

		Management: Most of these initiatives aim to protect wintering bird feeding and roosting areas from recreational disturbance. ▪ Bird aware Solent. ▪ Solent birds (brent goose and wader strategy) ▪ Seal code of conduct relevant to Chichester and Langstone Harbour ▪ Paddle sports code of conduct ▪ Sussex Inshore Fisheries and Conservation Authority byelaws on bait Collection Stakeholder Concerns: Increasing housing within a 30-minute drive of Chichester Harbour is predicted to increase levels of recreation in the coming years, particularly paddle boarding, kayaking and beach recreation. High levels of bird disturbance have been associated with paddle boarding and kayaking, impacting on both wintering and breeding birds. Birds are frequently disturbed by recreational use of the harbour (on shore and on water). Many tern or wader breeding sites (e.g. East Head) are unusable due to human disturbance. Bait collection removes significant biomass/species from certain areas of the SPA, causing disturbance to birdlife and releases sediments/nutrients. Motorboating causes disturbance to birds (and seals) within the SPA and has many associated issues (e.g. fuel, litter, anti-fouling paint, moorings).
Solent SAC	Maritime	~994m south west General site character • Marine areas, Sea inlets (14%) • Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) (59%) • Salt marshes, Salt pastures, Salt steppes (23%) • Coastal sand dunes, Sand beaches, Machair (0.5%) • Shingle, Sea cliffs, Islets (3%) • Broad-leaved deciduous woodland (0.5%) Download the Standard Data Form for this site as submitted to Europe (PDF <100kb) Note When undertaking an appropriate assessment of impacts at a site, all features of European importance (both primary and non-primary) need to be considered. Annex I habitats that are a primary reason for selection of this site • 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 <i>Zostera</i> 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 <i>Sabellaria spinulosa</i> 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 <i>Spartina alterniflora</i> in the UK and is one of only two sites where significant amounts of small cord-grass <i>S. maritima</i> are found. It is also one of the few remaining sites for Townsend's cord-grass <i>S. x townsendii</i> and holds extensive areas of common cord-grass <i>Spartina anglica</i>, all four taxa thus occurring here in close proximity. It has additional historical and scientific interest as the site where <i>S. alterniflora</i> was first recorded in the UK (1829) and where <i>S. x townsendii</i> and, later, <i>S. anglica</i> 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 <i>Atriplex portulacoides</i>, common sea-lavender <i>Limonium vulgare</i> and thrift <i>Armeria maritima</i>. 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 <i>Spartina</i> spp. Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site • 1110 Sandbanks which are slightly covered by sea water all the time • 1140 Mudflats and sandflats not covered by seawater at low tide • 1150 Coastal lagoons * Priority feature • 1210 Annual vegetation of drift lines • 1220 Perennial vegetation of stony banks • 1310 Salicornia and other annuals colonizing mud and sand • 2120 "Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")" Annex II species that are a primary reason for selection of this site • Not Applicable Annex II species present as a qualifying feature, but not a primary reason for site selection • 1016 Desmoulin's whorl snail <i>Vertigo moulinsiana</i>
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Solent and Isle of Wights Lagoons SAC	4.1km south west	Annex I habitats that are a primary reason for selection of this site • 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 <i>Lamprothamnium papulosum</i>, the nationally scarce lagoon sand shrimp <i>Gammarus insensibilis</i>, and the nationally scarce starlet sea anemone <i>Nematostella vectensis</i>. 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 <i>N. vectensis</i>. Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site • Not Applicable Annex II species that are a primary reason for selection of this site • Not Applicable Annex II species present as a qualifying feature, but not a primary reason for site selection • Not Applicable
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3.0 HRA Stage 1: Screening for Likely Significant Effects

3.1 Potential Impacts of the Proposed Development on European Sites

The following potential impacts on a European site from the proposed development are given consideration:

- Air pollution
- Water pollution
- Light pollution
- Visual disturbance
- Noise disturbance
- Loss of associated habitat
- Hydrological changes
- Impacts to qualifying species of the European site, either directly or indirectly where they are considered to be functionally linked to the site

- Recreational disturbance (especially dog walking)
- Synergistic impacts

Any impact requires a pathway to exist (direct or indirect) between the proposal and European Site, or functionally linked habitat.

3.2 Evaluation of the Potential for Likely Significant Effects on European Sites

Table 2 details an assessment of potential for Likely Effects as a result of the proposed development.

Table 2: Evaluation of the Potential for Likely Significant Effects on sites of European Importance.

Potential Impact	Pathway	Potential for Likely Effect	Justification
Operational air pollution	The risk that generation of constructional or operational aerial outputs such as dust, which may impact air quality and damage habitats associated with the European site.	No likely effect foreseen.	The proposed development is of small scale and will not generate operational aerial outputs that would result in significant accumulation by deposition nearby and most certainly not on any protected site. Constructional dusts are expected to fall-out within 50m ¹ . All sites are located over this distance from the site and therefore is out of range.
Water pollution	The risk that the transfer of pollutants from site could take place via ground or surface water to European sites impacting any standing or running water bodies linked to their ecological functioning.	No likely effect foreseen (in light of industry standard mitigation).	The site is in a medium to high groundwater vulnerability zone with a soluble rock risk. There is therefore a moderate to high risk for pollutants to percolate into ground water and travel via that pathway to groundwater waters, and through those means surface waters feeding into coastal European Sites

¹ Holman et al (2014). IAQM Guidance on the assessment of dust from demolition and construction, Institute of Air Quality Management, London. www.iaqm.co.uk/text/guidance/construction-dust-2014.pdf.

² National Highways et al (2020). CG 501 Design of highway drainage systems. Design Manual for Roads and Bridges

			There are no direct links between the site and European Sites via running water courses. The site is a sufficient distance from European Sites to be unaffected by direct overland water movements as surface water will be captured by the drain network. The risk that pollutants may enter the drain network and via discharges affect ground or surface waters functionally linked to or connected to the SAC is mitigated by the site being in a Source Protection Zone 1, in which discharge to the ground is forbidden without sufficient justification. However there may be risks when the rate of surface water runoff is greater than the rate at which water is able to infiltrate into the ground, at which time discharge to the ground may be utilised to drain water.² Whilst mitigation should generally be excluded from the HRA screening process, it should be noted that the implementation of industry standard environmental management techniques (such as not working in periods of heavy rain) are anticipated to mitigate this risk. On balance with the small scale (x3 buildings) of development, which is taking place on pre-developed land, whilst there is a possibility of any pollution event travelling through ground
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			water or run off from the site, the effects are likely to be limited.
Hydrological changes	The risk that construction may enact alterations to the hydrological regimes underpinning the functioning of habitats associated with the European site and enact adverse impacts upon any associated flora or fauna.	No likely effect foreseen.	The construction will be of small scale and using pre-developed land in an urbanised site will not involve substantial groundworks. For this and the reasons cited in the section above, it is not considered that the construction will not result in any significant alterations in the movement of groundwater or overland flow. There will be no impacts upon watercourse functionality.
Light pollution	The risk that light spill into the European site could impact upon light sensitive species population viability.	No likely effect foreseen.	No line of sight between European Sites and the development site. All are located located at a distance beyond the range of any light pollution generated by the site, which in the case of this small development would be unlikely to raise the cumulative impacts of local light pollution to a significant degree above the baseline.
Visual disturbance	The risk that the development may impact upon the visual amenity of the European site.	No likely effect foreseen.	No line of sight between European Sites and the development site. All are located located out of range of visual range from the site.
Noise disturbance	The risk that noise generated during the development may disturb sensitive species present within the European site.	No likely effect foreseen.	Construction activities and long term site use will not generate noise impacts that will impact European Sites or any qualifying species by virtue of distance and the short time frames and small scale involved in the development.
Loss of associated habitat	The risk that the development may lead to loss of habitats associated with the European site.	No likely effect foreseen.	The proposed development will not directly affect any European site and will not result in the loss of any habitats either on site or functionally linked by virtue of connectivity to any European site.

Impacts to qualifying species of the European site, either directly or indirectly.	The risk that the development may lead to disturbance, death or injury to qualifying species or the loss of habitat for qualifying species. This may be directly within the European site or indirectly where populations of qualifying species are present within the site or habitats affected by the development and are considered to be functionally linked to the European site.	No likely effect foreseen.	The development is isolated from habitats associated with European Sites and contains no habitats of significance to qualifying species. Therefore, the development is deemed to have no impacts upon qualifying species.
Recreational disturbance (especially dog walking)	The risk that the development may lead to adverse impacts upon habitats and species communities within the European site via increased recreational pressure, including trampling, litter, vandalism, arson, disturbance of and destruction of wildlife by walkers, cyclists, motorbikes, cats and dogs and nutrient input via dog fouling. Dogs may also cause disturbance of fauna. An additional recreational pressure may include the collecting of flora and fauna, in particular fungi and wildflowers.	Likely effect foreseen (Chichester & Langstone Harbours and Solent Maritime only) No likely effect foreseen for Solent & Isle of Wight Lagoons	The proposed development includes a net gain in residential dwellings of 17. This will result in a net increase of 64 people and is likely to lead to an increase in use of the European Sites with an associated increase in recreational impacts. Chichester & Langstone Harbours SPA and Solent Maritime are most likely to be impacted, being approximately 1km from the site and could be affected by recreational activities. Solent and Isle of Wights Lagoons SAC is beyond the 0-3m zone of influence where most significant effects are anticipated. It is therefore anticipated that recreational impacts will be dispersed temporally and spatially rather than concentrated within a small area close to a development and the effects of individual visitors from the development are likely to be nugatory on this site.