

Mr M Keeling

**Fairport House, Lands End Road, Bursledon,
Southampton, SO31 8DN**

Shadow HRA for Proposed construction works

Compiled by Dr P Tosswell, Lymington Technical Services Ltd

With reference to the following documents:

Fathom Ecology Ltd, Fairport House River Hamble Preliminary
Ecological Appraisal Report June 2026

Fathom Ecology Ltd, Fairport House River Hamble Biodiversity Net
Gain Report June 2026

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1 Project Details

The site is located in Bursledon adjacent to the Hamble River, at the end of Lands End Road. The site is immediately opposite Swanwick Marina on the north side of the river.

The site comprises a residential property and outbuildings together with a large area of garden. Access to the site is from the north-west corner where a drive leads to the main house, past a garage building and an outbuilding used as an office.

The whole site extends to an area of approximately 2 ha and includes a large part of the foreshore of the Hamble River. There is an alternative access to the site from the very end of Lands End Road adjacent to a public slipway.

The site owner has an established agreement with Natural England regarding the use of the land within the SSSI, SPA & SAC areas.

It is proposed to install a jetty and pontoon to provide improved recreational access to the water. The location of the works are within the Natural England consented areas.

Drawing 10951/26/1AB shows the proposed works.

2 Need for a Habitats Regulations Assessment (HRA)

Is the proposal directly connected with, or necessary to the management of a N2K site for the purpose of conserving the habitats or species for which the site is designated?	No. The proposal is not directly connected with, or necessary to the management of a N2K site for the purpose of conserving the habitats or species for which the site is designated.
Is it necessary to carry out a HRA?	Yes

3 Habitats Regulations Assessment – procedure

An HRA is required for any proposals that could affect the following protected sites:

- Special Areas of Conservation (including proposed areas) – applicable in this case.
- Special Protection Areas (including potential areas) – applicable in this case.

- Ramsar Sites (including proposed sites) – applicable in this case.
- Marine Annex I Habitats - Special Area of Conservation (SAC) Complex feature, 'Mudflats and sandflats not covered by seawater at low tide' [Habitat Code H1140]. A2.3 in this case

In this case the works are defined as a Project and an HRA is therefore necessary.

The HRA should be undertaken by the Competent Authority with relevant details being provided by the Applicant. This often results in a 'Shadow' HRA being provided by an Applicant.

For clarification, the following is the recommended procedure:

1. Screening – check if proposal is likely to have a significant effect on a site's conservation objectives.
2. Appropriate Assessment – assess any likely significant effects in more detail and identify ways to avoid or minimise any effects. At this stage it is also necessary to conduct an 'integrity test' which includes potential mitigation.
3. Derogations – This only applies if the proposal fails the 'integrity test'. Three legal tests are considered: Alternative solution; Imperative reasons of overriding public interest (IROPI); Compensatory measures.

4 National Site Network – sites

Site Name: Solent and Southampton Water SPA UK9011061
Licensable activity within or nearby: Works are within this site.
Conservation advice package used: NE Conservation Advice – Solent and Southampton Water SPA. Area 5401.12 hectares.
Date advice package accessed: 01:07:2026
Qualifying features: Black-tailed godwit (<i>Limosa limosa islandica</i>), Non-breeding Common tern (<i>Sterna hirundo</i>), Breeding Dark-bellied brent goose (<i>Branta bernicla bernicla</i>), Non-breeding Little tern (<i>Sternula albifrons</i>), Breeding Mediterranean gull (<i>Ichthyophaga melanocephalus</i>), Breeding Ringed plover (<i>Charadrius hiaticula</i>), Non-breeding Roseate tern (<i>Sterna dougallii</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding Teal (<i>Anas crecca</i>), Non-breeding Waterbird assemblage, Non-breeding
Conservation objectives: The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • the extent and distribution of the habitats of the qualifying features • the structure and function of the habitats of the qualifying features • the supporting processes on which the habitats of the qualifying features rely • the populations of each of the qualifying features • the distribution of qualifying features within the site

Site Name: Solent and Dorset Coast SPA UK9020330
Licensable activity within or nearby: Works are within this site
Conservation advice package used: NE Conservation Advice – Solent and Dorset Coast SPA. Area 88980.55 hectares
Date advice package accessed: 01:07:2026
Qualifying features: Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding
Conservation objectives: The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • the extent and distribution of the habitats of the qualifying features • the structure and function of the habitats of the qualifying features • the supporting processes on which the habitats of the qualifying features rely • the populations of each of the qualifying features • the distribution of qualifying features within the site

Site Name: Solent and Southampton Water Ramsar UK11063
Licensable activity within or nearby: Works are within this site
Conservation advice package used: For Ramsar sites, a decision has been made by Defra and Natural England not to produce Conservation Advice packages, instead focussing on the production of High Level Conservation Objectives. As the provisions on the Habitats Regulations relating to Habitat Regulations Assessments (HRAs) extend to Ramsar sites, Natural England considers the Conservation Advice packages for the overlapping European Marine Site designations to be, in most cases, sufficient to support the management of the Ramsar interests.
Date advice package accessed: 01:07:2026
Conservation objectives: As for SPA.

Site Name: Solent Maritime SAC UK0030059
Licensable activity within or nearby: Works are within this site
Conservation advice package used: NE Conservation Advice – Solent Maritime SAC. Area 11325.09 hectares.
Date advice package accessed: 01:07:2026
Qualifying features: Annual vegetation of drift lines Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) Coastal lagoons Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>) Estuaries Mudflats and sandflats not covered by seawater at low tide Perennial vegetation of stony banks Salicornia and other annuals colonising mud and sand Sandbanks which are slightly covered by sea water all the time Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("White dunes") Spartina swards (<i>Spartinion maritimae</i>)
• Conservation objectives: he objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring: • the extent and distribution of qualifying natural habitats and habitats of the qualifying species • the structure and function (including typical species) of qualifying natural habitats • the structure and function of the habitats of the qualifying species • the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • the populations of each of the qualifying species • the distribution of qualifying species within the site

5 Screening for Likely Significant Effects

Assessment is based on Natural England's Conservation Advice Packages using the following guidance:

- **Ports & Harbours (construction): Construction of port and harbour structures**
- **Ports & Harbours (construction): Piling**

The 'Advice on Operations' matrix has been used to determine the associated pressures. Only features deemed sensitive to medium and high-risk pressures for both direct and indirect pathways are taken forward into the LSE assessment.

Works alone, no similar works have been identified in the area.

The following is a screening summary.

Site Name: Solent and Southampton Water SPA UKUK9011061

Pressure	Qualifying feature or species (includes sub-features and supporting habitats)	LSE?	Justification
Above water noise – construction. Including piling.	Birds	Yes	Black-tailed godwit, Common tern, Dark-bellied brent goose, Little tern, Mediterranean gull, Ringed plover, Roseate tern, Sandwich tern, and Teal are sensitive to this pressure. Construction works can generate noise that is in addition to the existing environment. This is therefore a LSE for further consideration.
Abrasion/disturbance of the substrate on the surface of the seabed – construction. This only applies to the support piling.	Coastal lagoons Freshwater and coastal grazing marsh Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal rock Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral rock Subtidal seagrass beds Circalittoral rock	Yes	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The piling works will penetrate the substrate. This is therefore a LSE for further consideration.

Barrier to species movement	Birds	Yes	Black-tailed godwit, Dark-bellied brent goose, Little tern, Ringed plover, and Teal are sensitive to this pressure. Construction works will involve marine plant, and this could be in addition to the existing environment. This is therefore a LSE for further consideration.
Barrier to species movement	Coastal reed beds Freshwater and coastal grazing marsh Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Infralittoral rock Circalittoral rock Water column	Yes	The supporting habitats within or near the proposed works are: Water column Due to the presence of plant, the piling operation may have a short period affecting the water column, but this will be short lived. The completed installation may have a temporary effect on species movement. This is therefore a LSE for further consideration.
Changes in suspended solids	Birds	Yes	Common tern, Little tern, Roseate tern, and Sandwich tern are sensitive to this pressure. The piling works may cause short term localised changes in suspended sediment concentrations. This is therefore a LSE for further consideration.

Changes in suspended solids	Coastal lagoons Coastal reedbeds Freshwater and coastal grazing marsh Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal rock Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral rock Subtidal seagrass beds Cirralittoral rock Water column	Yes	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Water column The piling works may cause short term localised changes in suspended sediment concentrations. This is therefore a LSE for further consideration.
Emergence regime changes – tidal changes	Birds	No	Black tailed godwit, Ringed plover are sensitive to this pressure. The nature and scale of the proposed works are such that no measurable change will occur. No possible LSE

Emergence regime changes – tidal changes	Coastal lagoons Coastal reedbeds Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal rock Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Subtidal sand and muddy sand Infralittoral rock mixed sediments Subtidal seagrass beds Circalittoral rock Water column	No	The nature and scale of the proposed works are such that no measurable change will occur. No possible LSE
Habitat structure changes – removal of substratum.	Coastal lagoons Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal rock Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Subtidal sand and muddy sand Infralittoral rock mixed sediments	No	No removal of substratum is proposed. No possible LSE

	Subtidal seagrass beds Circalittoral rock Water column		
Introduction of light	Birds	No	Black tailed godwit, Dark bellied brent goose, Ringed plover, and Teal are sensitive to this pressure. The only lighting in the area is from houses and a small number of navigation marks. There is no proposal to install any lighting, and the works will only be conducted in daylight hours. No possible impact.
Introduction of light	Coastal lagoons Intertidal seagrass beds Intertidal rock Intertidal mud and muddy sand Infralittoral rock Subtidal seagrass beds Water column	No	The only lighting in the area is from houses and a small number of navigation marks. There is no proposal to install any lighting, and the works will only be conducted in daylight hours. No possible impact.
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion – construction	Coastal lagoons Freshwater and coastal grazing marsh Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal rock Intertidal mixed sediments	Yes	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Whilst the piling will cause some disturbance, this is relatively minor. This is therefore a LSE for further consideration.

	Intertidal mud Intertidal mud and muddy sand Infralittoral rock Subtidal seagrass beds Circalittoral rock		
Physical change to another seabed type	Intertidal rock Infralittoral rock Circalittoral rock	No	No change to another seabed type is proposed No possible LSE.
Physical change to another sediment type	Coastal lagoons Coastal reedbeds Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal coarse sediment Intertidal mixed sediment Intertidal mud Intertidal mud and muddy sand Subtidal seagrass beds	No	No change to another sediment type is proposed No possible LSE.
Physical loss (to land or freshwater habitat)	Coastal lagoons Coastal reedbeds Freshwater and coastal grazing marsh Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds	No	No physical loss to land or freshwater habitat, no LSE.

	Intertidal rock Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral Rock Subtidal seagrass beds Circalittoral rock Water column		
Removal of non-target species	Birds	No	Black tailed godwit, Common tern, Dark bellied brent goose, Little tern, Mediterranean gull, Ringed plover, Roseate tern, Sandwich tern, and Teal are sensitive to this pressure. No physical removal of non-target species is proposed nor likely. No possible LSE
Removal of non-target species	Coastal lagoons Coastal reedbeds Freshwater and coastal grazing marsh Atlantic salt meadows Intertidal seagrass beds Intertidal rock Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral Rock Subtidal seagrass beds Circalittoral rock Water column	No	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Water column No physical removal of non-target species is proposed nor likely. No possible LSE

Smothering and siltation rate changes (heavy)	Coastal lagoons Freshwater and coastal grazing marsh Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal rock Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral Rock Subtidal seagrass beds Circalittoral rock	No	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The scale of the works is such that heavy changes to siltation rates are not possible. No possible LSE
Smothering and siltation rate changes (Light)	Coastal lagoons Intertidal seagrass beds Intertidal rock Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral rock Subtidal seagrass beds Circalittoral rock	No	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The scale of the works is such that measurable siltation changes are unlikely. No possible LSE
Underwater noise changes	Water column	No	This is a busy area of the river with many vessels transiting the main channel. The piling works are very short lived and will not generate significant changes to underwater noise. No possible LSE

Vibration – construction	Water column	No	The vibro-piling is short lived and will not generate significant changes to the water column. No possible LSE
Visual disturbance - construction	Birds	No	Black-tailed godwit, Common tern, Dark-bellied brent goose, Little tern, Mediterranean gull, Ringed plover, Sandwich tern, and teal are sensitive to this pressure. The proposed works are all within an existing area of high leisure craft activity. The temporary addition of a crane barge for piling will be short-lived and unlikely to have any significant effect. No possible LSE
Visual disturbance	Water column	No	The piling will not generate significant visual changes to the water column, no difference from current visibility. No possible LSE
Tidal and sediment transport changes	Coastal lagoons Intertidal seagrass beds Intertidal rock Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Infralittoral rock Subtidal seagrass beds Circalittoral rock Water column	No	The works are small and there is no likelihood of any changes. No possible LSE
Wave exposure changes	Coastal lagoons Coastal reedbeds Intertidal seagrass beds	No	The nature of the works is such that will be no possible changes.

	Intertidal rock Infralittoral rock Subtidal seagrass beds Water column		No possible LSE
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Site Name: Solent and Dorset Coast SPA UK9020330			
Pressure	Qualifying feature or species (includes sub-features and supporting habitats)	LSE?	Justification
Above water noise - construction	Birds	Yes	Common tern, Little tern, and Sandwich tern are sensitive to this pressure. Construction works can generate noise that is in addition to the existing environment. This is therefore a LSE for further consideration.
Barrier to species movement - construction	Birds	Yes	Little tern are sensitive to this pressure. Construction works will involve marine plant, and this could be in addition to the existing environment. This is therefore a LSE for further consideration.
Barrier to species movement	Water column	No	The nature of the works is such that there is no change to the water column. No possible LSE

Changes in suspended solids – construction	Birds	Yes	Common tern, Little tern, and Sandwich tern are sensitive to this pressure. The piling works may cause short term localised changes in suspended sediment concentrations. This is therefore a LSE for further consideration.
Changes in suspended solids – construction	Water column	Yes	The piling works may cause short term localised changes in suspended sediment concentrations. This is therefore a LSE for further consideration.
Emergence regime changes, including tidal level change considerations	Water column	No	The nature and scale of the proposed works are such that no measurable change will occur. No possible LSE
Habitat structure changes - removal of substratum (extraction)	Water column	No	No removal of substratum is proposed. No possible LSE
Introduction of light	Water column	No	No lighting is proposed. No possible LSE

Physical loss (to land or freshwater habitat)	Water column	No	No physical loss to land or freshwater habitat, no LSE. No possible LSE
Removal of non-target species	Birds	No	Common tern, Little tern, and Sandwich tern are sensitive to this pressure. This refers to the physical removal of substrates. No physical removal of non-target species is proposed nor likely. No possible LSE
Removal of non-target species	Water column	No	No physical removal of non-target species is proposed nor likely. No possible LSE
Underwater noise changes – construction	Water column	No	When compared to the existing local activities, the piling will not generate significant changes to underwater noise. No possible LSE
Vibration – construction	Water column	No	The vibro-piling is short lived and will not generate significant changes to the water column.

This only applies to the piling			No possible LSE
Visual disturbance - construction	Birds	No	Common tern, Little tern, and Sandwich tern are sensitive to this pressure. The proposed works are all within an existing site of high activity with regular ferry operations. The temporary addition of a crane barge for piling will be short-lived and unlikely to have any significant effect. No possible LSE
Visual disturbance – construction	Water column	No	The piling will not generate significant visual changes to the water column, no difference from current visibility. No possible LSE
Water flow (tidal current) changes, including sediment transport considerations	Water column	No	The nature of the works is such that will be no possible changes. No possible LSE
Wave exposure changes	Water column	No	The nature of the works is such that will be no possible changes. No possible LSE

Site Name: Solent Maritime SAC UK0030059			
Pressure	Qualifying feature or species (includes sub-features and supporting habitats)	LSE?	Justification
Abrasion/disturbance of the substrate on the surface of the seabed – construction.	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand	Yes	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The piling works will penetrate the substrate. This is therefore a LSE for further consideration.

Barrier to species movement	Annual vegetation of drift lines Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal coarse sediment	No	There is no physical possibility of the works applying this pressure to the SAC.
Changes in suspended solids This only applies to the piling	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds	Yes	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The piling works may cause short term localised changes in suspended sediment concentrations. This is therefore a LSE for further consideration.

	Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand		
Emergence regime changes – tidal changes	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand	No	The nature and scale of the proposed works are such that no measurable change will occur. No possible LSE

	Subtidal seagrass beds Subtidal mixed sediments		
Habitat structure changes – removal of substratum.	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments	No	No removal of substratum is proposed. No possible LSE

	Subtidal sand		
Introduction of light	Coastal lagoons Intertidal seagrass beds Intertidal sand and muddy sand Subtidal seagrass beds Subtidal sand	No	The only lighting in the area is from houses and a small number of navigation marks. There is no proposal to install any lighting, and the works will only be conducted in daylight hours. No possible LSE.
Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion – construction	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand	Yes	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Whilst the piling will cause some disturbance, this is relatively minor. This is therefore a LSE for further consideration.

	Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand		
Physical change to another sediment type	Coastal lagoons Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand	No	No change to another sediment type is proposed. No possible LSE.

Physical loss (to land or freshwater habitat)	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds Intertidal coarse sediment Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand	No	No physical loss to land or freshwater habitat. No possible LSE.
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Removal of non-target species	Coastal lagoons Atlantic salt meadows Intertidal seagrass beds Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand	No	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Water column No physical removal of non-target species is proposed nor likely. No possible LSE
Smothering and siltation rate changes (heavy)	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Salicornia and other annuals colonising mud and sand Atlantic salt meadows Spartina swards Intertidal seagrass beds	No	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The scale of the works is such that heavy changes to siltation rates are not possible. No possible LSE.

	Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal coarse sediment Subtidal mixed sediments Subtidal sand		
Smothering and siltation rate changes (Light)	Coastal lagoons Intertidal seagrass beds Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds Subtidal mixed sediments Subtidal sand	No	The supporting habitats within or near the proposed works are: Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand The scale of the works is such that measurable siltation changes are unlikely. No possible LSE
Water flow (tidal current) changes, including sediment	Coastal lagoons Intertidal seagrass beds	No	The works are small and there is no likelihood of any changes.

transport considerations.	Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Subtidal seagrass beds		No possible LSE
Wave exposure changes	Annual vegetation of drift lines Coastal lagoons Perennial vegetation of stony banks Shifting dunes along the shoreline with Ammophila arenaria Intertidal seagrass beds Subtidal seagrass beds	No	The nature of the works is such that will be no possible changes. No possible LSE

The tables indicate that there is the potential for a LSE due to the proposed works.

An Appropriate Assessment is required.

6 Appropriate Assessment

The screening for both Southampton Water SPA; Solent and Dorset Coast SPA; and Solent Maritime SAC have been combined, and this covers the Ramsar site by default.

Assessment table –

Interest feature	Identified LSE	Can LSE be avoided?
Birds	Above water noise – construction.	Yes – the ecology report provides appropriate guidance. Whilst it is sometimes suggested that the over wintering bird season (October to March inclusive) it is pointed out that all dredging works in this river (including near the works site) is undertaken during the October to March period. The short use of a crane barge is insignificant. No resulting LSE
Birds	Barrier to species movement – construction	Yes - The proposed works are not significantly different to the existing noise climate, with only the piling plant being a new addition. This is, however, very short lived and a common occurrence in the harbour. Whilst it is sometimes suggested that the over wintering bird season (October to March inclusive) it is pointed out that all dredging works in this river (including near the works site) is undertaken during the October to March period. The short use of a crane barge is insignificant. No resulting LSE

Birds	Changes in suspended solids – construction	Yes - Piling works will produce non continuous, short term localised changes in suspended sediment concentrations. However, considering the existing high levels of vessel activity, any changes are likely to be of negligible values and unmeasurable. In real terms, these will be less than the normal disturbance from vessels in the area. No resulting LSE
Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand	Abrasion/disturbance of the substrate on the surface of the seabed – construction.	Yes – during construction there is likely to be minor disturbances caused by the spud legged crane barge. Such disturbances are a direct result of the barge operation and cannot be avoided. However, experience shows that such disturbances are quickly removed following a few tides. No resulting LSE
Water column	Barrier to species movement – construction	Yes – during construction there is likely to be minor disturbances caused by the spud legged crane barge. Such disturbances are a direct result of the barge operation and cannot be avoided. This is a busy area of the river with many vessels transiting the main channel. No resulting LSE
Intertidal mixed sediments Intertidal mud Intertidal sand and muddy sand Water column	Changes in suspended solids – construction	Yes - Piling works will produce non continuous, short term localised changes in suspended sediment concentrations. However, considering the existing high levels of vessel activity, any changes are likely to be of negligible values and unmeasurable. In real terms, these will be less than the normal disturbance from vessels in the area. No resulting LSE
Intertidal mixed sediments Intertidal mud	Penetration and/or disturbance of the substratum below	Yes – the proposed piles will occupy 0.212m² of mudflat. The Biodiversity Net Gain Assessment demonstrates that biodiversity gains can be achieved through the enhancement of the existing modified grassland and intertidal mudflat habitats. Proposed measures include improved grassland

	the surface of the seabed	management, implementation of biosecurity measures, periodic removal of marine litter and debris, and the protection of intertidal habitats from unnecessary disturbance. Additional biodiversity benefits may also be achieved through the incorporation of marine habitat enhancement features within the detailed design of the jetty and pontoon. No resulting LSE
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The Appropriate Assessment demonstrates that, whilst there is some minor temporary impact, the proposed works will not generate a Likely Significant Effect.

7 Biodiversity Net Gain

The Biodiversity Net Gain assessment has been provided by Fathom Ecology Ltd. The document is provided as part of the application documents.

Summary –

The Biodiversity Net Gain Assessment demonstrates that the proposed development can be delivered whilst retaining the ecological integrity of the Site and providing a measurable enhancement to biodiversity.

The development has been specifically designed to avoid direct impacts to the Atlantic Salt Meadow and minimize impacts to the intertidal habitats with an elevated jetty structure and floating pontoon. Permanent habitat loss is limited to a negligible footprint associated with the support piles and has been treated as a de minimis impact within the Biodiversity Metric assessment.

The proposed habitat enhancements result in an overall gain of 13.76% of habitat units, thereby exceeding the statutory requirement to achieve a minimum 10% Biodiversity Net Gain. The enhancement measures will provide long-term ecological benefits through improvements to grassland condition, management of the intertidal habitat and the incorporation of biodiversity-friendly design features.

Subject to the implementation of the habitat enhancement and management measures outlined within this report, the proposed development is considered compliant with Biodiversity Net Gain requirements and relevant planning policy. The scheme will deliver a measurable enhancement to biodiversity whilst maintaining the ecological value of the River Hamble estuary and its associated designated sites.