the Commission. The Natura 2000 site DE 7142-301 must be extended within one year of the signing of this opinion, as described by the German authorities in the amendment to their request.

– The standard data form for the Natura 2000 site DE 7142-301 must be updated by the competent authorities within one month of the signing of this opinion.

– The German authorities must ensure that the compensatory measures for the priority habitat type 91E0* are also implemented on the right-hand side of the Danube in the protected site as a compensatory measure for this project (measure 8.1 E_{FFH}).

– The German authorities must ensure that, before felling trees that are potential habitats for the priority protected species **Osmoderma eremita*, ecological monitoring is carried out and, if the occurrence of the priority species is confirmed, compensatory measures are established and notified to the Commission.

– The German authorities must ensure the survival of the thick shelled river mussel (*Unio crassus*) population through breeding and the improvement of the ecological conditions of the host fish.

– Detailed reports on the implementation and monitoring of these measures must be made publicly available online, and must also be sent to the Commission. The first three reports must be submitted annually from the date on which this opinion is signed, while subsequent reports must be submitted every three years.

– The results of the monitoring programme for the Natura 2000 sites affected must be taken into account in order to make appropriate corrections, where necessary, to the project design or to implement additional compensatory and/or mitigation measures.

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Language in which the opinion was addressed to the Member State: German

Done at Brussels, 19.11.2019

For the Commission
Karmenu Vella
Member of the Commission

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels,
COM(2006) XXX

OPINION OF THE COMMISSION

pursuant to Article 6.4 § 2 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port of Granadilla (Tenerife)"

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I. THE LEGAL FRAMEWORK

Article 6(3) of Directive 92/43/EEC states that any plan or project not directly connected with or necessary to the management of a Natura 2000 site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, should be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of its implications for the site and subject to the provisions of paragraph 4, the competent national authorities may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

According to Article 6(4) of Directive 92/43/EEC, a plan or a project may be carried out in spite of a negative assessment of the implications for a Natura 2000 site, in the absence of alternative solutions, if it is justified for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected and it shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, and if considerations relating to human health, public safety or beneficial consequences of primary importance for the environment cannot be invoked, the project can be justified, further to an opinion from the Commission,[1] by other imperative reasons of overriding public interest.

II. THE SPANISH REQUEST

On 7 November 2005 the Commission received a request from the Spanish authorities seeking an opinion pursuant to Article 6.4 of the 92/43/CEE Habitats Directive regarding the absence of alternative solutions and invoking imperative reasons of overriding public interest.

On 17th November 2005, the regional government of the Canary Islands (Regional Administration responsible for Nature Conservation) sent a clarification note in relation to a proposed Site of Community Importance "Sebadales de Güigüi".

[1] Different language versions of Art. 6.4 of the Habitats Directive use different terms for "opinion": the Dutch text has "advies", the French "avis", the German "Stellungnahme", the Spanish "consulta" and the Italian "parere". The term "opinion" will be maintained throughout this document.

III. THE PROJECT

The opinion requested from the Commission concerns a proposal to construct a new port in Granadilla, Tenerife, Canary Islands. It is argued that the existing port facilities in Santa Cruz are inadequate and that new facilities with increased capacity should be developed to respond to projected increased in maritime traffic.

The definitive Granadilla project foresees the construction of a 650m container terminal covering 26ha, a 200m dock for general goods with an annexed 5,7ha area and a 19,5ha trading harbour area for raw materials traffic.

The port works are made up of a main breakwater of 2.557m length going down to -55mts seabed depth and a total land filling of 786.000m2 by using 12mio m3 of quarry material.

The new harbour will dispose of a contiguous terrestrial area with 12,4ha for the development of logistic activities and an area with 15ha for the installation of a natural gas plant.

IV. THE NATURA 2000 NETWORK

The Natura 2000 sites involved are "Sebadales del Sur de Tenerife" (ES7020116) and "Montaña Roja" (ES7020049). These sites were designated by the Spanish authorities as sites of community importance (SCI) and included in the Commission Decision of 28 December 2001, which establishes the sites of Community importance for the Macaronesian bio-geographical region, pursuant to Council Directive 92/43/EEC.

The site "Sebadales del Sur de Tenerife" is one of the sites of the Canary Islands hosting a habitat type "1110 *Sandbanks which are slightly covered by sea water all the time* "(Listed in annex I of Council Directive 92/43/EEC) and a habitat required for the conservation of the priority species **Caretta caretta* [2]*(*loggerhead turtle*)* The site "Montaña Roja" is one of the sites hosting a priority habitat type-" *2130*Fixed coastal dunes with herbaceous vegetation (grey dunes").*

In addition, the species *Atractylis preauxiana* (a species of plant endemic to the Canary islands) and priority species *Caretta caretta*, included in Annex II and IV of the Habitats Directive, are also affected by the project.

V. DESCRIPTION AND ASSESSMENT OF THE EFFECTS OF THE CONSTRUCTION OF THE PORT ON THE NATURA 2000 SITES

The expected effects of building the new port of Granadilla were described in the environmental impact assessment carried out by the Spanish authorities and in other complementary studies sent to the Commission from 2003 to 2005.

A first project and its environmental impact study were subject to a public information procedure (Spanish Official Gazette on 19 January 2000). The environmental impact declaration was published on 26 February 2003. In order to take into account some of the

[2] *Caretta caretta*: EN: loggerhead turtle; FR: tortue de carouane; ES: tortuga boba; DE: Unechte Karettschildkröte

different opinions and comments, the original project was reviewed (downsized) and a final project was defined.

The most significant environmental impact of the new port will result from the disruption of natural patterns of sand removal and deposition. Under natural conditions, submarine sand covering the seabed near the coastline is progressively displaced from NE to SW due to the main water stream flow. The port project will interrupt this natural sand flow and this in turn will result in erosion of the sea-bed further down the coast. The Spanish authorities estimate this erosion effect from 0 to 50.000m^3/year. This erosion implies an associated partial destruction of habitats in the above-mentioned sites of community importance “Sebadales del Sur de Tenerife” (ES7020116) and “Montaña Roja” (ES7020049), which are located downstream.

In order to mitigate the expected impacts of the interruption of sand movements in the coastal waters, the Spanish authorities have proposed a "North South sand bypass in the Granadilla harbour". This proposal provides for pumping machinery and associated pipework to take all the sand deposited on the north-side of the new port and to pump it to the southern end of the port. Windmills built in the project area would produce the necessary electricity for powering the system. The Commission considers the commitment by the Spanish authorities regarding a properly dimensioned North-South sand by-pass as an essential part of the port project.

In order to respond to important concerns regarding the effects of ships anchors on sensitive habitats, the Spanish authorities' ministerial order 3777/2005, 18 November 2005[3] prohibits the anchorage of vessels in the Site of Community Importance "Sebadales del sur de Tenerife" (SCI ES7020116). This measure aims to avoid the negative effects that the movement of anchors and their chains produces on sandy habitats types present in this Site of Community Importance. These movements would produce the erosion of the seabed destroying habitats hosted by the site, which would represent a significant disturbance in the future when the port would in activity.

VI. ALTERNATIVE SOLUTIONS

It can be concluded from the environmental assessment studies and not withstanding the mitigation measures foreseen by the authorities, that the project is still likely to have a significant impact on important sites and priority species as described in section IV and in these circumstances, the authorities are required to evaluate potential alternatives to the project. The Spanish authorities have studied several alternatives including the option of not developing more port capacity (the “zero-option”) as well as the further expansion and development of the existing port in Santa Cruz.

The Commission services have analysed all available information in relation to the alternative solutions. This includes information presented in the context of complaints received by the Commission. With regard to the "zero option", the conclusion of the Commission services is that the existing port facilities will not be able to handle the expected increase in maritime traffic and that additional facilities and increased port capacity is necessary for the economic development of the island.

[3] O.J. 289 of 3/12/2005

– With regard to the alternatives which involve an expansion of the existing port facilities in Santa Cruz the Commission services consider that the Spanish authorities have provided adequate justification for rejecting these options in particular as;

– It (the expansion of the existing port facilities) would have a negative impact on the inhabitants of Santa Cruz de Tenerife, both during the construction and once the enlarged port becomes operational;

– It would not have a quarry in the surroundings thus creating problems during construction;

– It would not have the necessary land available for development of the associated industrial and logistical support facilities in the adjoining areas.

– It would further increase the North to South transport imbalance of the island transport system.

– It would compromise the plan to develop a natural gas storage terminal on the island thereby diversifying the energy mix available to the local economy. Due to the proximity of the current port to the town of Santa Cruz, developing such a facility on the existing site would not be possible.

Regarding the possible alternatives to Granadilla as site for the new port, the Commission has assessed the authorities' opinion that Granadilla is the only appropriate site for the new port in Tenerife. This opinion is based on different technical reasons that have to be considered when identifying a site for the construction of a new port. These include factors such as the depth of the seabed at shore, the presence or not of a quarry close enough to the envisaged site, the availability of free adjacent land surface for handling and logistic operations, the adequacy of the transport connections with the hinterland and the proximity to port users.

In conclusion, the Commission accepts that there is a need for improved port facilities and increased port capacity in the island. The Commission recognises that the Spanish authorities have carried out an evaluation of the potential alternatives in accordance with the requirements of Article 6.4 of the Habitats Directive and, following an assessment of available information made by the Commission services, accepts the conclusions from this evaluation.

VII. IMPERATIVE REASONS OF OVERRIDING PUBLIC INTEREST

Notwithstanding the information and the arguments presented in the preceding sections, it remains the case that the Granadilla port project is expected to have a significant negative impact upon a priority species and its habitat and a priority habitat under the habitats directive. As the main purpose of project is not concerned with improvements to human health or public safety and nor is it expected to have any beneficial consequences of primary benefit to the environment, justification for the projects should be based on "other imperative reasons of overriding public interest." and the Commission should give its opinion on these considerations (Article 6.4 Habitats Directive).

The Commission services have analysed all the information available to them. They have also taken account of the advice of independent external bodies in relation to the imperative reasons of overriding public interest presented by the Spanish Authorities.

The Commission accepts that as an island, Tenerife is highly dependent upon maritime transport and an efficient port system. However, the main port, currently located in the capital, Santa Cruz is subject to increasing congestion especially in relation to container traffic which is forecast to increase significantly. The proposed port of Granadilla would add needed capacity to accommodate future growth in container, dry bulk and general freight traffic in the island while at the same time de-congesting the existing port of Santa Cruz. The new port is expected to generate a sound economic rate of return and it will also provide the island with the possibility of attracting international container transhipment traffic.

In the light of the conclusions from section VI and taking into account the considerations presented above, the Commission recognises that there is a demonstrated need to increase and develop port capacity in order to promote economic and social development in the island of Tenerife and the surrounding region. The Commission therefore accepts the arguments put forward by the Spanish authorities that there exist imperative reasons of overriding interest that may justify the execution of this project on condition that appropriate compensatory measures are provided for.

VIII. PROPOSED COMPENSATORY MEASURES

To compensate for the expected effects of the project on the priority species of Community interest *Caretta caretta*, the priority natural habitat "*Fixed coastal dunes with herbaceous vegetation (grey dunes")* and the Natura 2000 sites "Sebadales del Sur de Tenerife" and "Montaña Roja", a set of necessary compensatory measures have been proposed:

A. General Considerations

To ensure that the Granadilla port is built and managed in an environmentally sensitive manner, and independent and permanent foundation will be set up before the construction works are started. The role of this foundation will be to monitor the status and trends in local biodiversity as well as ensuring that mitigation and compensation measures are carried out properly. The authorities have submitted the approval statement for the Statutes relating to the establishment of the foundation. The Commission notes the clarifications provided by the Spanish authorities in their letter of 8 May 2006, which indicate that the Statutes of the foundation have been modified to ensure its institutional independence. Future possible modifications of the statutes of the foundation will not reduce its independence nor its competences nor its permanence. Any modification of the statutes will be notified directly to the Commission.

B. Specifically related to the effects on the species and the integrity of the sites

i. Effects on the populations of the species *Atractilys preauxiana* listed in Annex II and IV of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

– Designation of a new site of community importance for the protection of the populations detected in the area of the industrial park of Granadilla. The total area of this new SCI will be 0,93 hectares. In addition, it is proposed that this area would serve as a donor for the restoration of southern areas where these subpopulations have disappeared (species reintroduction in SCI "Montaña Roja")

ii. Effects on the natural habitat of Community interest 1110 “Sandbanks which are slightly covered by sea water all the time” in the SCI “Sebadales del Sur”

– Designation of two new sites of community importance hosting areas of sandbanks which are slightly covered by sea water all the time (habitat type 1110): Antequera (Tenerife island), total surface 272,61ha; and Güi Güi (Gran Canaria island), total surface 7.219,74ha.

iii. Effects on Caretta caretta

– Any effects on the priority species *Caretta caretta*, due to impacts on the habitat required for its conservation, would be compensated through the above-mentioned measures.

– In addition to the above compensatory measures, the foundation will establish and carry out a monitoring programme to assess the conservation status of this species' population in the Canary Islands, as requested by article 11 of the 92/43 Habitats Directive. Methods and conclusions drawn out by the LIFE project B4-3200/97/247 will be considered by the foundation when establishing the above monitoring programme.

iv. Effects on SCI ES7020049 “Montaña Roja”

– Implementation of the restoration project on the SCI “Montaña Roja” for re-establishing a favourable conservation status. This measure implies enhancing the conservation status and will allow a significant increase of the area covered by the habitat type “Fixed coastal dunes with herbaceous vegetation (grey dunes)” within the site.

The Commission considers that given the expected effects of building the new port in Granadilla on the priority species Caretta caretta and the priority natural habitat “Fixed coastal dunes with herbaceous vegetation (grey dunes)”, and the expected results from the planned compensatory measures contained in the Compensatory Measures Programme prepared by the competent authority, it can be concluded that in the long term the overall coherence of the Natura 2000 network will not be significantly affected.

The Commission considers that the proposed compensatory measures described in the project are adequate if they are executed in a timely manner. To this purpose, it is considered necessary that compensatory measures under above-referred points A, Bi and Bii will be completed before the beginning of the construction works[4]*. In addition, the implementation of measures B.iii and B.iv must be started before the beginning of the construction works, and progressively completed according to a schedule as agreed by the foundation referred in point A.*

[4] *Spanish Authorities will send to the Commission their proposal of three new sites of community importance referred in points Bi and Bii in accordance with the provisions of the 92/43/CEE Habitats Directive and the 97/266/CE Commission Decision of 18 December 1996 concerning a site information format for proposed Natura 2000 sites*

The Commission notes the commitment of Spanish authorities to ensure appropriate financial resources for proper monitoring, implementation and reporting of the above referred mitigation and compensatory measures.

The Commission requests the Government of the Kingdom of Spain to send yearly reports on implementation of the project and on the results of the implementation of all above referred compensatory measures. The first report will be sent by the end of the year when the port works start and every year thereafter.

IX. OPINION OF THE COMMISSION

On the basis of the arguments set out above, the Commission holds the view that the new port of Granadilla project, as described in the documents submitted to the Commission by the Spanish authorities, can be executed for reasons of overriding public interest on the condition that all necessary compensatory measures to ensure overall protection of the coherence of Natura 2000 be taken in good time, as established in point VIII.

With regard to the opinion expressed in this document, the Commission notes that:

- this opinion is valid for this particular project, as described in the documents submitted to the Commission by the Spanish authorities[5] and cannot be considered as applicable to any other similar kind of development in a Natura 2000 site.

- this opinion presumes that the results of accompanying monitoring programmes regarding Natura 2000 will be taken into account in that they may, if need be, lead to appropriate rectifications to project design or to additional compensation and mitigation measures.

[5] 31 documents (23+8) are referred in the letter A24-15941 04 November 2005 sent by the Permanent Representation of the Kingdom of Spain to the Commission. These documents includes the project description comprising the final design incorporating mitigation measures.

A12: 2040 Portsmouth City Council Local Plan - Indicative Timeframe to Adoption

The Secretary of State is advised that the Portsmouth City Council Local Development Scheme (LDS) is in the process of review. A revised LDS will be considered by the City Council's Cabinet on 19 June 2023 and if approved will be forwarded to the Secretary of State.

The indicative timeframe is currently as follows:

- Work underway on final updates to evidence and policy formulation
- Advisory meeting with the Planning Inspectorate 16 August 2023
- Pre-Submission Local Plan to be considered by Full Council for consultation October 2023
- Pre-Submission consultation November/December 2023
- Submission for examination April 2024 assuming no fundamental matters of soundness or legal compliance
- Consultation on major modifications late 2024
- Adoption of Portsmouth Local Plan early 2025

A13: Portsea Island Coastal Strategy Study Statement of Case (Appendix 20) in respect of the effects on European Sites (June 2009) (*Halcrow*, for Environment Agency)

Environment Agency

Portsea Island Coastal Strategy Study
Statement of Case (Appendix 20) in respect of the effects on European Sites
June 2009

Halcrow Group Limited

Environment Agency

Portsea Island Coastal Strategy Study
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Environment Agency

Portsea Island Coastal Strategy Study
Statement of Case (Appendix 20) in respect of the effects on European Sites

Contents Amendment Record

This report has been issued and amended as follows:

Issue	Revision	Description	Date	Signed
1	0	Final	June 2009	RH

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1 Administration Details

1.1 *Background*

This report is presented as an Appendix to the Portsea Island Coastal Strategy Study. A Strategic Environmental Assessment (SEA) has been conducted identifying the principal impacts of the proposed Strategy on the physical, biological and human environment (Halcrow 2008a). In addition, a Habitats Regulations Assessment has been undertaken, comprising:

- Stage 1 Evidence Gathering
- Stage 2 Screening for likely significant effects
- Stage 3 Appropriate Assessment to consider the implications of the proposed Strategy with respect to Regulation 48 of the conservation (Natural Habitats &c) Regulations 1994.
- Stage 4 Statement of Case (this report) to present the case for approving the Strategy under Regulations 49 and 53 of the Conservation (Natural Habitats &c) Regulations 1994.

1.2 *Habitats Regulations Assessment Procedure*

The Portsea Island Coastal Strategy area includes three European sites for nature conservation (two Special Protection Areas (SPA) and a Special Area of Conservation (SAC)) and two proposed Ramsar Sites. The implications of the Strategy for these sites are critical to the development of a robust and viable Strategy. Consequently, the requirements of the European Union Habitats Directive (92/43/EEC) and European Union Birds Directive (79/409/EEC), as implemented in the UK by the Conservation (Natural Habitats &c) Regulations 1994 ("Habitats Regulations") and the Wildlife and Countryside Act 1981, have to be addressed. The Habitats Directive protects SACs and SPAs (known as "Natura 2000" sites) across the European Union.

ODPM Circular 06/2005, accompanying Planning Policy Statement (PPS) 9 'Biodiversity and Geological Conservation' (ODPM, 2005) provides guidelines for the consideration of plans or projects potentially affecting SACs, SPAs and Ramsar sites. Although the Habitats Regulations do not cover Ramsar Sites as a matter of law, PPS9 states that, as a matter of government policy, listed Ramsar sites should be subject to the same procedures.

Regulation 48 of the Habitats Regulations provides that if a plan or project is likely to have a significant effect on a European site, it must be subject to Appropriate Assessment by a Competent Authority. This provision was originally applied to projects at scheme level only, but following a ruling by the European Court of Justice it is now applied to flood and erosion risk management strategies and other similar plans. The objective of Appropriate Assessment is to determine the impact of the strategic plan where there is a likelihood of significant effects on the integrity of the site, either alone or in combination with other plans, programmes and projects, and where the Strategy is not directly connected with or necessary to site management for nature conservation.

The Strategy is not directly connected with or necessary to site management for nature conservation. The next question is whether the Strategy would be likely to have a significant effect (either alone or in combination with other plans or projects) on either of the European sites, taking account where necessary of advice from Natural England. If this conclusion is "Yes", the Competent Authority must then undertake an 'appropriate assessment' of the implications of the Strategy in view of the site's conservation objectives (i.e. the reasons for which it was designated). Subject to the provisions of Regulation 49, the Strategy may only be adopted if it can be ascertained that it will not adversely affect the integrity of the sites. The appropriate assessment includes a statutory consultation with Natural England and the Competent Authority must have regard to Natural England's representations.

The procedure is summarised in Figure 1. For further explanation of the issues considered in the Appropriate Assessment, reference should be made to that document.

The Appropriate Assessment (Halcrow 2008b) sets out a conclusion as to whether the proposed Strategy would have an adverse effect on the integrity of European nature conservation sites within and adjacent to the Strategy area. The conclusion was that the proposed Strategy for one frontage would be likely to adversely affect the integrity of the two SPAs, one SAC and two Ramsar Sites. This triggers the requirement for a Statement of Case.

1.3 Statement of Case

Where the Appropriate Assessment is unable to conclude that the Strategy does not adversely affect the integrity of the European Sites, the Strategy may only be

adopted if the requirements of Regulations 49 and 53 are met. Amongst other things, Regulation 49 specifies two conditions that must be met, sequentially:

- Firstly, there must be no alternative solutions to the Strategy that would have a lesser effect on the SAC; and, if there are no alternative solutions
- Secondly, there must be imperative reasons of over-riding public interest for adopting the Strategy.

These decisions are first made by the Competent Authority, Portsmouth City Council, but if the Council intends to proceed on the basis of there being no alternative solutions and imperative reasons of overriding public interest, it must notify the Secretary of State before adopting the Strategy.

Further, the Strategy may only be adopted in these circumstances if it can be demonstrated that, under the provisions of Regulation 53, the Secretary of State can be satisfied that Portsmouth City Council will be able to secure any necessary compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

This Statement of Case has been prepared to set out Portsmouth City Council's view that there are no acceptable alternatives and there are imperative reasons of over-riding public interest for implementing the long-term measures proposed in the Strategy. The proposed approach for compensatory measures in respect of the adverse impacts of the Strategy is also outlined. The methodology for this Statement of Case follows procedures set out in various guidance documents on how best to comply with Article 6 of the Habitats Directive (EC, 2000; EC, 2001; EC, 2007). In particular, the Statement of Case follows specific guidance on the assessment of alternative solutions, the Imperative Reasons of Overriding Public Interest and the adequate provision of compensatory measures.

1.4 Role of Organisations

1.4.1 Competent Authorities

Competent authorities are responsible for:

- making an appropriate assessment before deciding to undertake, or give any consent, permission or other authorisation for a plan or project likely to have a significant effect on a European site, either alone or in combination with other plans & projects;

- for the purposes of the assessment, consulting the appropriate nature conservation body and having regard to its representations;
- deciding whether to consult the public during an 'appropriate assessment'; and
- ensuring that if there is a negative assessment of a plan or project, it is only adopted, or consent is only given, if there are no alternative solutions, and it must be carried out for imperative reasons of over-riding public interest, and any compensatory measures that may be required are secured.

Defra and the Environment Agency have agreed that Coastal Flood Management Plans (CFMPs), Shoreline Management Plans (SMPs) and flood risk management strategies constitute land use plans, as per the Directive. In line with this, Portsmouth City Council is carrying out this Appropriate Assessment for the Portsea Island Coastal Defence Strategy Plan.

At 'scheme or project' development level the Planning Authority generally takes the role of Competent Authority for the purposes of the Habitats Regulations. In this case (as planning permissions are not yet being sought), Portsmouth City Council will also act as the Competent Authority.

1.4.2 *Natural England*

Natural England's role in the implementation of the Conservation (Natural Habitats etc.) Regulations 1994 is as follows:

- provide advice on whether plans or projects are likely to have a significant effect [either alone or in combination with other plans or projects] when requested to do so;
- advise competent authorities whether a plan or project is directly connected with and necessary for the management of the site;
- provide formal representations to the competent authority when consulted about appropriate assessments;
- provide advice on the need for any compensatory measures; and
- provide advice on the suitability of any proposed compensatory measures.

We have consulted Natural England during the development of the Strategy and it was agreed that the Strategy is likely to significantly affect Portsmouth Harbour SPA and Ramsar Site, Chichester and Langstone Harbours SPA and Ramsar Site and Solent Maritime SAC. The Appropriate Assessment report (Halcrow 2008b)

documents the appropriate assessment process and has been produced following advice and guidance received.

1.4.3 *Secretary of State*

The Secretary of State is responsible for:

- considering notifications sent by competent authorities in respect of plans or projects, which the authorities are minded to consent despite a negative assessment under Regulation 48 / 85B;
- securing any necessary compensatory measures to ensure that the overall coherence of Natura 2000 is protected;
- confirming that any compensatory measures are sufficient to maintain the coherence of Natura 2000; and
- informing the European Commission of the measures adopted.

These responsibilities arise at both strategy and scheme levels.

2 Site Details

2.1 *Relevant European sites*

The European site designations adjacent to the frontages are as follows:

- Portsmouth Harbour SPA
- Portsmouth Harbour Ramsar site
- Chichester and Langstone Harbours SPA
- Chichester and Langstone Harbours Ramsar Site
- Solent Maritime SAC

Details of the qualifying interests of these sites are included in Section 1 of the Appropriate Assessment (Halcrow 2008b).

3 Summary of the Plan or Project Having an Effect on the Site

3.1 Portsea Island Coastal Strategy Study

The objectives of the Strategy are:

- Identification of human/built environment interests that may be affected by coastal flooding, and an initial estimate to quantify these impacts. This will include the impacts on residential areas, industry, commerce and transport, as well as military interests and future planning issues;
- Identification of nature conservation assets that may be lost or significantly affected by coastal flooding, and an initial estimate to quantify the habitat changes expected;
- Identification of archaeological or other cultural heritage sites that may be affected by coastal flooding, and recommendation of measures for recording them;
- Identification of any other environmental assets, including those relating to recreation and tourism, that may be affected by coastal flooding;
- Development of objectives for each unit of the frontage, to be used in developing and appraising strategy options;
- Review of Shoreline Management Plan policies, in relation to environmental assets, and identification of specific strategy options;
- Identification of legal issues and other constraints relating to strategy options (including the "do nothing" option), such as the need to meet obligations under the Habitats and Birds Directives;
- Contributing to the development of preferred strategic options for each unit of the frontage;
- Identification of significant issues that are expected to arise during the development of individual flood protection schemes, including recommending approaches to their assessment and mitigation.

3.2 The Purpose of the Strategy

The evaluation of alternatives (Section 6) and imperative reasons of over-riding public interest (Section 7) is based on the purpose of the Strategy as a whole, which is defined as follows:

To plan and co-ordinate technically sound, environmentally acceptable and economically viable proposals for flood and erosion risk management for the strategy area, over the next 50 to 100 years.

Alternatives to the Strategy can only be regarded as alternative solutions if they meet the purpose of the Strategy and would achieve the same aims. Likewise, the consideration of imperative reasons of over-riding public interest must relate to the purpose of the Strategy and the consequences of not carrying out the proposals in it.

Each component part of the Strategy (each frontage scheme) will be subject to regulatory procedures which will include the application of the Habitats Regulations before consent may be granted. Furthermore, the Strategy can only be implemented if each component project can fulfil the criteria for Defra funding. These ensure that preferred options are technically sound, economically viable and environmentally acceptable. It will be seen that these criteria are explicitly built into the purposes of the Strategy.

Strategic Environmental Assessment (SEA) of the Strategy is an important but separate procedure, which helps to inform the selection of the options for the various frontages. The SEA objectives are wider in scope than nature conservation and ensure that the assessment of the Strategy takes account of all relevant aspects of the environment, including the assessment of the purpose of the Strategy to help to secure the environmental acceptability of an option. In developing the Strategy, the options for each component frontage, or combination of frontages, were evaluated against the purpose of the Strategy and the SEA objectives. In some cases, none of the options for a particular frontage could fully meet all the SEA objectives.

However, whilst the selection of options is informed by other assessment processes, this Statement of Case is limited to the specific requirements of the tests in Regulations 48, 49 and 53 of the Habitats Regulations.

4 Summary of the Assessment of the Negative Effects on the Site

The Appropriate Assessment (Halcrow 2008b) identified that the Strategy proposal to Hold the Line in all seven Flood Cells around Portsea Island would be liable to cause an adverse effect on the integrity of two SPAs, one SAC and two Ramsar Sites as a result of "coastal squeeze". Holding the existing defence line in combination with rising sea levels will cause a progressive loss of intertidal area estimated to amount to 56 ha during the lifespan of the strategy. Of this, 18.2 ha is within Chichester and Langstone Harbour SPA and Ramsar Site, 29.2 ha is within Portsmouth Harbour SPA and Ramsar Site and 19.2 ha is within Solent Maritime SAC. The total area of loss within designated sites is 47.4 ha.

The Study also identified that a further net change in 132 ha of intertidal habitat currently above MHWN, which will be below MHWN in 2107. This will occur as a result of rising sea levels, whether or not the Strategy to Hold the Line is implemented.

5 Modifications Considered

5.1 Introduction

Mitigation refers to measures to reduce or remedy the negative effects of Strategy implementation. Such measures would be undertaken as part of scheme construction and, on the basis of case law, would have to be within the SAC boundary.

The direct effects of Holding the Line, such as temporary and permanent construction footprints, will be minimised by adopting the most appropriate design and construction method. Indirect effects such as temporary disturbance during construction will be minimised by programming works outside of seasons when sites are used by wintering birds. Pollution control measures will be implemented to safeguard aquatic flora and flora within and adjacent to the construction site.

The effect of coastal squeeze cannot, however, be mitigated by optimising design or construction practices, except possibly by recharging the foreshore to keep pace with sea level rise. However, such an option would require dredging of sub-tidal habitats to maintain the current condition of the SPA and SAC and is considered to cause more damage to the natural environment. This would change the velocities of flow through the channels and direction and strength of currents resulting in localised scour and potential erosion of areas of the existing intertidal habitat. It is therefore not considered possible to maintain the required foreshore profile without undertaking additional engineering works with resultant environmental impacts.

6 Alternative Solutions Considered

6.1 *Introduction*

To be an "alternative solution" for the purpose of Regulation 49 of the Habitats Regulations, an option must meet the purpose of the strategy and avoid or have a smaller adverse effect on the SAC.

This Section describes the options that potentially may comprise alternative solutions within each flood cell together with the extent to which they meet the purpose of the Strategy and can be shown to avoid an adverse effect on European sites.

European Commission guidance (EC, 2000) recommends the consideration of a 'zero' or 'do-nothing' option in the assessment of alternative solutions. This is shown as the 'no active intervention' option.

6.1.1 *No Active Intervention*

The No Active Intervention option would comprise PCC ceasing any coastal defence works on Portsea Island. The existing defences would gradually fall into decline. In the longer term there would be extensive flooding in two flood risk areas on the island, together with further flooding in a number of other locations adjacent to the coast. In addition to the direct risk of flooding to human health, this policy would affect large residential areas as well as commercial, industrial, military, harbour and infrastructure interests. Many historical assets including Scheduled Monuments, listed buildings, conservation areas and other heritage interests would also be affected. In addition, tourist and recreation features, such as beaches, car parks, open spaces, attractions, resort seafronts and footpaths would be flooded.

Under a No Active Intervention policy, erosion would also occur whenever the existing defences reach the end of their residual lives. There are a number of locations around the island where this erosion would be particularly significant, notably:

- Tipner Ranges – although erosion would be relatively minor at this location due to the particularly sheltered coast, the heavily contaminated

nature of this promontory means that any erosion would be a notable threat to natural environment interests in the harbour.

- Southsea Common – erosion of these beaches would lead to increased overtopping, damage and failure of existing defences, with the low-lying hinterland at high risk of erosion.
- South Parade Pier – numerical modelling of future beach plan shape scenarios shows potential increased erosion at this location. This is significant as the otherwise stable beaches along this frontage are at their narrowest at this point and the adjacent erosion risk areas are extensive, low-lying and densely developed - thus the consequences of any erosion, damage to defences or increased overtopping are particularly significant.
- Fort Cumberland/Eastney Spit – analysis of beach survey information and the results of numerical modelling suggests some potential for increased erosion along the Eastney frontage, although this is less significant than along South Parade. Under this policy Eastney Spit would deteriorate, threatening the integrity of the spit and harbour entrance channel, with further potential impacts upon the prevailing regimes within Langstone Harbour.

Much of the coastal margin of the island has been reclaimed from the sea with potentially contaminated material. Together with a significant number of landfill sites, flooding would release contaminants whilst defence failure and erosion would lead to contaminated material falling into harbour waters, threatening natural environment interests. Other impacts of a "do nothing" policy on the natural environment would include the loss of freshwater and brackish habitats as a result of saline flooding. This would impact upon habitats protected under European legislation. There would also be the loss of terrestrial habitat, such as woodland, grassland and meadows, much of which is of national and local importance.

Changes to the existing landscape would occur, including the flooding of some significant natural and man-made elements along many sections of the frontage.

The impact of Non Intervention would be socially and environmentally unacceptable and this approach would not meet the Purpose of the Strategy.

6.1.2 *Do Minimum*

In the absence of the Portsea Island strategy, there would be no planned improvement to the flood defences but there would be continued maintenance and urgent repair of defences. In this scenario, defence works would be identified

purely on the basis of immediate need, determined by emergency failures (breach or overtopping).

The lack of planning and foresight in the delivery of flood risk management would result in isolated, but increasingly frequent, flood events through breaches and overtopping, which could lead to social and commercial disruption, loss of confidence by developers/investors, widespread outward migration of people/businesses and potential loss of life. In the long-term, emergency patching would cease to become effective and defence standards such that impacts would be similar to the No Active Intervention scenario. Hence, Do Minimum would not meet the Purpose of the Strategy.

6.1.3 *Managed Realignment*

The deliberate set-back of defences around Portsea Island is not practicable because all coastal land is occupied by buildings, public open space and/or contaminated sites such as landfills. The loss of any of property or public open space would be socially and environmentally unacceptable.

An initial assessment (Halcrow, 2004) was undertaken to determine the costs associated with remediating areas of contamination that would be affected by coastal flooding in the event that defences were realigned or not maintained. These assessments indicated that remediation costs for Portsea Island would be in the region of £750 million. These costs are far in excess of the potential costs associated with developing new sites for compensatory habitat in non-contaminated areas and demonstrate that localised retreat options are not economically viable.

Hence, managed realignment would not meet the Purpose of the Strategy.

7 Imperative Reasons of Over-Riding Public Interest

7.1 ***General***

The Habitats Directive essentially leaves the definition of over-riding public interest as a decision for national governments. In this case the relevant authorities are the Secretaries of State for Communities and Local Government (CLG) and for Environment, Food and Rural Affairs (Defra). Regulation 49(5) requires Competent Authorities to notify the Secretary of State at least 21 days before agreeing a project under this provision. Regulations 49(3) and 49(4) provide that Competent Authorities and the Secretary of State may seek the opinion of the European Commission as to what constitutes reasons of over-riding public interest in a particular case.

Regulation 49(1) of the Habitats Regulations states that if a site hosts priority natural habitat types or species, reasons of over-riding public interest must relate to human health, public safety or the environment. Otherwise, reasons may be of a social or economic nature. No priority interest features are affected by the Portsea Island Coastal Strategy. It is therefore considered that reasons in all categories may be applicable.

In 1998, the Government issued an Outline Position Statement on the Birds and Habitats Directives (placed in the libraries of the Houses of Parliament). It set out 'guiding principles' against which imperative reasons of over-riding public interest may be judged in circumstances such as prevailing in this case. Amongst other matters it stated that such cases should demonstrate the following benefits, which it is considered are met in this case for the reasons explained below:

- A need to address a serious risk to public safety (serious flood risk);
- The interests of national defence (protection of Ministry of Defence facilities on Portsea Island);
- The provision of a clear and demonstrable direct environmental benefit on a national or international scale (protection of internationally designated nature conservation interest features from contamination); and
- Where failure to proceed would have unacceptable social and / or economic consequences (which here would include the loss of, or risk to, 9,335 residential properties, many businesses, important infrastructure and

services and many assets of national historical and cultural heritage importance).

Consideration of imperative reasons of over-riding public interest necessarily includes an understanding of what may happen if the Strategy were not implemented. It is necessary to test whether the reasons are 'imperative', that is, whether they are urgent and necessary; as well as 'over-riding' – the harm to European sites is outweighed by the consequences of taking no action.

7.2 Public Safety

Areas of the hinterland are low lying and, under certain conditions, flood events could result in the depth of water being in excess of 1m in areas, creating a risk of drowning.

The properties behind the seawall at South Parade are of particular concern should flooding result from a breach formed in the existing flood defences. In this location many of the properties' ground floor levels are as much as 4.0m below the current crest height of the seawall. The low ground level in this area would result in a very fast onset of flooding and flood waters would not drain away quickly. There would be little or no warning to the people located in this area and flooding would represent a significant risk to life to those people living in the worst affected properties. This area is known as the "Great Morass" and was subject to sewer flooding in 2000 due to sewer surcharge.

7.3 Social and Economic Benefits

The preferred options promoted by the Portsea Island Coastal Strategy Study will provide continued flood protection to a large number of residential and commercial properties providing significant social and environmental benefits. Table 7.1 summarises some of the key social and economic benefits that the strategy will deliver.

Table 7.1 Summary of properties at risk of flooding

Cell	No. residential properties	Market Value (£k)	No. non-residential properties	Market Value (£k)
1	3932	645,197	377	76,694
2	198	32,490	21	13,746
3	383	62,846	41	3,538
4	4234	694,752	492	214,913
5	1	164	10	6,848
6	586	96,156	68	31,486
7	1	164	58	35,018

7.4 ***National Defence***

The study frontage incorporates the HM Naval Base which is a highly important asset for national defence purposes. Any option other than hold the line for this length of the coastline would hinder Ministry of Defence Operations and it is therefore considered imperative that any improvement works are undertaken along the line of the existing flood defences and seawalls.

The Ministry of Defence supports the recommendations incorporated in the Portsea Island Coastal Strategy Study and has provided a letter of support. The Ministry of Defence will continue to maintain responsibility for ensuring the operational capabilities of the facility and will work with Portsmouth City Council, when the need arises to improve the defences, to ensure that any improvement works incorporate a flood risk management solution.

7.5 ***Environmental Protection***

The coastal defences around Portsea Island protect a number of landfills and other contaminated sites from being eroded into the surrounding waters.

All flood cells where holding the existing defence line is proposed include areas of contaminated land and/or landfill, as shown on Figure 2. A desk study was undertaken to identify areas where contamination is present and where seawall maintenance may be required to prevent contamination entering the harbours (Halcrow, 2004).

The contamination risk assessment reviews the information available for those sites deemed at risk from erosion and/or inundation due to the potential for sites to comprise contaminated material that may leach into the harbours causing

considerable damage to international nature conservation sites. In addition the presence of contamination may affect the health and safety of construction workers.

Areas such as Milton Common are currently being eroded and although not a high priority to defend in terms of threat to property they should be considered in terms of the Habitats Regulations and the possible threat of contaminants leaching into Langstone Harbour from the old tip site. Non-intervention may lead to contamination of the harbour and if so would not be an acceptable option. Due to the heavy contamination at Tipner an area was left out of the SPA and because of erosion it has been agreed that the area should be sealed to prevent contamination of the Harbour.

Other potentially contaminated areas include the sites of current and historical industry located along the coastline. The naval dockyards at Portsmouth Harbour have been established for several centuries and as such historic contamination may be present. Light industry such as marine paint shops and repair workshops may be associated with Southsea marina and others in close proximity to the study area. Such industries are often associated with heavy metal contamination and fuels and solvents. The rifle ranges at Portsmouth Harbour may be a potential source of unexploded munitions that may have health and safety implications during any construction work in that region.

PCC has undertaken detailed desk studies and site investigations at several sites around the coastline with reports detailing the nature and depth of the fill, soil and groundwater contamination levels. The site investigation reports have been reviewed to determine their potential for contamination and the implication of contamination migration into the SPA and SAC. There may be conflicts between the damage to the international site caused through pollution and the encroachment on the SPA if defences have to be constructed to protect the area.

The study showed that defence failure would lead to release of contamination that would be likely to adversely affect water quality and the ecological integrity of the harbours. Contaminants in sediment would be ingested by invertebrates and in turn by birds, in which concentrations may be sufficient to cause mortality or morbidity. This would be damaging to nature conservation interests of European importance. In addition, the spilling of waste materials on to the foreshore would be aesthetically unacceptable.

7.6 Consequences of Taking No Action

Finally, as indicated above, it is evident that the consequences of failing to take appropriate action would be economically, socially and environmentally unacceptable. Indeed, Portsmouth City Council believes that not to adopt a Strategy seeking to achieve the stated purposes would be a failure of its statutory duties and administratively perverse.

8 Compensatory Measures

8.1 *General Considerations*

Compensatory measures are intended to offset the adverse impact of implementing the Strategy and to maintain the coherence of the Natura 2000 network. In order to satisfy the requirements of the Habitats Directive and Birds Directive, it is necessary to justify the compensatory measures that are proposed to offset the negative impacts of the plan (EC, 2001). According to European Commission guidance (EC, 2000; EC 2007), compensatory measures can consist of:

- Recreating a habitat on a new or enlarged site, to be incorporated into Natura 2000;
- Improving a habitat on part of the site or on another Natura 2000 site, proportional to the loss due to the project;
- In exceptional cases, proposing a new site under the Habitats Directive.

Compensatory measures are different to mitigation measures in that they are to offset an adverse effect that occurs on a site, whereas mitigation measures are to avoid the occurrence of the adverse effect.

EC guidance (2007) prioritises locating compensation within the Natura 2000 site concerned provided the necessary elements to ensure ecological coherence and network functionality exist within the site. EC guidance requires the overall coherence of the Natura 2000 network to be preserved in the long term. Whilst compensatory measures should be in place before damage occurs, the guidance recognises that there are cases where this may be unrealistic. The requirement is for compensatory measures to be secured (i.e. guaranteed) before the damage occurs, even if it takes some while for them to become fully effective.

As it is a requirement of the Habitats Directive to maintain the overall coherence of Natura 2000 (Natural England/ Environment Agency, 2004), EC guidance (EC, 2000; EC, 2007) recommends that compensatory measures proposed for a project should therefore:

- address, in comparable proportions, the habitats and species negatively affected;

- concern the same biogeographical region or within the same range, migration route or wintering area for bird species in the same Member State;
- provide functions comparable to those which had justified the selection criteria of the original site;
- have or be able to develop the specific features attached to the ecological structure and functions required by the habitats and species populations.

8.2 Proposed Compensatory Habitat

Table 8.1 summarises the changes in intertidal habitat extent that are predicted to occur during the 100 year period of the Portsea Island Coastal Strategy.

Table 8.1 Intertidal Gains and Losses during Portsea Island Coastal Strategy

Elevation Band	**Area of Intertidal Habitat Gains and Losses (in ha) within Flood Cells between 2007 and 2107**							
	1	2	3	4	5	6	7	**Total Habitat Losses**
Sea wall to MHWS	-2.74	-1.92	-0.17	-0.72	-0.31	-0.42	-0.14	**-6.42**
MHWS (or sea wall if lower) to MHWN	-0.15	-1.04	-1.31	-4.10	-0.64	-0.84	+0.05	**-8.03**
MHWN (or sea wall if lower) to MLWN	-0.48	-14.63	-19.71	-120.88	-8.92	-8.35	-0.74	**-173.70**
MLWN (or sea wall if lower) to MLWS	-1.82	+13.08	+17.20	+112.22	-3.29	-5.62	+0.27	**132.04**
Total Habitat Losses	**-5.19**	**-4.51**	**-3.99**	**-13.49**	**-13.15**	**-15.22**	**-0.56**	**-56.11**

Key: + Habitat Gain - Habitat loss

Table 8.1 identifies that:

- 56 ha of intertidal habitat will be lost to coastal squeeze. Of this, 47.4 ha is within European and Ramsar Sites and requires Compensation habitat under Article 6.2 of the Habitats Directive.
- A further 132 ha of intertidal habitat that is currently above MHWN (and therefore exposed on all tides) will be between MLWN and MHWS by 2107 (and therefore exposed only on some tides) as a result of sea level rise. This should be replaced under Article 6.4 of the Habitats Directive.

Compensatory habitat will be delivered through the Environment Agency's Regional Habitat Creation Programme (RHCP) which takes a strategic approach to

maintaining the extent of designated and Biodiversity Action Plan habitat across the Southern Region.

Loss of intertidal habitat lost due to coastal squeeze and sea level rise occurs over a long period of time. In the case of the Portsea Island Coastal Strategy, most of the loss will occur between year 50 and year 100. In this situation, Defra has indicated that the costs of addressing the loss may be spread across the whole Flood Risk Management programme for an estuary.

The Environment Agency's internal operational instruction states that a scheme which causes coastal squeeze can still go ahead if:

- There is an estuary-wide strategy that identifies the full range of schemes that will be undertaken; and
- There is a regional habitat creation programme which will deliver the required compensation habitat - the costs of which are absorbed by the full range of schemes identified in the estuary-wide strategy.

The RHCP (Environment Agency 2009) will seek to deliver a balance of habitat gains and losses across the Solent over a 100 year time frame. In this way, compensatory and replacement habitat for the losses around Portsea Island will be achieved.

The North Solent SMP estimates that 608 ha of intertidal will be required over 100 years, of which Portsea Island accounts for 47.4 ha. Of the total requirement identified by the SMP, Epoch 1 (years 0 to 20) require 136 ha and Epoch 2 (years 21 to 50) require 191 ha.

The Environment Agency has brought forward an intertidal habitat creation project at Medmerry, between Bracklesham and Selsey Bill. Habitat creation is programmed to start in 2014 and the site is estimated to provide 183 ha of intertidal habitat initially, increasing to 263 ha over 100 years as a result of sea level rise. This is sufficient to cater for all losses due to coastal squeeze in North Solent during Epoch 1 and some losses in Epoch 2. Further sites for intertidal habitat creation will be brought forward from Years 20 - 25 onwards. to avoid a deficit arising. Based on the current SMP, some of these sites are likely to be outside the Solent unless land can be secured from private landowners within the Solent.

9 Conclusions

Portsmouth City Council considers that the proposed Strategy options are the only ones that meet the Strategy purpose.

The provision of flood risk management to this frontage for the next 50 years, in accordance with the Strategy, is considered to be an urgent and necessary (imperative) public interest sufficient to override the adverse effects on the integrity of Portsmouth Harbour SPA and Ramsar Site, Chichester and Langstone Harbours SPA and Ramsar Site and Solent Maritime SAC because the Strategy will:

- address a serious risk to public safety;
- protect the interests of national defence;
- protect water quality and public amenity; and
- protect nature conservation interests of international importance from harm due to release of contamination.

It is considered that failure to proceed with the Strategy would have unacceptable social and economic consequences.

The adverse effect of the Strategy proposal to Hold the Line on the internationally designated sites is summarised in Table 9.1. The predicted loss of 47.4 ha of intertidal habitat within internationally designated sites due to coastal squeeze will be compensated within the Solent through the Environment Agency's Regional Habitat Creation Programme.

A further 132 ha of intertidal habitat currently above MHWN will be between MLWN and MLWS by 2107 as a result of sea level rise, whether or not the Strategy is implemented. This is regarded as a natural loss rather than one arising from flood and coastal defence works which the Environment Agency's Regional Habitat Creation Programme is designed to address.

Table 9.1 Estimated Intertidal Habitat Gains and Losses by designation

Elevation Band	**Area of Intertidal Habitat Gains and Losses (in ha) within Flood Cells between 2007 and 2107**							
	1	2	3	4	5	6	7	**Total Habitat Losses**
Chichester & Langstone Harbour SPA and Ramsar Site(1)		-2.49	-3.99	-11.69				**-18.17**
Portsmouth Harbour SPA and Ramsar Site				-1.80	-13.15	-14.3		**-29.25**
Solent Maritime SAC(1)		-3.50	-3.99	-11.69				**-19.18**
Subtotal (Designated Sites)		**-3.50**	**-3.99**	**-12.39**	**-13.15**	**-14.3**		**-47.4**
No designation	-5.19	-1.01		-1.10		-0.9	-0.56	**-8.76**
Total Habitat Losses	**-5.19**	**-4.51**	**-3.99**	**-13.49**	**-13.15**	**-15.22**	**-0.56**	**-56.11**

Key: + Habitat Gain - Habitat loss

Note: (1) There is a partial overlap between these sites

10 References/Supporting Documentation

Anon, May 1998, *The Birds and Habitats Directives: Outline Government Position Statement*

Environment Agency, November 2009, Southern Region Habitat Creation Programme

European Commission. 2000, *Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/CEE*

European Commission. 2001, *Assessment of Plans and Projects Significantly Affecting Natura 200 Sites. Methodological Guidance on the Provisions of Article 6 (3) and (4) of the Habitats Directive.*

European Commission, 2007. *Guidance Document on Article 6 (4) of the 'Habitats Directive' 92/43/EEC Clarification of the concepts of alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence and opinion of the Commission.*

Halcrow, March 2008a, Portsea Island Coastal Defence Strategy Study, Strategic Environmental Assessment

Halcrow, March 2008b, Portsea Island Coastal Defence Strategy Study, Appropriate Assessment

Natural England/ Environment Agency, 2004, *Habitat creation and issues to be addressed in the design and delivery of compensation packages* (Habitats Directive Joint Technical Advisory Group on Flood Defence)

North Solent Shoreline Management Plan, http://www.northsolentsmp.co.uk/index.cfm?articleid=9907&articleaction=nthslnt&CFID=22743977&CFTOKEN=77552890

Planning Policy Statement 9, August 2005, *Biodiversity and Nature Conservation*

SI 1994 No 2716, *The Conservation (Natural Habitats, &c.) Regulations 1994*

Conservation (Natural Habitats, &c) (Amendment) (England and Wales) Regulations 2006

Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

Appendix 14 - Alternative Solutions -(Provisional)

A14.1 Regulation 107(1) states that where the plan-making authority is satisfied that there are no alternative solutions and where the land use plan must nonetheless be given effect for imperative reasons of overriding public interest (which may be of a social or economic nature), it may then give effect to the land use plan, notwithstanding a negative appropriate assessment.

A14.2 The plan-making authority therefore needs to be satisfied that the absence of feasible alternative solutions to the plan has been demonstrated objectively and in a robust fashion. The draft Portsmouth Local Plan has been the subject of three Regulation 18 Consultations[40], the most recent having ended in October 2021. Each of these consultations did, however propose, as an option the far more ambitious Lennox Point project involving at least 27ha of potential land reclamation (the now abandoned 'Super Peninsula' option). The Regulation 18 Local Plan drafts were accompanied by a Habitats Regulations Assessment[41]. Whilst clearly written in the context of a very different project comprising far greater levels of direct impact upon the designated sites, the HRA noted that:

> *"By definition, any permanent habitat loss from a European site will result in adverse effects on site integrity. The proposal would have to meet the No Alternatives and IROPI tests prior to its allocation in the submitted Local Plan. At this early stage in the Local Plan process, considerable uncertainty remains over the details of the land reclamation and any compensation measures required in light of adverse effects on the integrity of the Portsmouth Harbour SPA / Ramsar…Until more specific detail on the Tipner development proposal is available and it is demonstrated that the above tests are met, adverse effects of the [Local Plan] on the Portsmouth Harbour SPA / Ramsar regarding the impact pathway direct habitat loss cannot be excluded, either alone or in-combination with other plans and projects. This proposal will be revisited in the HRA of the Reg.19 PLP."*

A14.3 At this point in time, and having regard to the significant alteration to the project parameters as instructed by Full Council in November 2022, the full assessment of alternative solutions remains a work-in-progress, in anticipation of a Regulation 19 pre-submission consultation of the draft Local Plan in Q3 2023. The project team (PCC-TRP) are exploring 'Project-level' alternative solutions for the former 'Lennox Point' proposals, recognising that the significant effects identified upon the site integrity for that proposal were not considered to be capable of avoidance or mitigation.

A14.4 PCC-LPA has undertaken an HRA Screening Assessment for the draft site allocation in anticipation of this Regulation 107 request (see Appendix A5). By reason of the anticipated direct and indirect effects outlined in 4.3 above, which cannot be avoided or fully mitigated, both the Plan and Project will be likely to be required to move to a consideration of alternative solutions under Stage 3 of the HRA process and, where there are no such alternative solutions, a case for IROPI will need to be made.

A14.5 The consideration of Alternative Solutions is therefore work that will be undertaken by PCC-LPA and will be informed by the project-level input from the site promoter, the PCC-TRP team. The 'snapshot' of evidence in respect of alternative solutions as outlined below draws upon workstreams

[40] https://www.portsmouth.gov.uk/services/development-and-planning/planning-policy/the-local-plan/

[41] https://www.portsmouth.gov.uk/wp-content/uploads/2021/09/PLP-HRA_150921_Final_compressed.pdf

undertaken by both arms of the Council and which indicate the likely absence of viable and deliverable (i.e. feasible) alternatives and hence the need to progress to the IROPI Derogation step.

A14.6 The consideration of alternative solutions to the draft policies of the land-use plan must necessarily be framed in the context of PCC's statutory duties, which are specifically as follows:

- the competent authority to carry out an HRA;
- the local planning authority to prepare a local plan for the City;
- the Lead Local Flood Authority (LLFA);
- Contaminated Land inspection and action (Part 2A Environment Act 1990 (as amended));
- Local Air Quality Management (LAQM); and
- The Local Highway Authority for its area.

The Council also has corporate obligations such as delivery of its Economic Regeneration Strategy, its Local Transport Plan and the City Deal with Government, as highlighted in section 3.0 above. These existing obligations provide an established case for development at Tipner West and Horsea Island East, including the bridge link across Tipner Lake. Copies of these can be provided upon request.

A14.7 As noted above, the full Local Plan HRA and assessment of alternative solutions will be set out by PCC-LPA alongside the Regulation 19 pre-submission. This will be prepared by *AECOM* on behalf of the City Council and will follow on from previous iterations of the HRA also prepared by *AECOM*. As a planning application is being prepared concurrently by the TRP team, it is anticipated that the Plan HRA will be partly informed by the project-level HRA work and evidence base. The City Council considers this to be a pragmatic approach to HRA and Local Plan preparation that will help to ensure that the Portsmouth Local Plan is deliverable and so meets the 'effective' test of soundness. However, it is considered appropriate to provide the Secretary of State with an early indication of the likely principal alternative solutions to be assessed and to what extent these are likely to prove feasible and/or deliverable and, hence, why a case for IROPI is required to be made. This will help to ensure that the Portsmouth Local Plan is legally compliant in regard to HRA.

A14.8 Potential alternative solutions in regard to the following are discussed below, recognising that detailed HRA for both the emerging Local Plan and parallel Project remains in early stages of preparation. Alternative solutions are considered for flood prevention and sea defence, site decontamination, marine employment hub development at Tipner and Horsea Island East and for the proposed bridge (sub-sections (a)-(d) below). These are all location specific matters that can only be addressed on the site itself and are neither considered capable of provision elsewhere, either on land within the jurisdiction of the City Council or on neighbouring authorities, nor capable of provision at a preferable or optimal alternative location.

A14.9 Additional consideration of alternative solutions is then given to the proposed housing land use, notably 1,250 homes (sub-section (e) below). This previous work includes detailed assessment of alternatives to the development of the site having regard to financial viability considerations and the role of housing as 'enabling development', which have been considered at length by the City Council. The Secretary of State is requested to note that, in setting out the potential alternative solutions, some reference is made to work undertaken on behalf of the City Council for the former *'Lennox Point*' or *'Super Peninsula*' project which have since been abandoned. Nevertheless, this background work is nonetheless undergoing comprehensive review to address the new scaled back proposals for the draft allocation site.

(a) Flood Prevention and Sea Defence Alternatives

A14.9 The Portsmouth Harbour and SPA/Ramsar sites are covered by 'Hold the Line' policies within the adopted North Solent Shoreline Management Plan 2011 (SMP) [42] which were subject to Appropriate Assessment and a positive IROPI decision in April 2011[43] (see also Appendix A8). The 'Hold the Line' policy extends for all three 'Epochs' covering a 100-year period and it is considered appropriate to rely upon these assessments in this case. 'Hold-the-Line' means that it is necessary to maintain or upgrade the level of protection provided by existing coastal defences. The SMP is currently being updated and the strategy for Portsmouth will almost certainly be to continue to maintain the same policy.

A14.10 The SMP covers the 386km shoreline from Selsey Bill to Hurst Spit including Southampton, Portsmouth, Langstone and Chichester Harbours. The majority of these harbours and existing sea defences are covered by/adjacent to designated habitat sites forming part of the National Site Network. It is considered appropriate to reiterate the same alternative solutions put forward for the purposes of the SMP as the policies continue to apply to the Tipner West landmass edge which comprises a focused Flood Cell (5) within the Assessment documents.

No Active Intervention

A14.11 The No Active Intervention alternative solution as set out in the SMP considered the implications for Portsea Island as a whole. This would comprise PCC ceasing any coastal defence works on Portsea Island. The existing defences would gradually fall into decline. In the longer term there would be extensive flooding in two flood risk areas on the island, together with further flooding in a number of other locations adjacent to the coast. In addition to the direct risk of flooding to human health, this policy would affect large residential areas as well as commercial, industrial, military, harbour and infrastructure interests. The number of residential properties at risk would be at least 208 (Flood zones 2 and 3), of which 162 would be in Flood Zone 3 (see plan below). Historical assets including Scheduled Monuments, listed buildings, conservation areas and other heritage interests would also be affected. For Tipner West, this would result in the flooding of five Grade 2 Listed assets.

[42] North Solent Shoreline Management Plan (southampton.gov.uk)
[43] North_Solent_SMP_IROPI_decision_confirmation.pdf (northsolentsmp.co.uk)

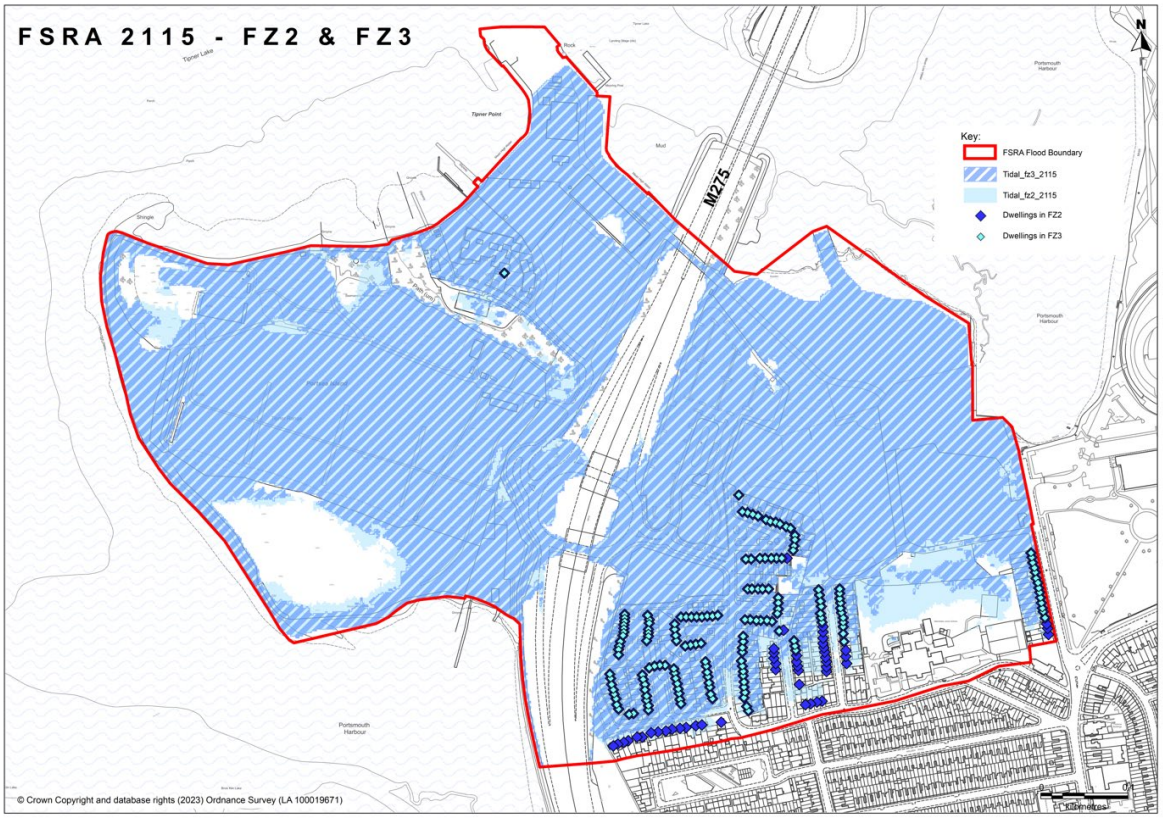

Fig : A14-1: Flood Extent 2115 (Source: Strategic Flood Risk Assessment, PfSH 2016); https://www.portsmouth.gov.uk/services/development-and-planning/planning-policy/strategic-flood-risk-assessment/

A14.12 Under a 'No Active Intervention' policy, erosion would also occur whenever the existing defences reach the end of their residual lives. There are a number of locations around the island where this erosion would be particularly significant, notably at the former Tipner Firing Range. Although erosion would be relatively minor at this location due to the particularly sheltered coast, the heavily contaminated nature of this promontory means that any erosion would be a notable threat to the natural environment interests in the harbour.

A14.13 Much of the coastal margin of the wider Portsea island has been reclaimed from the sea with potentially contaminated material. This includes Tipner West. Flooding would release contaminants (further detail below) whilst defence failure and erosion would lead to contaminated material falling into harbour waters, threatening natural environment interests. There would also be the un-mitigated or non-compensated loss of core functional supporting habitat on the Tipner firing range, as identified in the Solent Waders and Brent Goose Strategy[44]. The impact of non-intervention is considered to be socially and environmentally unacceptable.

Do Minimum

A14.14 In the absence of the Portsea Island strategy as set out in the SMP, there would be no planned improvement to the flood defences but there would be continued maintenance and urgent repair of defences. In this scenario, defence works would be identified purely on the basis of

[44] https://solentwbgs.wordpress.com/

immediate need, determined by emergency failures (breach or overtopping). The lack of planning and foresight in the delivery of such flood risk management would result in isolated, but increasingly frequent flood events through breaches and overtopping, which could lead to social and commercial disruption, loss of confidence by developers/investors, widespread outward migration of people/businesses and potential loss of life. In the long-term, emergency patching would cease to become effective and defence standards, such that impacts would ultimately be similar to those of the 'No Active Intervention' scenario.

Managed Realignment

A14.15 The *Portsea Island Coastal Strategy Study (PICSS) Statement of Case in respect of the effects on European Sites June 2009* (Appendix A13) (produced by *Halcrow* on behalf of the Environment Agency) notes that "*..the deliberate set-back of defences around Portsea Island is not practicable because all coastal land is occupied by buildings, public open space and/or contaminated sites such as landfills."* The latter is particularly the case at Tipner. It goes on to point out that *"..an initial assessment (Halcrow, 2004) was undertaken to determine the costs associated with remediating areas of contamination that would be affected by coastal flooding in the event that defences were realigned or not maintained. These assessments indicated that remediation costs for Portsea Island would be in the region of £750 million. These costs are far in excess of the potential costs associated with developing new sites for compensatory habitat in noncontaminated areas and demonstrate that localised retreat options are not economically viable*."

(b) <u>Site Decontamination Alternatives</u>

A14.16 More detail of the contaminant risks are set out in the IROPI case in section 6.0 below. As noted above, the provision of sea defence infrastructure around Tipner West delivers a number of clear benefits, one of which is the prevention of leachate contamination from the site to the waters of the Harbour and the protected habitats that depend upon it. The alternative solutions and the associated risks as outlined for the sea defence infrastructure in (a) above, apply equally to the question of site de-contamination.

A14.17 The decontamination of the land will itself need to take place, if it is to be developed for future land uses, especially for any human habitation. The cost of such works, including necessary land raising, have been estimated to be in the order of £15m. One alternative solution might comprise the diversion of capital expenditure to the decontamination of the land rather than in sea defences, thereby removing leachate risks to the protected habitats of the Harbour and potentially allowing for a managed realignment. However, firstly this has been expressly discounted in the SMP (see A14.15 above) and in reality, the incurring of such works in the absence of concurrent or preliminary sea defences would be of limited public or environmental benefit in the longer term where modelling makes it clear that the whole Tipner peninsula would be flooded under a 0.5% Annual Exceedance Probability scenario.[45] This would represent a significant dereliction of duty by the City Council, not least as lead local flood authority. As also recognised in the City Deal award (Appendix A2), Government has stipulated as a commitment for the City Council to deliver both sea defence construction and site decontamination in tandem, in readiness for development.

[45] https://democracy.portsmouth.gov.uk/documents/s41718/APP%20C%20-%20211126-%20TRP%20-%20Full%20Council-%20Report%20Dec%202021.pdf

(c) Marine Employment Hub Alternatives

A14.18 Portsmouth is a recognised key employment hub within the Solent sub region. Analysis by the Solent Local Enterprise Partnership (LEP)[46] predicts that Portsmouth will be one of the key drivers of growth within the sub-region during the plan period. The Council adopted the *Portsmouth Economic Development and Regeneration Strategy*[47] (2019-36) in October 2019 with the primary aspiration of securing an additional 7,000 jobs in the City by 2036, focusing on increasing the City's economic productivity by a third. This includes recognition of the regeneration potential of Tipner to support these aims.

A14.19 Extensive work has already been undertaken on behalf of the TRP team by Marina Projects Limited (MPL) and is captured in their report "*Marine Employment Alternatives, Tipner Regeneration Programme, July 2019*"[48]. This has built upon the findings of the Solent LEP report "*Maritime Futures: Solent Waterfront Sites* (2015).[49]

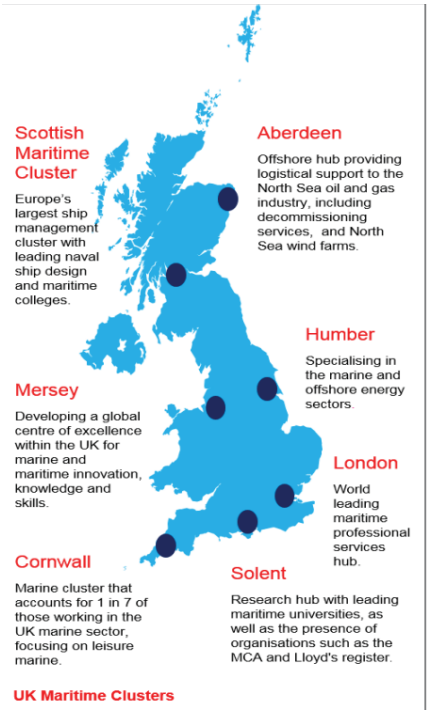

Fig A14-2: UK Maritime Clusters
Source(https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872194/Maritime_2050_Report.pdf)

[46] https://solentlep.org.uk/

[47] https://www.portsmouth.gov.uk/services/council-and-democracy/policies-and-strategies/economic-development-and-regeneration-strategy/

[48] See Appendix B at https://democracy.portsmouth.gov.uk/documents/b14699/Tipner%20West%20Full%20Council%20Update%20-%20Appendices%2006th-Dec-2021%2013.00%20Cabinet.pdf?T=9

[49] https://solentlep.org.uk/media/1341/maritime_futures_-_solent_waterfront_sites_-_169_15_.pdf

A14.20 At the strategic land-use planning level, the alternative solutions to be considered include:

i. Do Nothing
ii. Deliver at an alternative location (within the Solent sub-region)
iii. Disaggregation of the proposed marine employment hub; and
iv. Alternative locations on the Tipner peninsula.

(i) Do Nothing

A14.21 A 'Do Nothing' scenario will not deliver the project objective established above and as set out in the project description and the needs/IROPI case because no new (market-led) marine employment will occur on the site. Furthermore, and perhaps more notably it will squander one of a limited number of critical waterfront marine employment sites that have been identified by the Solent LEP as being capable of transitioning to marine employment, thereby undermining National & Regional strategies aimed at expanding the marine sector, including Maritime 2050 and the Local Industrial Strategy.

A14.22 For the avoidance of doubt a do-nothing scenario, in respect of the marine sector elements will lose the ability to:

- provide 1,750 FTE jobs on-site that would be provided by the proposed development;
- utilise a critical marine employment opportunity that has the attributes to deliver strategic marine sector growth through development at the site;
- address local deprivation through employment and skills growth as well as meeting housing need; and
- enhance marine sector skills.

(ii) Deliver at an alternative location (within the Solent sub-region)

A14.23 In respect of the consideration of alternative locations there are a number of key considerations:

- A key point is that any alternative must be in the Solent sub-Region to meet the identified project need, objective and address local/regional policy delivery. Furthermore, the national and regional policy support makes the case strongly that the Solent has an established reputation as the UK's centre of excellence for marine and maritime industries. [50]
- The Solent LEP's (emerging) Local Industrial Strategy[51] is predicated on the basis that the Solent is well-placed to address key challenges of the Government's national Industrial Strategy and lead the way in developing the ambitions of the Government's Maritime 2050 Strategy and its proposed Levelling-Up Missions.
- The Solent LEP's Waterfront Sites' study provides the foundation for an initial filtering of alternatives. This report responded to amongst other things the Strategic Economic Plan

[50] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872194/Maritime_2050_Report.pdf

[51] https://solentlep.org.uk/what-we-do/news/were-working-on-a-local-industrial-strategy-for-a-prosperous-2050/

for the Solent region, published in 2014[52] that sought to focus investment on those parts of the economy with the best growth prospects. The marine and maritime sector was and remains recognised as a key economic strength around which the growth strategy for the region was built.

A14.24 It is widely recognised that waterfront employment sites across the Solent Region are in short supply.[53] The MPL report notes that the LEP register was compiled to identify and assess existing waterfront sites in order to inform policy makers, including local planning authorities in preparing their development plans. The report notes the importance for strategic planning and identifies a total of 97 sites with a combined area of 1,730 hectares used or available for waterfront employment in the Solent area. Importantly, these sites are located within 7 clearly defined "clusters" across the region. Of this supply only 100.7Ha (less than 6%) was undeveloped waterfront land and spread across several sites. Furthermore, only around 10Ha (0.5% of the total) is undeveloped waterfront land with permanent waterfront access (applying the report's definition), again spread across several sites. In addition to establishing the relative importance of a site, the sites register also provides an assessment for each of the waterfront assets based on three defined criteria: (1) Marine Access, (2) Presence of Marine & Maritime Activities and (3) Development Potential.

A14.25 The sites register provides a useful overview of Tipner, indicating a number of physical characteristics that will influence proposals for the site. Tipner West was identified in the site's register as a 250,000m^2 (25Ha) site that has been categorised as a first tier "Prime Site" within Portsmouth Harbour. As noted, the register defines "Tier 1" as "**sites of prime importance for marine & maritime activities within the Solent region**". It is particularly pertinent that of the 97 waterfront sites identified by the register, a total of 23 are ranked as 'Tier 1' (23.7%), the majority are established use without potential for growth and only four "Tier 1" sites remained under-developed for marine and maritime use. This equates to just 4.1% of the total number of waterfront sites across the Solent region.

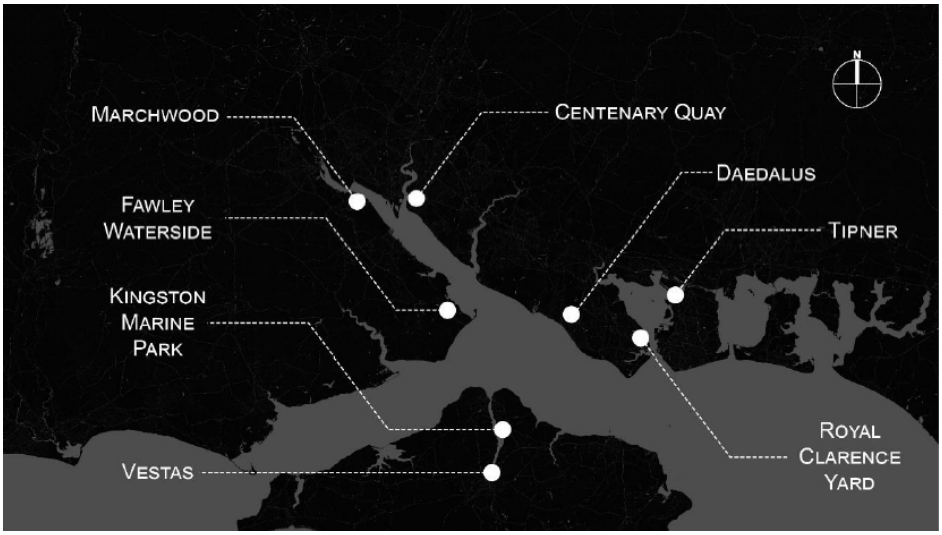

Fig A14-3: Alternative sites in Solent region (source: MPL report)

[52] https://solentlep.org.uk/publications/

[53] Transforming the Solent: Marine and Maritime Supplement, Rear Admiral Rob Stevens, CB March 2014

A14.26 The MPL report finds that **only the Tipner West site meets all core criteria in terms of site area, full deep water tidal access, boat lifting facility of 600-700 tonnes, sufficient open yard storage, up to 58,000sq m marine employment space, a total site area of 9-10ha** and ultimately comprises a potential marine employment hub of regional significance.

(iii) Disaggregation of the marine hub site components

A14.27 A *Marine Market Baseline and Literature Review* (2016) undertaken by Marina Projects Ltd ("MPL") has considered the wider growth of the marine sector across the UK and its opportunities for growth. This review concluded that the 'clustering' of marine businesses around a site with improved and immediate access to deep water has optimal prospects for economic growth. A concentrated hub of 'marine excellence' would benefit hugely from the inter-relationships between marine industry businesses dependent upon the deep-water access (eg. superyachts, defence services), with research and development and training (eg in conjunction with the University), and innovative fledgling businesses (eg. Performance boats, power), as illustrated in Fig 4 below. A very detailed market review concluded that a site area of circa 9ha would be optimal, if combined with deep water access.

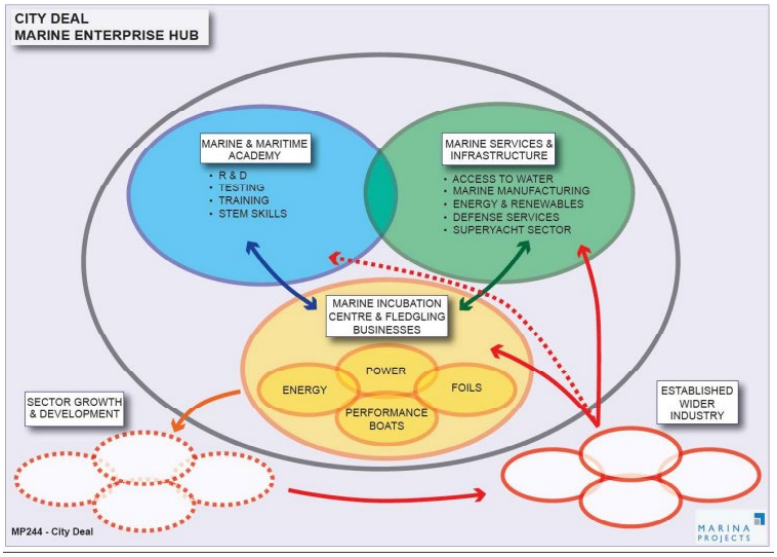

Fig A14-4: Conceptual Marine Hub (source: MPL report[54])

A14.28 Disaggregating the various components of such a hub would risk the loss of the above immediate inter-relationships and result in the disbenefits identified in the majority of other marine sites considered in the Solent LEP report. There could be additional risks associated with co-location with other land uses and impacts associated with noise, access and negative implications for economies of scale. Many sites such as Vestas, Daedalus and Kingston Marine Park are located next to very shallow water and are unable to provide full tidal access.

A14.29 Some cannot accommodate a large boat lift facility (above 150 tonnes) that is identified as missing in the market place but already exists at Tipner. The *MPL Marine Sector Market Summary* report identified that this shortage of facilities extends to the Thames in the east and to the South West. Those alternative facilities that do exist are constrained in terms of increased marine hub

[54] Appendix D (Public Pack)Tipner West Full Council Update - Appendices Agenda Supplement for Cabinet, 06/12/2021 13:00 (portsmouth.gov.uk)

potential by reason of site boundaries, neighbouring land uses, lack of storage and topography. These various inefficiencies have severely limited sector growth for years. The MPL report conducted extensive consultation across the marine sector and just some of the concerns included the following:

Commercial vessels

- Vessel operators are exposed to longer than ideal vessel down-time and incur significant costs in arranging works at a remote location. The Maritime and Coastguard Agency (MCA) licensing of these vessels demands a regular programme of lifting, inspection and maintenance.
- There is undoubtedly a loss to the local marine sector supply chain through activity being driven outside of the region and indeed overseas.
- The lack of suitable facilities significantly limits the potential for new build and refit works to be undertaken within the region. There are examples of vessel manufacturers being unable to launch and or refit vessels that they construct at their current premises.
- The constraints identified at existing facilities has a direct knock-on effect through introduction of inefficient practices.
- Whilst the Solent commercial fleet is extensive, this is not being accommodated for maintenance, servicing and repairs with many operators travelling abroad.

Superyacht sector

- The superyacht fleet spends much of the summer in the Mediterranean and undertaking winter repairs/refit work in a Mediterranean yard is seen as being logistically easier to achieve, despite the UK having a global reputation for the required skills and workmanship. This results in unnecessary journeys and critically lost income to the UK economy;
- Large composites require a waterfront location due to difficulties transporting by road.

A14.30 These are just a few of the many reasons outlined in the MPL reports why dis-aggregation of the proposed marine hub would continue to frustrate the growth needs of the UK's marine sector. It also shows why the opportunities afforded at Tipner for a world class marine hub have been recognised in the City Deal for some time. An indicative illustration of how a marine hub at Tipner might be laid out is provided below:

Fig A14-5: Illustrative layout for marine employment hub

(iv) Alternative locations on the Tipner West peninsula

A14.31 This has also been explored in the MPL reports, with consideration of the shoreline characteristics, prevailing winds, constraints such as heritage structures or sub-sea cables and ability and the use of land that could otherwise be more readily devoted to other land uses such as housing (this would not have been permitted on Horsea Island East, for example, due to proximity to existing MoD assets). This analysis will be explored further as part of the full HRA, but the MPL studies to date have very quickly confirmed the clear benefits associated with the northern quadrant of the Tipner West site hosting the marine hub (as illustrated above) and hence the proposed Local Plan site allocation as shown at Appendix A1.

(d) Bridge Alternatives

A14.32 A feasibility report was commissioned by the City Council in 2010. A copy of this is provided at Appendix A10. It should be noted that whilst this is relatively dated now, the report approach and conclusions are considered to remain fit for purpose as site conditions relevant to the crossing corridor between Tipner West and Horsea Island East remain very similar to those considered at the time. However, a key additional constraint is now the recent Scheduling of the former D-Day slipways at Horsea Island East. Whilst the former study did not have this constraint, the conclusions remained that the current preferred bridge crossing option remains that of a corridor immediately adjacent to the existing M275 flyover structure, which would not be expected to directly impact these heritage assets (although this must yet be assessed in detail).

A14.33 The report considered four bridge alignment options, as indicated in the extract below:

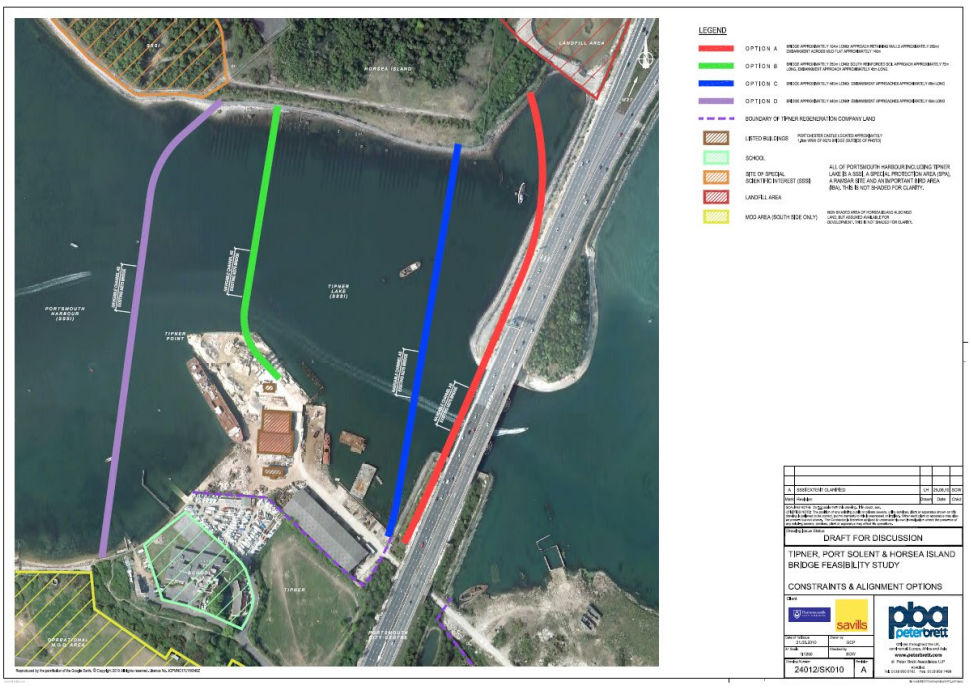

Fig A14-6: Bridge alignment options (source: Peter Brett Assoc reports 2010)

A14.34 The report concluded only Options A or B being potentially viable for further assessment. Initial technical drawings were also supplied in the report appendices but none of these have yet

been the subject of HRA and the impacts of a suitable 'Option A' route corridor remain to be tested. Nevertheless, the draft Local Plan policy and associated site allocation plan will proceed on the basis of an option similar to that of Option A. It is important to note some of the report conclusions (below) and these are considered to remain equally applicable today and for the purposes of the new Local Plan:

- *"Without the bridge link access to the Horsea Island and Port Solent development strategic sites would be reliant on the Port Way access road, whereas the main access point for the Tipner site would be retained via the proposed Tipner Interchange on the M275;*[55]

- *In the absence of the bridge link development related traffic travelling between Horsea Island/Port Solent sites to central areas of the city centre (for example) will be subject to lengthy detours relative to a scenario which includes the bridge link. Average peak hour journey times to reach the central areas by car would increase by half an hour, resulting from a combination of increased distances travelled (four kilometres to the city centre) and higher levels of congestion and delays at key junctions;*

- *Without the bridge link the resulting poorer levels of accessibility and congestion mean that the development will be less attractive and therefore reduced take up of housing, commercial space and regeneration.*

- *The bridge link will connect Tipner and Horsea Island significantly reducing severance between the two development locations and improving site permeability and access to jobs, services and public transport. Thereby removing the present requirement for bus services to terminate at Tipner and Port Solent which would have the benefit of reduced journey times and increased operational efficiency. Furthermore, the omission of the bridge link would also have an acute impact on servicing Horsea Island from other areas in central Portsmouth."*

(e) Housing development comprising minimum of 1,250 homes - alternatives

A14.35 As described above the City Council has considered at significant length a range of options for the Tipner West site and notably in respect of alternative solutions to those of the original 'Lennox Point' or 'Super Peninsula' option, having regard to the likely significant adverse effects upon the SPA and Ramsar protected sites. A detailed report was presented to Full Council in December 2021[56], produced with input from PCC-TRP team. With the exception of the "Do Nothing" option, all other options included delivery of residential development on the Tipner West site by reason of its cross-subsidy 'enabling' funding for the necessary sea defence and site decontamination works. The City Deal did not provide for full Government funding of these works, with the Government grant (£48.75m) (and associated MoD Land transfer provisions) to be accompanied by local capital investment of £42.7m and in addition a further £87.8m in developer contributions.

A14.36 All development options considered in this report demonstrated a significant negative viability position for the City Council, ranging from figures of £48.75m for 'Do Nothing' (City Deal grant to be refunded to Government), to £160m for development of all of the existing land mass,

[55] Port Solent and Horsea Island was one allocation in the 2012 Core Strategy whilst Tipner was a separate allocation. In the emerging plan Tipner West and Horsea Island West is one allocation.

[56] (Public Pack)Tipner West Full Council Update - Appendices Agenda Supplement for Cabinet, 06/12/2021 13:00 (portsmouth.gov.uk)

including protected SPA/Ramsar habitat south of the firing range, but excluding significant harbour reclamation. Full Council resolved to commit to prioritising protection of the SPA/Ramsar sites and to support any viability shortfall through locally-sourced funding avenues. However, it is clear from the Full Council report that the significant site enabling costs associated with implementing the City Deal could be in excess of £200m and that residential development, alongside the marine hub would continue to be necessary to lever in additional private finance, including further developer contributions as noted above. The City Deal has in any event been premised upon the need to make the Tipner West and Horsea Island sites ready for sale to 'one or more private sector developers'.

A14.37 Notwithstanding the options tested to date, premised upon viability considerations and decision-making for Full Council, the full site HRA would also need to have regard to other possible scenarios for the siting and delivery of residential development at Tipner West and Horsea Island East. In terms of development within the proposed site allocation boundaries the options for alternative siting of the housing component are limited, for example, by:

- The very specific locational needs for an optimal marine employment hub on the northern part of the peninsula, adjacent to the deep water channel;
- Protected SPA/Ramsar habitat over land south of the former firing range;
- The retained SEN Harbour school;
- Operational objection from the MoD to residential development on Horsea Island East in close proximity to existing MoD assets immediately to the west;
- Land required to deliver the bridge abutments and access thereto (the bridge siting having already undergone detailed optioneering as outlined above);
- Retained Listed Buildings;
- Air quality and noise considerations vis-à-vis the M275 corridor; and
- Optimal site access point being from Tipner Lane at the eastern edge of the site and also via existing subway beneath the M275 (as indicated on the plan at Appendix A1).

A14.38 It is also necessary for the LPA to consider alternative locations for housing development within the City. Portsmouth has a highly constricted land supply with much of the land that is available to build on at risk of flooding, close to international nature designations and includes heritage assets. We will clearly have to robustly demonstrate that we have left no stone unturned when looking for housing sites, but we have a strong case for setting a capacity based housing figure that is less than our housing need. Any homes that could not be built at Tipner West could not be built elsewhere in the City.

A14.39 The City Council works closely with its neighbouring local planning authorities in the Partnership for South Hampshire (PfSH) on meeting sub-regional housing need and other cross boundary strategic matters. There is already agreement with Fareham Borough Council to provide 800 new homes for Portsmouth in their newly adopted Local Plan. It is unlikely that with the constraints in South Hampshire that our neighbours would be able to accommodate the unmet need for Portsmouth including that amount of housing that would have been located at Tipner West.

A14.40 PCC-LPA will be making the case at its Local Plan examination that it has left no stone unturned in meeting its housing need. This will include allocating land at Tipner West for housing as enabling development and as part of a mixed use strategic development. Notwithstanding this allocation, the City will still not be able to meet its housing need and will have a capacity based housing figure. The City Council considers that the proposed new homes for Tipner West cannot be disaggregated and located elsewhere within or outwith the City for the following reason:

- The need to make full and effective use of available land for housing as clearly set out in the NPPF (notably para.11 on Plan-making);
- To deliver sufficient homes on (an otherwise remote) site, capable of supporting a new community in its own right and providing cross-benefits for employment and live/work associated with the proposed marine hub;
- Failure to meet the clear instruction set out by Government in the City Deal award, to deliver the site for, and 'lever in', private sector development.

A14.41 On the basis of the above provisional assessment of alternative solutions, the PCC-LPA is satisfied that there are not expected to be feasible alternative solutions to the Plan's proposals for Tipner West and Horsea Island East that would be less damaging or avoid damage to the designated sites. The full HRA for the draft Local Plan will address these issues at the necessary level of detail for strategic plan-making purposes, whilst some of these elements will be more appropriately addressed at the Project HRA level. However, the above summary of the potential alternative solutions for development at Tipner West and Horsea Island East are provided to the Secretary of State as part of this Reg.107 request as necessary context in reaching an initial Opinion on the next, IROPI, stage of the Derogation, which follows below.

Appendix 15 - Compensation Strategy (Derogation Step 3 - Provisional)

A15.1 If harm to a site designated as part of the National Site Network or international Ramsar site is to be allowed (because there are no alternatives and IROPI can be shown through steps 1 and 2 of the Derogation stage of HRA), the Regulations require a third Derogation step. This is to ensure that all necessary compensatory measures are secured to protect the overall coherence and integrity of the designated sites.

A15.2 Whilst this Statement of Case is focused principally upon the second step of the Derogation Stage of HRA, it is considered important that the Secretary of State is made aware of the Council's anticipated approach to compensation for the direct and indirect harms arising from the proposed Plan. Such compensatory habitat needs to be secured and in place before the adverse impact from the proposed development, as set out in the draft Local Plan, occurs.

A15.3 At the Plan-making stage, the precise details of compensatory habitat are ultimately a matter for identification at the Project level. However, in order for the plan to be effective there must be reasonable confidence that the compensatory habitat can be secured. The TRP team has for some years been preparing a habitat banks approach by applying a modified Defra Metric to the areas of the SPA/Ramsar likely to be impacted by the previously pursued Reg.18 'Super-Peninsula' proposals, being mainly the reclaimed intertidal area (as noted in section 4.0 above). The proposed Metric is under review by the TRP consultant team in discussion with the Tipner Regulatory Panel and individual regulatory bodies thereof[57]. These discussions would only re-commence when a full project-level understanding of the development parameters and likely significant effects to the SPA/Ramsar sites are understood.

A15.4 The metric, whilst not likely to provide the sole basis for Appropriate Assessment and consideration of suitable compensatory habitat, nevertheless provides target areas to create in order to compensate for the harm to the SPA and its supporting habitats and are based on an objective and empirical analysis. These are expected to provide a generous compensation site ratio for habitat lost (including supporting functional habitat) dependent upon factors such as qualitative functionality and ease of creation. Based upon previous site studies undertaken by the TRP (in the context of a far more ambitious project with extensive area of direct reclamation from the Harbour), PCC-LPA is confident that suitable compensatory habitat can be secured in order to maintain and enhance the integrity of the designated sites using the precautionary principle in line with the HRA Regulations. The compensatory sites in question have included schemes for coastal realignment and sediment recharge to improve functionality and foraging opportunity and landowners have been approached. However, having regard to the pause to the Project between the end of 2021 and end of 2022, the TRP team will need to provide robust evidence to the LPA that these same site opportunities are all still available. The broad quantum of compensatory habitat is however likely to be reduced relative to studies in relation to the previous 'Super peninsula' proposals (which proposed circa 27.0ha of direct reclamation from the Harbour) as the TRP team are now instructed to pursue options that minimise land reclamation and prioritise protection of the land south of the firing range (being SPA/Ramsar designated). These details will need to be set out in more detail in the Plan and Project HRAs respectively - and in subsequent Derogation Notice(s), should this ultimately be confirmed as necessary.

[57] Tipner Regulatory Panel established in 2021 pursuant to the Coastal Concordat and comprises representatives from Natural England, Environment Agency, Marine Management Organisation and also non-statutory bodies Hampshire and the Isle of Wight Wildlife Trust (HIWWT) and RSPB.

A16: Habitats Directive: guidance on the application of Article 6(4) - Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures (DEFRA, Aug 2012)

Department for Environment, Food and Rural Affairs

Habitats Directive: guidance on the application of article 6(4)

Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures

August 2012

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Introduction

1. The purpose of the Habitats Directive[1] is to enhance Europe's biodiversity by protecting its most important habitats and species. This is achieved, in part, through the designation of protected sites[2].The directive requires competent authorities (those with decision making powers) to assess the impact of plans or projects that may have a significant effect on these "European sites", either alone or in combination with other plans or projects. Competent authorities cannot consent to plans or projects they determine may have an "adverse effect on the integrity of a European site" following such an assessment.

2. However the directive provides a derogation under article 6(4) which allows such plans or projects to be approved provided three tests are met:

    - There are no feasible alternative solutions to the plan or project which are less damaging.

    - There are "imperative reasons of overriding public interest" (IROPI) for the plan or project to proceed.

    - Compensatory measures are secured to ensure that the overall coherence of the network of European sites is maintained.

3. These tests must be interpreted strictly and developments which may result in an adverse effect on the integrity of a European Site can only be authorised once the above tests have been met. This document provides guidance on how these tests should be applied in England and UK offshore waters (except in relation to functions exercised by devolved authorities). It is not intended to provide an authoritative statement of the law and should be read in conjunction with the Habitats Directive and its transposing regulations. The Government recommends competent authorities and statutory nature conservation bodies have regard to this guidance when considering making a derogation under article 6(4). This guidance does not apply to article 16 of the directive which concerns European Protected Species.

4. Competent authorities should be aware that there may be circumstances where a development that may be damaging to a European site is needed for an imperative reason of overriding interest. As long as the other requirements of article 6(4) are met, such developments can be approved to ensure that this interest is met.

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[1] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. The Habitats Directive is primarily transposed in England under the Conservation of Habitats and Species Regulations 2010 and in the offshore marine area by the Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007.

[2] European sites include: special areas of conservation (SACs), special protection areas (SPAs), sites of Community importance (SCIs), and candidate SACs. As a matter of Government policy, potential SPAs and RAMSAR sites are also treated as European sites. A list of European sites in England can be found at: http://jncc.defra.gov.uk/page-4.

5. Developers and competent authorities should engage closely when an application is made for an article 6(4) derogation. They should also ensure that the tests are fully explored and documented, since this will help avoid delays to the decision making process and ensure a transparent and robust decision. Early engagement with statutory nature conservation bodies (Natural England, Joint Nature Conservation Committee, as appropriate) is strongly recommended, since their view should be obtained on the extent of any adverse effect, and the compensatory measures required. The Government expects the statutory nature conservation bodies to have a role in helping the competent authorities to identify adequate compensatory measures.

Test 1: alternative solutions

6. The purpose of the alternative solutions test is to determine whether there are any other feasible ways to deliver the overall objective of the plan or project which will be less damaging to the integrity of the European site affected.

7. It is the competent authority's responsibility to assure itself there are no feasible alternative solutions. The competent authority should determine the range and type of possible alternatives that should be considered, and use its judgement to decide what is reasonable in any particular case. Where necessary it may consult others on potential alternative solutions. In some cases the competent authority may need to consider options that have not been identified by the applicant. In addition the 'do-nothing' option must be considered.

8. Alternatives must be considered objectively and broadly. This could include options that would be delivered by someone other than the applicant, or for example at a different location, using different routes, scale, size, methods or timing.

> Example: A proposed project in Dibden Bay sought to increase the number of deep water berths at Southampton. The project could only proceed with an article 6(4) derogation as the harm it would have caused to European protected sites could not be mitigated.
>
> The derogation was rejected by the Secretary of State as the assessment of alternatives had not included the assessment of alternative facilities at other ports on the south and east coasts that would have provided increased shipping capacity for southern England. However an alternative solution on the Isle of Grain was not considered credible as there were no formal proposals to develop container handling capacity there.

9. Alternatives can also involve different ways of operating a development or facility.

Example: In Germany it was proposed to dredge the River Elbe to increase shipping capacity at the port of Hamburg. The dredge could only proceed with an article 6(4) derogation. Six alternatives, plus a 'do-nothing' option were considered:

- Reduction of speed and use of sea tugs
- Additional dams and floodgates
- International convention limiting ship size
- Different dimensions of dredge
- Use of other German ports
- Partial unloading downstream to reduce draft of ship

In that case, all alternatives were rejected as either they did not meet objectives, were unfeasible or would result in an economic disadvantage to the port as ships would go elsewhere.

10. Alternative solutions are limited to those which would deliver the same overall objective as the original proposal. For example, in considering alternative solutions to an offshore wind renewable energy development the competent authority need only consider alternative offshore wind renewable energy developments. Alternative forms of energy generation are not alternative solutions to this project as they are beyond the scope of its objective. Similarly, alternative solutions to a port development will be limited to other ways of delivering port capacity, and not other options for importing freight. Likewise, the assessment of alternative solutions for a proposed motorway would not need to include the assessment of alternative modes of transport. This approach was followed in the Nuclear Energy National Policy Statement where the consideration of alternative solutions was limited to alternative sites for nuclear development.

11. National Policy Statements and other documents setting out Government policy (e.g. the UK Renewable Energy Roadmap) provide a context for competent authorities considering the scope of alternative solutions they will assess.

12. Having undertaken its assessment of the alternative solutions a competent authority must decide whether any are feasible while also being less damaging. In taking this decision a competent authority may decide that options are not feasible alternative solutions if, despite being less damaging, they do not deliver the overall objective of the original proposal.

13. If the competent authority decides that there are feasible alternative solutions to the plan or project which would have lesser effects on the European site, it cannot give consent for the plan or project to proceed. Early discussion between the applicant, competent authority and statutory nature conservation bodies should minimise the prospects of an application reaching this stage only to be turned down.

Example: In assessing alternatives to the replacement of an unsafe motorway bridge in Germany the competent authorities concluded that there were no alternatives to the project. This was because in that case the restoration or maintenance of the existing bridge was considered as being technically impossible, and the 'do-nothing' option would lead to a closure of the bridge and an increase in traffic on the remaining routes causing greater harm to the affected European site.

Test 2: imperative reasons of overriding public interest

14. Having established there are no feasible alternative solutions, the competent authority must be able to identify "imperative reasons of overriding public interest" (IROPI) that justify the plan or project despite the environmental damage it will cause.

15. The type of IROPI that a competent authority can consider will depend on the nature of the site that will be affected:

    - If the site hosts a priority habitat or species[3], the competent authority can only consider reasons relating to human health, public safety, or beneficial consequences of primary importance to the environment; or other imperative reasons of overriding public interest only after having regard to the opinion of the European Commission. Annex 1 lists the European Sites which host priority habitats and species in England (including cross-border sites).

    - For other sites the competent authority can consider other imperative reasons of overriding public interest including those relating to social or economic benefit in addition to those of human health, public safety, or beneficial consequences of primary importance to the environment.

16. When identifying IROPI a competent authority must consider whether all three elements of IROPI are met:

    - Imperative: the plan or project is necessary (whether urgent or otherwise) for one or more of the reasons outlined above (paragraph 15).

    - Overriding: the interest served by the plan or project outweighs the harm to the integrity of the site as assessed in light of the weight to be given to the protection of such sites under the directive.

    - Public Interest: a public good is delivered rather than a solely private interest.

17. Public interest can occur at national, regional or even local level, provided the other elements of the test are met.

[3] I.e. if the site has been designated, at least in part, due to the presence of a priority species or habitat.

18. In practice, plans and projects which enact or are consistent with national strategic plans or policies, may be more likely than others to show IROPI – e.g. those covered by or consistent with a National Policy Statement or identified within the National Infrastructure Plan, especially if the plan itself has been assessed using the Habitats Regulations. Plans or projects which fall outside national strategic plans, including those at a lower geographic scale may also be able to show IROPI, depending on the particular case. Plans or projects which only deliver short term benefits are unlikely to be able to show IROPI. In each case, the public interest of the plan or project would need to be assessed and weighed against its particular impacts on a European site.

19. Although they are separate tests, in practice it may be helpful initially to consider alternative solutions and IROPI together. This is because the consideration of alternative solutions includes identifying the overall objective that a plan or project would deliver, and judging alternative solutions against whether they would achieve the same objective. It is wasted effort to assess alternative solutions if they will not deliver the same objective or if it is very clear that a plan or project will not meet the IROPI test due to the nature of its objective. This does not change the requirement that the competent authority's decision demonstrates that alternative solutions have been ruled out before considering justifying a plan or project on IROPI grounds.

Test 3: compensatory measures

20. The Habitats Directive seeks to create a coherent ecological network of protected sites. Therefore if harm to one site is allowed – because there are no alternatives and IROPI can be shown – it must be compensated for so the coherence of the network as a whole is maintained.

21. Compensatory measures can include, among other things:

    - The re-creation of a comparable habitat, which can in time be designated as a European site.

    - The re-creation of a comparable habitat as an extension to an existing European site.

    - In exceptional circumstances the classification of a new European Site for comparable features.[4]

22. The competent authority (liaising with the statutory nature conservation body and others as necessary) must have confidence that the compensatory measure will be sufficient to offset the harm. This can be a complex judgement and requires consideration of factors including:

[4] This applies only to Special Areas of Conservation.

- Distance from the affected site: in general compensation close to the original site will be preferable, but there may be instances where a site further away will be better suited, in which case it should be selected. This judgement must be based solely on the contribution of the compensatory measures to the coherence of the network of European sites.

- Time to establish the compensatory measures to the required quality.

- Whether the re-creation / restoration methodology is technically proven or considered reasonable.

- If there is uncertainty or a time lag between harm to the site and the establishment of compensatory measures, a larger area of compensation may be needed, coupled with a monitoring and management strategy that would require the applicant to take action if the compensation is not successful.

23. Competent authorities should not require more compensation than is needed to ensure the integrity of the network of European sites is maintained. However, compensation can also provide an opportunity to improve the network of protected sites and wider biodiversity. Competent authorities are encouraged to explore these opportunities with applicants on a case-by-case basis. The re-created or restored habitat must be sustainable or reasonably so, given natural changes – it will therefore be necessary to secure medium to long term management of the area concerned.

24. Compensation must be secured before damage occurs. This includes ensuring all legal, technical and financial arrangements are in place. Compensation measures should normally be delivered before the adverse effect on the European site occurs, as this reduces the chance of harming the network of sites and also ensures there is no loss during the period before the compensatory measures are implemented.

25. In certain situations damage to European sites may necessarily occur before the compensatory measures are fully functioning. There may also be circumstances where the compensatory measures will take a long time to become fully-functioning (e.g. re-creation of woodland). In such circumstances it may be acceptable to put in place measures which do not provide a complete functioning habitat before losses occur, provided undertakings have been made that the measures will in time provide such a habitat and additional compensation is provided to account for this. Such cases require careful consideration by the competent authority in liaison with statutory nature conservation bodies.

26. Having agreed what compensatory measures are required, the appropriate authority must ensure they will be delivered. This will require the competent authority to demonstrate that secure and binding plans are in place to deliver and manage the measures on an ongoing basis. The competent authority should put in place monitoring and reporting requirements to ensure the plans are fulfilled.

Roles

27. A number of parties are involved in the assessment of a plan or project under the Habitats Directive. Their specific roles in the consideration of a derogation under article 6(4) are set out below.

Developer

28. The developer must supply any information required by the competent authority to allow it to consider a derogation under article 6(4). The competent authority can only consider such a derogation after concluding that the plan or project may have an adverse effect on the integrity of a European site.

29. The developer may be asked by the competent authority to supply the evidence it needs to make a decision on an article 6(4) derogation. This will include the evidence needed to confirm any assessments of impact. The Government advises developers to liaise with competent authorities and statutory nature conservation bodies, as appropriate from an early stage in the plan, to ensure issues are worked through collaboratively.

Statutory nature conservation bodies

30. Statutory nature conservation bodies should be asked to provide advice to developers, competent authorities and appropriate authorities on the likely impacts of alternative solutions and the adequacy of compensatory measures. Early engagement of statutory nature conservation bodies will be beneficial, and may speed up the consideration and eventual delivery of the plan or project. The Government expects statutory nature conservation bodies to engage constructively with developers and competent authorities to identify compensatory measures.

Competent authority

31. The competent authority decides whether a derogation under article 6(4) is appropriate. It must ensure each of the tests have been met and clearly set out how it has reached its decision. Before it grants permission on the basis of a derogation under article 6(4) it must inform the appropriate authority[5] and may not grant permission for 21 days. In that period, the appropriate authority may direct the competent authority not to agree to the plan or project either indefinitely or a specific period of time period. If no direction is received the competent authority may grant permission on the basis of an article 6(4) derogation.

[5] In England, the appropriate authority is the relevant Secretary of State.

32. The competent authority is responsible for ensuring its decision takes account of all relevant evidence. It should not therefore request information from the developer or other parties which will not be material to its decision.

33. Competent authorities should work cooperatively with developers, the appropriate authority, statutory nature conservation bodies and other interested parties when reaching its decision. Where more than one competent authority is involved the competent authorities should have regard to the Government's advice on competent authority coordination.

Appropriate authority

34. On receipt of a notice from a competent authority that it intends to use an article 6(4) derogation, the appropriate authority may within 21 days, or such longer period as stated, direct the competent authority not to agree to the plan or project. If the appropriate authority is content with the competent authority's decision it must ensure compensatory measures are secured and sufficient to maintain the coherence of the network of European sites.

35. Once a derogation has been used the appropriate authority is responsible for informing the European Commission that the compensation has been secured.

36. The appropriate authority may seek the opinion of the Commission, following a request from a competent authority, on a plan or project can be approved for 'other' IROPI reasons, where priority species or habitats are concerned (see paragraph 15).

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