

Royal Southern and RAF Yacht Clubs

ENVIRONMENT NOTE

1. LOCATION

The Royal Southern Yacht Club (RSrNYC) and RAF Yacht Club (RAFYC) are located on the Western bank of the river Hamble, a tributary of Southampton Water in Hampshire.

2. SITE

The development site comprises of a water area of approximately 1 hectare, which is split between a sub tidal area of 7,000m² and an intertidal area of approximately 3,000m². The ownership of this water area (fundus) is split between the RSrNYC and the Crown Estate and RAFYC. The intertidal area falls within the demise of the RSrNYC and RAFYC.

The following facilities are incorporated within the water area:

- Deep water moorings
- Intertidal mooring
- Inspection Piles x 2
- Tidal Slipway use x 2
- Static crane lifting & Launching

The proposed development zone is within an area of activity and disturbance due to the presence of the above facilities and the associated activities. This is important context when considering the potential for impact and extent and nature of proposed mitigation.

3. ENVIRONMENTAL DESIGNATIONS RELEVANT TO THE SITE

A large proportion of the Hamble and its banks are designated in one form or another under various classifications.

3.1 INTERNATIONAL

3.1.1 Special Area of Conservation (SAC)

The River Hamble is part of the Solent Maritime Special Area of Conservation (SAC), created as 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 SAC designation covers the sub-tidal area with the boundary the line of MLW.

The Royal Southern YC and RAFYC sites straddle this boundary with any work on the intertidal areas outside the SAC, however generally, works on the existing or proposed pontoons take place within the SAC.

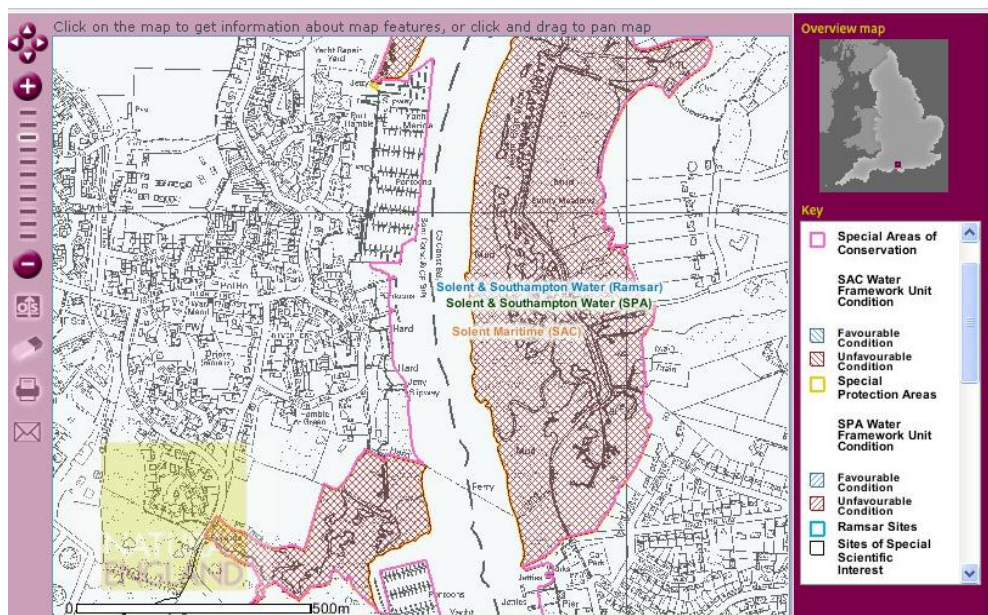


Figure 1 - SAC and SPA/RAMSAR designations. © Crown Copyright and database right 2012. Ordnance Survey Licence number 100022021. © Crown Copyright. Licence number 100022432.

3.1.2 SPA & RAMSAR

The Hamble Estuary is a component of the Solent and Southampton Water SPA and RAMSAR Site. The SPA is designated under the Wild Birds

Directive for supporting significant numbers of internationally important wild birds, whilst the RAMSAR site is designated under the RAMSAR Conservation. Not all the interest features of the Solent and Southampton Water SPA and RAMSAR designations occur within the Hamble Estuary or are at a level of abundance for qualification.

Qualifying species for designation as a SPA or RAMSAR site are referred to as 'interest features', with key habitats necessary to support the birds that qualify being classed as 'sub-features'. The sub-features present at the Royal Southern and RAF Yacht Club sites are 'Intertidal mud and sandflats' and 'Estuaries'.

3.2 NATIONAL

3.2.1 SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)

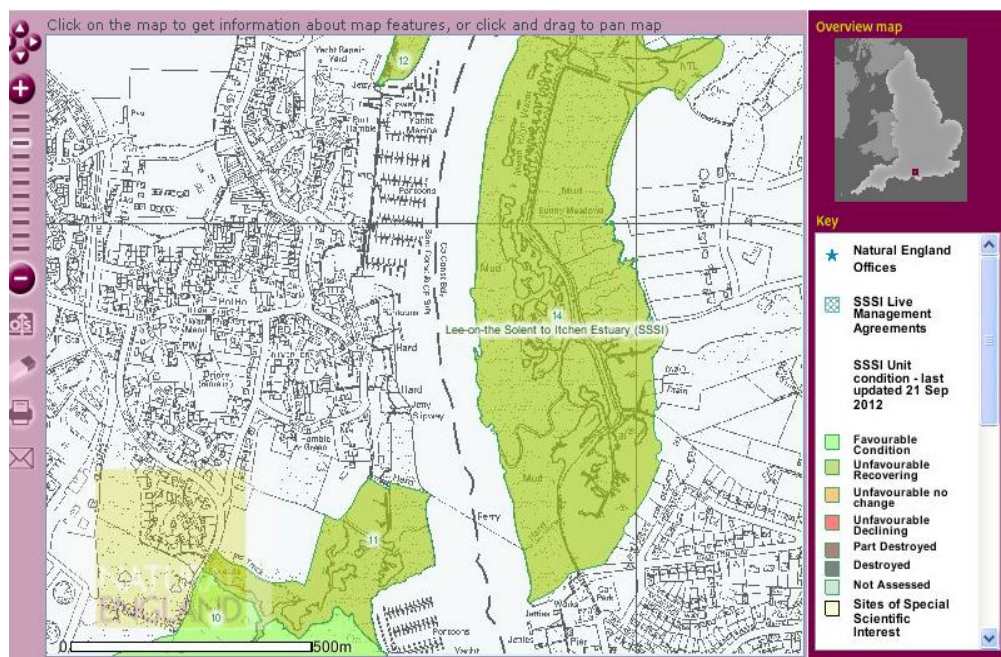


Figure 2 - SSSI designated units near the site. © Crown Copyright and database right 2012. Ordnance Survey Licence number 100022021. © Crown Copyright. Licence number 100022432.

The proposal site is in proximity to several "units" of the 'Lee-on-the-Solent to Itchen Estuary' SSSI. The SSSI covers a total of 585.79 Hectares comprised of varied intertidal sediment resources, including estuarine mud, sandy beaches and mixed sediments. Directly opposite the site (within

100m) is unit 14 (38.15 Hectares), with Unit 11 (6.68 Hectares) approximately 250m to the South and Unit 12 (10.11 Hectares) approximately 400m to the North. It is worth noting that whilst the majority of the 27 units that make up the Lee-on-the Solent to Itchen Estuary' SSSI are classified as "Favourable", the units closest to the Royal Southern and RAF yacht clubs are classified as "Unfavourable Recovering". No reason is given in the Natural England Unit assessment comments for this classification.

3.3 BIODIVERSITY ACTION PLAN (BAP)

The BAP classification is a national (UK) action plan that describes the biological resources of the UK and provides detailed plans on conservation of these resources. Actions plans for the most threatened species and habitats were set out to aid recovery and reported on every three to five years. Mudflats are generally classified under the BAP as they *"are highly productive areas which, together with other intertidal habitats, support large numbers of predatory birds and fish. They provide feeding and resting areas for internationally important populations of migrant and wintering waterfowl, and are also important nursery areas for flatfish. They are widespread in the UK with significant examples in the Wash, the Solway Firth, Mersey Estuary, Bridgwater Bay and Strangford Lough."* Mudflats also help provide a sea defence by dissipating wave energy and protecting sea defences.

It is noteworthy that despite being classed as BAP habitat, the area in front of the Royal Southern and RAF Yacht Clubs is subject to significant activity levels and disturbance and does not provide a benefit to the overall goal of the BAP due to the public slipway, inspection pile (and associated activity) and consistent use across it.

The presence of pontoons, slipways, access bridges and piers (with related activity levels) crossing the inter-tidal zone to the deeper water create individual small scale pockets of inter-tidal habitat that are subject to regular disturbance along this section of the western bank of the Hamble. The section of habitat subject of these proposals is the last in a number of such elements ("a book-end") and it is not considered to play a valuable part in creating a network of such areas. By distinct

contrast the BAP habitat on the opposite east bank provides an extensive and valuable resource subject of much lower levels of associated activity.

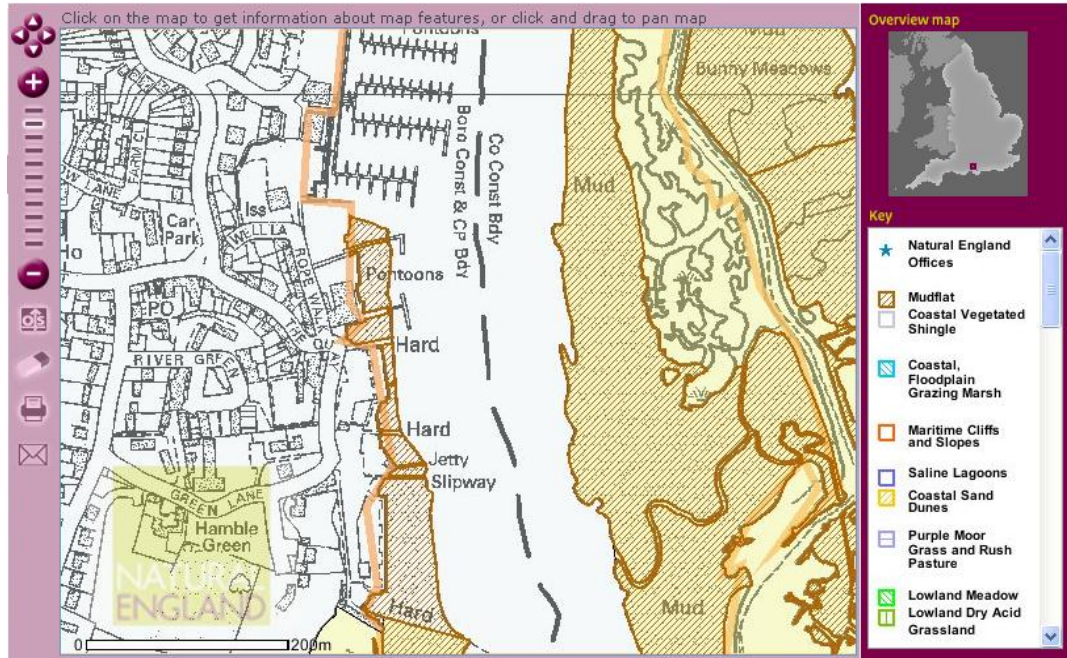


Figure 3 BAP habitats. © Crown Copyright and database right 2012. Ordnance Survey Licence number 100022021. © Crown Copyright. Licence number 100022432.

4. THE PROPOSED WORKS

The proposed works are described as:

Reconfiguration of berthing facilities and installation of additional pontoons to provide more flexible and efficient berthing provisions. Improved arrangements for access to water for a range of users including: floating all-tide dinghy slipway; disabled access berth; crane and holding berth; dedicated visitor and event berthing.

Capital dredging works to create additional water depth to berths and the associated facilities. A new sheet piled quay wall with suspended timber deck and infill behind to replace the existing failing structure and removal of inspection piles and existing slipway.

The details of the proposed works is contained in the various supporting documents attached to the various applications and are not repeated here.

5. POTENTIAL FOR IMPACT

5.1 SCALE OF WORKS (COMPARED TO DESIGNATIONS)

The BAP Mudflat habitat action plan states *“The total UK estuarine resource has been estimated as c588,000 ha of which 55% is intertidal area, mostly mud and sandflats with a lesser amount of saltmarsh. Intertidal flats cover about 270,000 ha. The UK has approximately 15% of the north-west European estuarine habitat.”*

The footprint of the whole Royal Southern and RAF Yacht Club sites is approximately 1 Hectare, with the proposed works taking place on approximately half the site. The proposed dredge area will directly affect less than 1/3 hectare (3,000m²) of BAP habitat. By contrast the area of the BAP habitat noted as being within the Lee on the Solent to Itchen Estuary is some 586 Ha – the percentage of lost habitat amounts to 0.05%.

5.2 ASSESSMENT OF IMPACTS

Flow modelling has been undertaken by ABPmer to establish the impacts of the proposed works and evidence has been established that confirms that any changes to the local environment would be very small, generally undetectable and all in the immediate vicinity of the scheme. Accordingly there would be a negligible effect if any on any of the existing habitats arising from the proposals.

Natural England has confirmed their agreement that the works will not adversely affect the function of the Hamble Estuary therefore by implication the wider Solent Maritime Special Area of Conservation (email correspondence 13/10/12). By extension the same assessment can be applied to the SSSI designation, none of which is directly impacted by the proposals.

Dredge works that are proposed for the intertidal area on the site would move the low water mark closer inshore and would have the effect of increasing the sub-tidal habitat (subject of the SAC designation). It is however likely that part of the increased sub-tidal area would be the subject of maintenance dredging every few years which would impact the ability of habitat to develop.

It is worth noting that the Port Hamble Marina pontoon complex has been excluded from the SAC classification where it would otherwise have been included. Instead

of running along the low water mark as with the rest of the river at Port Hamble the boundary runs along the line of the outermost pontoons. Maintenance dredging within the Port Hamble basin is likely to reduce as a function of the scheme. The ABPmer report is clear that the overall maintenance dredging burden in the area will remain the same as is currently the case and the sub-tidal area will clearly increase, thus indicating a direct increase in undisturbed sub-tidal habitat.

The proposed works are unlikely to contribute to any adverse impact on the BAP habitats of the River Hamble – note the assessment of the percentage loss above which ignores the relevant quality and location of the habitat. The Royal Southern and RAF Yacht Club site is in effect a book end to the BAP sites on the east bank of the river which is of limited value and under stress.

It is considered that the scale of benefits arising from the proposals will outweigh any potential impacts on the BAP Habitats.

6. MITIGATION OF WORKS

Notwithstanding the above assessment detailed and extensive consideration has been given to the various opportunities to mitigate for any perceived impacts and to enhance the environmental quality of the area.

Opportunities for mitigating within the proposal/applicant site are limited. Detailed discussions have been held with the River Hamble Harbour Authority, Natural England and Eastleigh Borough Council with respect to appropriate and like for like mitigation opportunities on the Hamble River but unfortunately no such opportunity exists at this time. This in part is a reflection of the relative health of the River Hamble.

6.1 PRINCIPAL MITIGATION

Through the efforts of the applicant an opportunity site has been identified downstream of the proposed works. The site in question and its relationship to the study site is identified in the aerial photo at Figure 4. It is important to note that the mitigation site is designated as SPA, Ramsar and SSSI and is noted in unfavourable condition (SSSI unit noted as unfavourable recovering).



Figure 4 – Mitigation Site – Indicated at bottom of image

The mitigation site has two redundant pontoons moored in the area as shown which historically have been secured by mooring lines. The proposed mitigation will see the removal of the pontoons and reinstatement of the inter-tidal zone through a natural process of repair and settlement of material.



Figure 5 – Area of Mitigation

The pontoons themselves are each approximately 2.5m x 12m giving a total of some 50m². However the area of intertidal influenced by the pontoon structures (area between pontoons and potential mooring radius) is much larger. An estimate of the area is made in Figure 5; the total area being nearer 200m².

It is noteworthy that the mitigation will reinstate an internationally and nationally designated site and assist in meeting the conservation objectives of an area that is in unfavourable condition. The value of the mitigation site is quite clearly of greater importance and significance than the area affected by the works.

6.2 OTHER MITIGATION MEASURES AND CONSIDERATIONS

In addition to the principal item of mitigation noted above other proposed enhancement/mitigation measures (including some within the application site) and other relevant environmental factors arising as a result of the proposal include:

- A 'Vertical Habitat' will be created within the "in-pans" of the sheet pile wall – i.e. the creation of "a living wall".
- Removal of the inspection piles and inspection grid (reinforced concrete) and associated vessel activity and maintenance works.
- An intertidal habitat will be retained beneath the new timber decking structure.
- Increased sub-tidal habitat as a result of the intertidal dredge – Not SAC designation, however increased equivalent sub-tidal habitat will be created. As an aside there will be improved sub-tidal habitat (not designated) within Port Hamble Marina – consequent of the reduced dredging & disturbance.
- Reduced Bosun vessel activity/impact/emissions.
- Commitment to make maintenance dredged arisings available for beneficial re-use if a scheme can be brought forward as part of a wider dredging plan.

6.2.1 CONSTRUCTION MATERIALS

The use of appropriate construction materials also provide an opportunity for positive contribution to offsetting any impacts. These include:

- The new pontoon structures will be decked in 'Kebony' a fully sustainable softwood timber as an alternative to hardwood species.
- The Vertical Sheet Pile wall will be clad in reclaimed timber sections above mean high water.
- Where possible existing piles and pontoons will be recycled and incorporated into the project to minimise material waste.

6.2.2 CONSTRUCTION METHODS

There are a number of best practice construction methods that will be applied to the works and these include:

- Best practice vibro-piling techniques will be utilised to drive the sheet and tubular piles wherever practical.
- The piling works will be undertaken during daylight hours to minimise the impacts of noise pollution.
- Upon completion of the sheet pile wall works, the dredging works will commence. Dredging works will be carried out by a self-propelled backhoe dredger anchored in position by spud legs. The dredger will fill a self-propelled split hopper which will take approximately 2.5 hours to complete, where upon the barge will travel to the disposal site and return to site in readiness for the next ebb tide dredging cycle. Backhoe dredging is recognised on the Hamble as creating least disturbance and it is acknowledged best practice.

7. SUMMARY/CONCLUSION

The scale of the works is modest, modelling by ABPmer has identified that impacts arising from the scheme are minor in nature, generally undetectable and within the immediate proximity of the site. Impact on the European site has been ruled out.

The package of mitigation offered up presents an opportunity for enhancement of a valuable internationally designated site. Other mitigation measures including sensitive design, construction materials and methods produce a package that will offset any potential for impact.

8. APPENDIX 1 – Correspondence from Natural England 24/10/12

Marina Projects Ltd
11th January 2013
Version 5

Date: 24 October 2012
Our ref: 67062
Your ref:



Cromwell House
15 Andover Road
WINCHESTER
Hampshire
SO23 7BT

Dan McKiernan
Marina Projects Ltd

By email only, no hard copy to follow

Dear Dan,

**Lincegrove and Hackett's Marshes Site of Special Scientific Interest
Solent Maritime Special Area of Conservation
Solent and Southampton Water Special Protection Area
Solent and Southampton Water Wetland of International Importance under the Ramsar Convention**

Location: Royal Southern and RAF Yacht Clubs, River Hamble, Hampshire
Proposal: Pre-application comments on capital dredge technical report

Thank you for your email of 10 October 2012 consulting Natural England for our pre-application comments on the above technical report. I have read and would broadly agree with the conclusions within the report, namely that the proposed capital dredge will not adversely affect the functioning of the Hamble Estuary and therefore by implication the wider Solent Maritime Special Area of Conservation.

I would be very happy to meet with you to discuss the project in more detail in due course

Please do not hesitate to contact me should you wish to discuss this response.

Yours Sincerely

A handwritten signature in black ink that reads "G Horton". The signature is stylized and cursive.

Graham Horton
Marine Adviser, Southern Seas Team

Tel: 0300 060 4851
Email: Graham.Horton@naturalengland.org.uk