

5.0 statement of commitments

As part of the EA, a draft Statement of Commitments (SoCs) was provided outlining the various mitigation methods to be adopted through the construction and on-going operation of the marina. Should the application be approved, these commitments will form either part of the Conditions of Approval, be adopted within the Construction Management Plan (CMP) or be enforced through the MEOMP.

The following SoCs include those originally proposed or amended where necessary as well as additional as seen fit within the environmental assessment of the application:

5.1 PLANS, DOCUMENTS AND APPROVALS

1. The Project will be completed in accordance with the submitted plans and descriptions of proposed development provided in this EA Report.

5.2 MOBILISATION OF SEDIMENTS

Construction

Sediment mobilisation during construction will be minimised by the following measures:

2. Enforcing a 'no wash' speed limit on vessels as they approach and move around the work site. This will form part of the final detailed construction management plan documentation.
3. Sediment mobilisation during pile installation will be reduced by the use of hollow steel piles, which displace less sediment than traditional wooden piles;
4. The use of silt curtains may be necessary to minimise the dispersal of sediment. However, care must be taken to ensure that the installation and operation of silt curtains does not inadvertently damage seagrass (e.g. silt curtain based chain contacting nearby seagrass);
5. Monitoring of water turbidity will be considered during the installation of piles, to ensure that no sustained or widespread increases in turbidity occur.
6. Silt fences and erosion control measures will be placed around the site for the car park.

Ongoing Presence and Operation

Mobilisation of sediments due to boats accessing the marina will be minimised by:

7. Enforcing a 'no wash' speed limit for vessels as they approach and move around the marina. This will be included on signage around the marina; and
8. Vessels with deeper drafts will be housed on the outer arm to maintain greater vessel clearance from the seabed.

5.3 IMPACTS TO WATER AND SEDIMENT QUALITY

Construction

Potential impacts on water quality during construction will be minimised by the following measures:

9. Accidental spillages of fuels and oils will be contained within floating booms and cleaned up as soon as possible to prevent weathering and subsequent deposition of heavy fractions; and
10. Construction teams will be prohibited from discharging sewage directly into Brisbane Water and bilge water before removing any oils using bilge pads.

Ongoing Presence and Operation

The following mitigation measures will be implemented to reduce potential risk of water contamination from boats:

11. Boat owners will be educated about the environmental problems associated with use of copper-based anti-fouling paints; discouraged from *in-situ* cleaning of boat hulls that have been treated with copper paints and encouraged to switch to non-toxic anti-fouling paints;
12. Accidental spillages of fuels and oils will be contained within floating booms and cleaned up as soon as possible to prevent weathering and subsequent deposition of heavy fractions;
13. The potential for introduction of contaminants during on board washing of boats could be reduced by encouraging the use of environmentally friendly cleaning agents (i.e. those that do not contain chlorine or phosphate-based ingredients);
14. Boat owners will be prohibited from discharging sewage directly into Brisbane Water and bilge water before removing any oils using bilge pads;
15. Marina users will be advised of the location of existing pump-out facilities in Brisbane Water to help mitigate any impacts arising from the disposal of sewage; and
16. A Marina Manager or representative is to be present on-site 7 days a week generally from 9am to 5pm to ensure the above mitigation measures are upheld. Outside of these hours contact details of the Office of Environment and Heritage (131 555) and off-site contact details of the Marina Manager are to be provided on signage.

5.4 DAMAGE TO HABITATS

Construction

To minimise the potential for damage to seagrass habitats during marina installation the following measures will be followed:

17. Construction teams will be made aware of the presence and distribution of this environmentally sensitive area as part of the detailed construction management plan documentation. This documentation will include the importance of seagrass habitat, and details on how and why to avoid damaging seagrass;
18. Construction teams will be prohibited from deploying anchors within seagrass due to the likelihood of causing damage; and
19. Construction teams will be made aware of the importance of avoiding navigating over seagrass, particularly in shallow areas. If movements over seagrass are necessary during construction then these should be done at high tide, while travelling slowly and ensuring that adequate clearance is maintained between seagrass and propellers.

Ongoing Presence and Operation

To minimise the potential for damage to seagrass habitats due to the movement of boats accessing the marina the following measures will be implemented:

20. Information (such as signage) will be provided to marina users on the presence and distribution of seagrass at the marina site (including maps). The importance of this environmentally sensitive area will be outlined and details on how and why to avoid damaging seagrass provided;
21. Boat owners to be prohibited to deploy anchors within seagrass;
22. Boat owners to avoid navigation over seagrass beds, particularly shallow areas; and
23. On-shore signage will be provided at the marina highlighting the presence and distribution of seagrass and creating a 'vessel exclusion zone'.

5.5 INTRODUCTION OR SPREAD OF MARINE PESTS

Prior to Construction

24. Amended: The area of *C. taxifolia* identified within the Aquatic Ecology Report will be removed in conjunction with NSW Fisheries, prior to any construction.

Construction

The risk of spreading *Caulerpa taxifolia* around the construction site will be reduced through the following measures:

25. Information on why the spread of *C. taxifolia* is an environmental issue and how to avoid aiding its spread will also be provided;
26. Deleted: Through the implementation of amended SoC No. 24;
27. Amended: Any equipment is to be inspected before and after use to avoid the spread of *Caulerpa taxifolia* and any *Caulerpa taxifolia* collected on gear will be removed, bagged and disposed of with general refuse.

Ongoing Presence and Operation

To minimise the risk of *C. taxifolia* being spread around the marina site, or to other areas by the boats accessing the marina facility, the following measures will be implemented:

28. Any equipment is to be inspected before and after use to avoid the spread of *Caulerpa taxifolia* and any *Caulerpa taxifolia* collected on gear will be removed, bagged and disposed of with general refuse; and
29. Details on why the spread of *C. taxifolia* is an environmental issue and how to avoid aiding its spread to be provided to Marina berth holders.

5.6 SHADING OF THE WATER COLUMN AND SUBSTRATUM

Ongoing Presence and Operation

Shading effects of the jetty, pontoons and walkways will be mitigated by:

30. Minimising the widening of the existing jetty;
31. Replacing the existing jetty boarding with ecostyle "sea grass friendly" polypropylene decking;
32. Keeping the length and width of floating structures to a minimum; and
33. Using mesh or similar material for floating structures to allow light penetration.

5.7 WAVE/TIDE/ESTURINE FLOODING/SEA LEVEL RISE HAZARD MITIGATION

Ongoing Presence and Operation

Impacts of wave/tide/estuarine flooding/sea level rise will be mitigated by:

34. The existing jetty will be raised by no less than 0.5m from its existing level (to a minimum level of 1.55m AHD for the underside and approximately 1.75m AHD for the deck level); and
35. The proposed jetty will be designed for horizontal and vertical wave loads and be closed when waves over-top the deck.
36. Marina will be designed to withstand a current jointly occurring with waves with a speed of 0.1m/s.
37. A Flood Emergency Response Plan will be prepared for the site to address both present and 2050 flood risks for patrons of the marina.
38. The pontoons will as a minimum be designed so as to accommodate the 100-years ARI estuarine flood level for the 2050 planning horizon, by which time the structure will have reached the end of its design life.
39. The pontoons will be designed so as to attenuate wave activity in accordance with Australian Standard *Guidelines for design of marinas* (AS3962).

40. Any electrical services to be designed with estuarine flood levels in mind to ensure safety.

5.8 NOISE

Construction

Impacts of construction noise will be mitigated by:

41. The closest neighbouring residents will be notified of the proposed works. Particular emphasis should be placed on the time frame of the works. A contact name and phone number of a responsible person will be given out so that complaints can be dealt with effectively and efficiently. All complaints or communication should be answered.
42. During the liaison process notes will be made of any particularly noise sensitive times of day and care taken to avoid scheduling noisy works, particularly piling of the closest holes) at these times.
43. All personnel working on the job including contractors and their employees will be made aware of their obligations and responsibilities with regard to minimising noise emissions.
44. Contractors will familiarise themselves with methods of controlling noisy machines and alternative construction procedures. These are explained in AS2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites".
45. Activities that are known or have the potential to create excessive noise will, where possible, be scheduled to occur at times to cause least annoyance to the community. Carrying out such work during early morning will be avoided. This includes start up and idling etc. of heavy machinery prior to commencement of work.
46. Mechanical plant will be silenced using best available control technology. Noise suppression devices will be maintained to manufacturer's specifications. Engines should be fitted with appropriate, well maintained, high efficiency mufflers. Particular emphasis should be placed on the use of exhaust silencers, covers on engines and transmissions and squeaking or rattling components. Excessively noisy machines should be repaired or removed from site.
47. Machines which are used intermittently will either be shut down in the intervening periods between work or throttled down to a minimum.
48. Construction for the entire project will be restricted to the following hours:
 - Monday to Friday 7:00am to 6:00pm
 - Saturday 8:00am to 1:00pm
 - No work on Sundays or Public Holidays
49. Conducting piling only after 9.00 am, and include respite periods.

5.9 TOPOGRAPHY, GEOLOGY & SOILS

Construction

Impacts of construction to topography, geology and soils will be mitigated by:

50. The Construction Management Plan (CMP) prepared for the works will include an erosion and sediment control plan.
51. Erosion and sediment control measures will be consistent with those specified in the Blue Book - Managing Urban Stormwater: Soils and Construction (4th ed, Landcom, March 2004).
52. All erosion and sediment control measures will be established before excavation, demolition or vegetation clearance begins and are to remain in place until all surfaces have been fully restored and stabilised.
53. Sandbags will be placed at the entry points to any culverts and stormwater channels to prevent sediment entering the stormwater system.
54. Sediment control devices (eg silt fences, straw bales wrapped in geotextile etc) will be installed parallel with the contours of the site and immediately downslope of any areas where the natural ground surface has been disturbed.
55. Any spoil storage areas or stockpiles will have appropriate erosion control devices installed to control runoff and prevent sedimentation.
56. Sediment and erosion control devices will be inspected regularly, maintained to ensure effectiveness over the entire duration of the project, and cleaned out before 30% capacity is reached.

5.10 AIR QUALITY

Construction

Impacts of construction on air quality will be mitigated by:

57. Machinery and vehicles will not be left running or idling when not in use.
58. Odour or air pollutant emission complaints will be dealt with promptly and the source will be eliminated wherever practicable.
59. All work sites, general work areas and stockpiles will be closely monitored for dust generation and watered down (with clean water) or covered (via seeding or tarpaulins) in the event of dry and/or windy conditions.

5.11 WASTE MANAGEMENT

Ongoing Presence and Operation

60. Waste management on site will be in accordance with Gosford City Council's Development Control Plan 106 (Waste Management Controls) and Waste Classification Guidelines (EPA 2008), Environmental Guidelines: Best Management

Practice for Marinas and Boat Repair Facilities (EPA 1999) and in accordance with the requirements of the Marine Industries Association of Australia: Clean Marinas Handbook.

5.12 EMERGENCY SERVICES

Ongoing Presence and Operation

61. Upon completion of the marina, access keys will be provided to the NSW Water Police and NSW Maritime to ensure the marina is available for 24 hour emergency access.

5.13 APPROVALS

Ongoing Presence and Operation

62. To identify the requirements for water and sewer services for the development, the developer will submit an application under Section 305 of the Water Management Act 2000 to Gosford City Council's Water and Sewer Department for their formal requirements for the issue of a Certificate of Compliance for water and sewer services under Section 307.

5.14 GENERAL

63. Additional: A Construction Management Plan will be adopted for the works and will outline the above relevant commitments and how these will be achieved.
64. Additional: A Marina Environmental and Operational Management Plan will be adopted for the proposal, and will outline the above relevant commitments and how these will be achieved.

CMP

The following Commitments have been included within an amended CMP (refer Attachment 9):

- 2, 4, 5, 6, 9, 10, 17-19, 25, 27 and 41-59

MEOMP

The following Commitments have been included within the MEOMP:

- 7, 8, 11-16, 20-23, 28, 29, 60 and 61

Conditions of Approval

The following Commitments can be included as Conditions of Approval:

- 1, 3, 24, 34-40, 62 - 64

- Note: 30-33 have been incorporated into the proposed plan and are therefore enforced through Condition 1.

The above commitments and mitigation methods can be added to; with any further requirements of the Department of Planning and Infrastructure, to be included as either Conditions of Approval, and/or to be added to the final CMP or MEOMP.