

# **Environmental Approval Checklist & Review of Environmental Factors**

(EP&A Act - Part 5, Div 5.1)

**Notes:**

- 1. This document includes a MANDATORY checklist for ALL Capex projects.**
- 2. This document includes an REF template (should this be required – as identified in the checklist).**
- 3. Ensure that all licenses and approvals are received prior to the undertaking of any works.**
- 4. Ensure all mandatory sections are completed prior to signature.**
- 5. Make sure to provide necessary supporting evidence where applicable.**

**SECTION 1 - Details****(MANDATORY)**PROPOSAL TITLE: Bradys Point Seahorse Hotels (part of Clontarf Tidal Pool Upgrade)PROJECT OFFICER: Andrew CamarshBUSINESS UNIT PROPOSING ACTIVITY: Capital Projects**SECTION 2 - Applicability****(MANDATORY)**

Is the proposed work a routine activity?

*Where a routine activity is - simple, small-scale activities associated with regular (daily, weekly, monthly, etc.) and general upkeep or maintenance of a building, plant, or structure against normal wear and tear.*

~~YES~~ **NO**

If **Yes**, activity can be undertaken without assessment but must be in line with relevant standards and assessment recorded in the appropriate location.

If **No** proceed to Section 3.

**Note 1:** must ensure "minimal" environmental impact by use of one of the following:

- Standard operating procedure;
- relevant Australian Standards;
- the Building Code of Australia;
- any relevant NSW Roads and Traffic Authority design guidelines;
- Ausspec;
- Northern Beaches Councils standard operating procedure;
- Northern Beaches Councils Pesticide notification plan;
- All product labels and warnings;
- Works that have previously been approved.

**Note 2:** If any Aboriginal cultural material or heritage constraints are found on any job site, all work should cease and the Office of Environment and Heritage and the Metropolitan Local Aboriginal Land Council notified immediately in accordance with the National Parks and Wildlife Act. An assessment can be undertaken by the Aboriginal Heritage Officer via Aboriginal Heritage Office.

<b>SECTION 3 - Background</b>	<b>(MANDATORY)</b>
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**DESCRIPTION OF ACTIVITY:**

Northern Beaches Council proposes to install Seahorse Hotels so that White's Seahorse and other Syngnathiformes can be relocated for the duration of demolition and construction of the Clontarf Tidal Pool, mitigating impacts to threatened aquatic fauna. The Hotels are proposed at Bradys Point, a nearby area of seagrass meadows consisting of dense (> 20 plants per 5 m<sup>2</sup>) *Zostera capricorni* and *Posidonia australis*.

**TRIM FOLDER:**

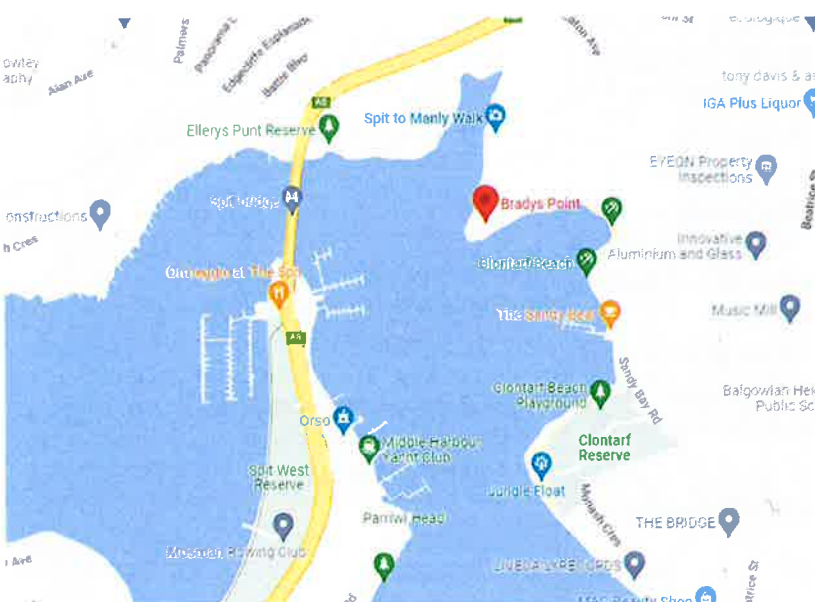
**C002995**

**REASON FOR ACTIVITY:**

Under a separate proposal, Northern Beaches Council is proposing to remove and upgrade the Clontarf Tidal Pool, which involve the demolition of the existing structure and complete replacement with an expanded pool. The pool is located at Clontarf Reserve, in the waters of Middle Harbour. This proposal required the relocation of White's Seahorse, a species that is relatively commonly seen throughout the waters of Sydney Harbour, in particular holding onto the shark nets and rebars of swimming enclosures such as Clontarf (McGrouther, 2019).

**LOCATION:**

The proposed location of the seahorse hotels is Bradys Point just north of Clontarf Beach.



**LAND OWNER:** Transport for NSW (TfNSW) is the registered proprietor of the study area. DPI Fisheries holds a license with TfNSW for seahorse hotels throughout the harbour.

**TIMING AND DURATION OF WORKS:**

Works are expected to commence Tuesday 22 November 2022 and be complete by 25 November 2022. The proposed works will be undertaken during standard working hours according to NSW Environmental Protection Authority as follows:

- 7:00 am – 6:00 pm Monday to Friday
- No work on Sundays or Public Holidays

**APPROXIMATE COST:**

**\$10,000 ex GST**

**SECTION 3 continued (MANDATORY)**

 All Tables below **MUST** be completed

**Table 1** will determine if the activity is Exempt Development. If the activity is Exempt Development then no further assessment is required (other than sections 1-4).

**Table 1**

			Yes	No
Q1	Is the activity listed as <b>Exempt Development?</b> (within SEPP Transport & Infrastructure 2021) If YES provide details below. For assistance please refer to a Principal Planner from the Development Assessment business unit.	<b>If YES, provide detail below and complete items 2 to 6 to determine if environmental assessment required</b>  <b>If NO Continue to Table 2</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>WHY IS ACTIVITY EXEMPT:</b> Not applicable				
<b>WILL THE ACTIVITY:</b>				
Q2	Involve the removal or damage to any remnant native vegetation or any construction works within Tree Protection Zones (under the drip line). <b>Note.</b> this excludes issues where there is a significant public risk posed from the vegetation. For assistance please see Natural Environment Officer in Bushland and Biodiversity team.	<b>If YES to any of these items, activity is not exempt continue to Table 2- Q7.</b>  <b>If all items are NO, complete Approvals and Licences and Certifications</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q3	Involve construction within 40 metres of a waterway that will impact geomorphology, groundwater, water quality or appearance of the foreshore or waterway. <b>Note.</b> This excludes the removal of built up sediment and maintenance works within drainage channels to restore the channel. For assistance please talk to the Senior Environment Officer – Catchments in Environment & Sustainability.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q4	Have a negative impact on amenity in the area either during or post works.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q5	Be immediately adjacent to or within a Threatened Ecological Community. (Check SEA or for assistance please talk to the Natural Environment Officer in Bushland and Biodiversity team)		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q6	Disturb more than 40m <sup>2</sup> excluding man-made surfaces (eg/ road, sportsfield turf) and linear work such as trenching or kerb & gutter.		<input type="checkbox"/>	<input checked="" type="checkbox"/>

..continue to next page for exempt development

### **Certification Exempt**

I certify that the proposed activity is exempt and will be undertaken in accordance with any relevant environmental controls, standards, procedures, etc. and that any other agency requirements will be met.

Executive Manager	Business Unit	Signature	Date
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Table 2 will determine if the activity is Permissible Without Consent. If the activity is Permissible Without Consent then no Development Application is required.

Table 2			
	Assessment	Description and References	Tick box
Q7	Permitted Without Consent	The activity is "Permitted Without Consent". Assessment is via Part 5 of the EP&A Act 1979 and <b>Form 1 – Impact Assessment</b> is to be completed, and/or an REF prepared. List the relevant Clause from SEPP Infrastructure or the LEP that determined this outcome below. For assistance please refer to a Principal Planner from the Development Assessment business unit.	<input checked="" type="checkbox"/>
<b>Why is Activity Permitted Without Consent:</b> <i>Pursuant to Section 2.165 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP), the proposed works are considered development permissible without consent, as it allows public authorities to undertake waterway and foreshore management activities (including environmental management works) without consent on any land.</i>			
Q8	Permitted With Consent	The activity is Permitted With Consent – a Development Application to be prepared and lodged with Council under Part 4 of the EP&A Act.	<input type="checkbox"/>

### **SECTION 4 – Approvals from other Agencies**

**(MANDATORY)**

Table 3 will identify what approvals, licenses and permits from other Agencies are required to undertake the proposed works. These approvals, permits and licenses MUST be obtained prior to the commencement of works. In some instances the agencies may request an Environmental and/or Species Impact Statement prior to granting approval.

Table 3			
Is the activity:	Approval required		If Yes
	YES	NO	
Working within or impacting on Threatened Species/Populations and/or Threatened Ecological Communities and/or causing any possible damage to those threatened species or communities. For assistance check SEA or for assistance please talk to the Natural Environment Officer in Environment & Sustainability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Must complete an REF and depending on the assessment the proposed works may require a license from Office of Environment & Heritage (OEH).

Working near Aquatic Reserves, Aquatic Habitat or damaging any marine vegetation such as sea grass, mangroves, etc. For assistance please talk to the Senior Environment Officer in Environment & Sustainability	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A Permit from the Department of Primary Industries is required.
Dredging of water or banks of creeks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	A Permit from the Department of Primary Industries is required
Working within the 'place' of a Heritage Item identified under the NSW Heritage Act	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Councils Heritage Officer
Working near known aboriginal relics, places, or potential Aboriginal relics or places – Check with the Aboriginal Heritage Office. see APPENDIX 2 Aboriginal heritage potential desktop assessment checklist	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Must notify the Office of Environment and Heritage prior to commencing works
Working on vacant Crown Lands not under Council Control and/or Council not Trustee - check with the property office.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Permission must be sought from the Department of Primary Industries
Working on a Classified Roads – not under a current maintenance program	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Approval required from NSW Roads and Maritime Services
If polluting a waterway ie. dewatering, herbicide application, etc	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Licence from the Office of Environment and Heritage
Check Dial Before You Dig to identify any services that may be impacted	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Contact the relevant service authority
On the open coast or estuary. Assistance can be provided from the Coast & Catchments team in Environment & Climate.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Approval from the Office of Environment and Heritage may be required.
On land which is not owned or controlled by Council.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Contact the landowner to obtain approval

#### **Certification Sections 1-4**

I certify that the above information in **Sections 1 to 4** is correct and I have endeavoured to clarify that all requirements have been met.

Andrew Camarsh

Capital Projects



21/11/22

**Project Officer**

**Business Unit**

**Signature**

**Date**

## SECTION 5 – Form 1-REF - Consideration of Impacts of the Activity (MANDATORY if Q7 in Table 2 is YES)

### Notes:

1. This Form 1 & Form 2 must be completed and evidence provided (you can refer to and attach additional documents to this assessment)
2. Assessment of all impacts must be provided; reason and justification for answers must be provided.
3. For all construction impacts of Minor or greater possible impacts, mitigation measures must be included and a final Impact determined. Additional information detailing justification and/or mitigation of the impact may need to be referenced, provided and attached to the assessment.
4. Possible impact is to be determined utilising the descriptions in the table below.
5. Construction impact - refer to all activities of undertaking the works, ongoing impacts, cumulative impacts, maintenance and permanent impacts.

1 - Negligible	2 - Minor	3 - Moderate or Greater
Does not create a nuisance	Creates a temporary nuisance	Creates a continuous or ongoing nuisance
Impacts contained within work site	Impact short term/localised, for life of project	Impact ongoing/long term or widespread impact
No detectable/noticeable change	Measurable change/may be offensive	Obvious change/offensive
Complies with industry guidelines	Exceeds industry guidelines (minor)	Exceeds industry guidelines (major)
Reasonable inconvenience/financial loss	Sustained/short term inconvenience/financial loss	Unacceptable inconvenience/financial loss
Change but similar to original land use	Slight or temporary change to land use	Transforms a locality permanently
No damage to heritage items or native flora or fauna	Heritage items or native flora and fauna able to be repaired/rehabilitated	Permanent damage/loss of a heritage item/flora or fauna from an area
No foreseen increase to risk from natural hazards	Slight increase to risk from natural hazards	Major increase to risk from natural hazards
Waste disposed/recycled of at licensed waste facility or reused immediately	Waste stockpiled with end use unknown, potential for temporary impact to air, soil, water	Long term contamination of air, soil or water due to waste disposal
No remediation required following work to prevent/remove pollution	Minor /short term site remediation required at completion of work to prevent/remove pollution	Extensive site remediation required over extended timeframe to prevent/remove pollution (e.g. soil or water contamination, severe soil erosion, large scale revegetation)



**FORM 1 - IMPACT ASSESSMENT**

Description	Construction Impact	Mitigation Measures (detail measures)	Ongoing Impact
<b>A</b> Any environmental impact on a community <i>eg Social, economic and cultural impacts</i> .	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>B</b> Any transformation of a locality <i>eg . Human and non-human environment</i> .	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>C</b> Any environmental impact on the ecosystems of the locality <i>Flora, fauna, ecological integrity, biological diversity, connectivity/fragmentation, air, water including hydrology, soil</i> .	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1    2    3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



D	<b>Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality</b> <i>eg Visual, recreational, scientific and other</i>									
▪		1	2	3	•		1	2	3	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E	<b>Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations</b> <i>eg Aboriginal heritage (including intangible cultural significance), architectural heritage, social/community values and identity, scenic values and other</i>									
▪		1	2	3			1	2	3	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
F	<b>Any impact on the habitat of protected animals (within the meaning of the Biodiversity Conservation Act 2016)</b> <i>eg Listed species and habitat requirements/ critical habitat</i>									
▪		1	2	3	•		1	2	3	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<b>Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air</b> eg Listed species, non-listed species and key threatening processes									
G			1	2	3		1	2	3
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Any long-term effects on the environment</b> eg Ecological, social and economic									
H			1	2	3		1	2	3
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Any degradation of the quality of the environment</b> eg Ecological, social and economic									
I			1	2	3		1	2	3
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Refer to Review of  
Environmental Factors  
completed by EcoLogical

J	<b>Any risk to the safety of the environment</b> eg Public health, contamination, bushfire, sea level rise, flood, storm surge, wind speeds, extreme heat, urban heat and climate change adaptation																	
	1 <input type="checkbox"/>			2 <input type="checkbox"/>			3 <input type="checkbox"/>			1 <input type="checkbox"/>			2 <input type="checkbox"/>			3 <input type="checkbox"/>		
K	<b>Any reduction in the range of beneficial uses of the environment</b> eg Natural resources, community resources and existing uses																	
	1 <input type="checkbox"/>			2 <input type="checkbox"/>			3 <input type="checkbox"/>			1 <input type="checkbox"/>			2 <input type="checkbox"/>			3 <input type="checkbox"/>		
L	<b>Any pollution of the environment</b> eg Air (including odours and greenhouse gases); water (including runoff patterns, flooding/tidal regimes, water quality health); soil (including contamination, erosion, instability risks); noise and vibration (including consideration of sensitive receptors); or light pollution																	
	1 <input type="checkbox"/>			2 <input type="checkbox"/>			3 <input type="checkbox"/>			1 <input type="checkbox"/>			2 <input type="checkbox"/>			3 <input type="checkbox"/>		



P	<b>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions</b> <i>eg Coastal processes and hazards arising from the proposed activity on coastal processes and hazards and impacts on the proposed activity from coastal processes and hazards), climate scenarios</i>										1	2	3	•	1	2	3	
Q	<b>Any applicable local strategic planning statement, regional strategic plan or district strategic plan made under Division 3.1 of the Act</b> <i>eg Issues, objectives, policies and actions identified in local, district and regional plans</i>										1	2	3	•	1	2	3	
R	<b>Any other relevant environmental factors</b> <i>eg Any other factors relevant in assessing impacts on the environment to the fullest extent</i>										1	2	3	•	1	2	3	

Refer to Review of  
 Environmental Factors  
 Completed by ECOLOGICAL



# FORM 2 Declarations

(MANDATORY)

Declarations	YES	NO
Sustainability Principles have been applied to the assessment of Environmental, Social, and Economic factors of this project.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
This Impact Assessment provides a true and fair review of the proposal in relation to its likely effects on the environment. It addresses, as best as possible, the impacts affecting or likely to affect the environment as a result of the activity. It provides sufficient information to determine whether this is likely to be a significant impact on the environment as a consequence of the activity.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alternate methods, activities or designs been investigated for alternate method of delivery for all activities other than Level 1 Impacts.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Community Consultation has been undertaken as per the Community Engagement Framework.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The implementation of the recommended mitigation measures will minimise the identified impacts/risks.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All material supporting the assessment has been detailed in the assessment of the item above with a copy attached to this assessment, this is detailed in Addendum 1.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
A risk assessment will be undertaken to ensure that Work Health and Safety requirements are met on the site at all times.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>This environmental review (and a formal REF if required) must be published on Council's website, before activity commences, if any of the following are true - Environmental Planning and Assessment Regulation 2021 (Part 8, clause 171 (4). Refer to legislation to check other requirements...</b> <a href="https://legislation.nsw.gov.au/view/pdf/asmade/sl-2021-759">https://legislation.nsw.gov.au/view/pdf/asmade/sl-2021-759</a>		
(a) the activity has a capital investment value of more than \$5 million, or	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) the activity requires an approval or permit as referred to in any of the following provisions before it may be carried out—		
(i) Fisheries Management Act 1994, sections 144, 201, 205 or 219,	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(ii) Heritage Act 1977, section 57,	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iii) National Parks and Wildlife Act 1974, section 90,	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iv) Protection of the Environment Operations Act 1997, sections 47–49 or 122, or	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) the determining authority considers that it is in the public interest to publish the review.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**SECTION 6 – Assessment Result****(MANDATORY)**

Based on the information in Section 5 (ie Forms 1 and 2), the assessment results in the following LEVEL of impact (tick one of the following):

☐

LEVEL 4: All items assessed as 1 Negligible Impact - **NO FURTHER ASSESSMENT REQUIRED - Proceed to Section 7**

☒

LEVEL 3: Some items assessed as 2 Minor Impact and others as 1 Negligible with proposed mitigation - **CURRENT ASSESSMENT ADEQUATE - Proceed to Section 7**

☐

LEVEL 2: Any item assessed as 3 Moderate or Greater Impact **and/or** any works occurring in Endangered Ecological Communities or impacting species as Scheduled in the Biodiversity Conservation Act – a formal **REVIEW OF ENVIRONMENTAL FACTORS REQUIRED** addressing these issues and attach to this assessment. - **Proceed to Section 7**

☐

LEVEL 1 – In the assessment numerous items are assessed as 3 Moderate or Greater Impact and deemed to have environmental **and/or** other impact determined as significant by any consent authority (including Council officers) as determined in Part 5 of the *Environmental Planning and Assessment Act 1979* (listed SECTION 4 – Approvals and Other Agencies) - **ENVIRONMENTAL and/or SPECIES IMPACT STATEMENT REQUIRED**. This requires a report to Council with concurrence of the relevant agency. No self-determination possible. For assistance please speak to a Principal Planner from the Development Assessment unit. - **Proceed to Section 7**

**SECTION 7 – Consultation****(MANDATORY)**

The level of consultation and engagement required is to be determined via the community engagement matrix (from Community Engagement Framework). <https://www.northernbeaches.nsw.gov.au/council/publications/policies/community-engagement-policy>

Consultation has been completed with the community through consultation on the Clontarf Beach Reserve Masterplan, and further detailed consultation has been completed on the Clontarf Beach Tidal Pool Upgrade.

Consultation with external agencies (DPI, TfNSW) has been undertaken as detailed in REF.

Internal consultation has been completed with Transport and Civil Infrastructure, Environment and Climate Change.



## SECTION 8 – Approval (If proposal permissible without consent)

(MANDATORY)

### 8.1 REVIEW OF ENVIRONMENTAL FACTORS

Tick the option which accurately reflects the requirements of a Review of Environmental Factors for the proposal:

- ☐ A formal Review of Environmental factors is not required. This REF document is satisfactory considering the low impact nature of the proposal.
- ☒ A formal Review of Environmental factors is required and has been submitted and is attached.
- ☐ A formal Review of Environmental factors has been submitted, it is considered that the overall impact on the environment is significant. The proposal should not proceed until an Environmental and/or Species Impact Statement is prepared and approved.

Andrew Camarsh

Capital Projects



21/11/22

**Project Officer**

**Business**

**Signature**

**Date**

## 8.2 DETERMINATION

For proposal that is “permitted without consent” the following Decision Statement is required.

*The determination is undertaken by an authorised person - an individual authorised by the determining authority to determine the proposal under Division 5.1 of the EP&A Act and Part 8, Division 1 of the EP&A Regulation. That authorised person will produce a decision statement.*

- A. For proposal that is “permitted without consent” with Level 3 or 4 impact, under current delegations any Executive Manager in the Transport & Assets directorate may provide determination.

- the proposed activity ~~is~~/is not likely to have a significant impact on the environment and therefore an EIS is ~~/is not~~ required
  - the proposed activity ~~will~~/will not be carried out in a declared area of outstanding biodiversity value and is/is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a SIS and/or BDAR is/is not required
  - the proposed activity may/~~may not~~ proceed and the reasons for the decision
  - mitigation measures are/~~are not~~ required to eliminate, minimise or manage environmental impacts, indicating where in the REF document the mitigation measures are set out, as well as any additional mitigation measures and/or conditions required and the reasons for these mitigation measures and conditions.
  - A determining authority may also choose to note whether referral to the Commonwealth Department of Agriculture, Water and the Environment has been considered.
- If a SIS and/or BDAR is prepared, and the determining authority is a Minister, the decision statement will identify any recommendations from the Environment Agency Head or the Primary Industries Head that have not been accepted.

The proposal has been assessed and can proceed, subject to the inclusion of the stated mitigation measures below (if any):

Eva Havenstein	Capital Projects		21/11/22
<b>Executive Manager</b>	<b>Business Unit</b>	<b>Signature</b>	<b>Date</b>

- B.** For proposal that is “permitted without consent” with Level 2 (Section 6) proposals, under current delegations endorsement from the **Executive Manager Development Assessment (or delegate)** is required.
- In this case, this completed form is to be forwarded to the Development Assessments team who will review and determine with conditions (as appropriate) by provision of a separate memo.**

Whilst this proposal fall within a Level 3 Impact – the REF has been reviewed by the planning team and their review is attached.

## **APPENDIX 1**

### **Biodiversity Conservation Act 2016 – Part 7 Division 1 Section 7.3**

7.3 Test for determining whether proposed development or activity likely to significantly affect threatened species or ecological communities, or their habitats

(1) The following is to be taken into account for the purposes of determining whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats:

- a) in the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,
  - b) in the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity:
    - i. is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or
    - ii. is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction,
  - c) in relation to the habitat of a threatened species or ecological community:
    - i. the extent to which habitat is likely to be removed or modified as a result of the proposed development or activity, and
    - ii. whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and
    - iii. the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality,
  - d) whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly),
  - e) whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.
- (2) The Minister may, by order published in the Gazette with the concurrence of the Minister for Planning, issue guidelines relating to the determination of whether a proposed development or activity is likely to significantly affect threatened species or ecological communities, or their habitats. Any such guidelines may include consideration of the implementation of strategies under the Biodiversity Conservation Program.

## **APPENDIX 2**

### **Aboriginal heritage desktop assessment checklist (direct reference from Aboriginal Heritage Office)**

<b>1. Check Aboriginal heritage potential mapping and Aboriginal site data</b>															
<b>a) What level of potential is the subject area in</b>	<table border="1"><tr><td><input type="checkbox"/></td><td>Very High</td></tr><tr><td><input type="checkbox"/></td><td>High</td></tr><tr><td><input type="checkbox"/></td><td>Moderate</td></tr><tr><td><input type="checkbox"/></td><td>Low</td></tr><tr><td><input type="checkbox"/></td><td>Very Low</td></tr></table>	<input type="checkbox"/>	Very High	<input type="checkbox"/>	High	<input type="checkbox"/>	Moderate	<input type="checkbox"/>	Low	<input type="checkbox"/>	Very Low				
<input type="checkbox"/>	Very High														
<input type="checkbox"/>	High														
<input type="checkbox"/>	Moderate														
<input type="checkbox"/>	Low														
<input type="checkbox"/>	Very Low														
<b>Comments:</b>															
<b>b) Are there registered Aboriginal site within or within the vicinity of the subject area?</b>	<table border="1"><tr><td><input type="checkbox"/></td><td>Immediate vicinity</td></tr><tr><td><input type="checkbox"/></td><td>Within 100-200m</td></tr><tr><td><input type="checkbox"/></td><td>Not recorded nearby</td></tr></table>	<input type="checkbox"/>	Immediate vicinity	<input type="checkbox"/>	Within 100-200m	<input type="checkbox"/>	Not recorded nearby								
<input type="checkbox"/>	Immediate vicinity														
<input type="checkbox"/>	Within 100-200m														
<input type="checkbox"/>	Not recorded nearby														
<b>Comments:</b>															
<b>2. Check landscape features present in the subject area</b>															
<b>a) Are any of the following features present in the subject area?</b>	<table border="1"><tr><td><input type="checkbox"/></td><td>Watercourses (creek lines, drainage lines even if ephemeral)</td></tr><tr><td><input type="checkbox"/></td><td>Foreshore</td></tr><tr><td><input type="checkbox"/></td><td>Cliff lines or boulders (higher than 1m)</td></tr><tr><td><input type="checkbox"/></td><td>Overhangs or caves</td></tr><tr><td><input type="checkbox"/></td><td>Level sandstone outcrops (&gt;2m<sup>2</sup>)</td></tr><tr><td><input type="checkbox"/></td><td>Deep sandy deposits</td></tr></table>	<input type="checkbox"/>	Watercourses (creek lines, drainage lines even if ephemeral)	<input type="checkbox"/>	Foreshore	<input type="checkbox"/>	Cliff lines or boulders (higher than 1m)	<input type="checkbox"/>	Overhangs or caves	<input type="checkbox"/>	Level sandstone outcrops (>2m <sup>2</sup> )	<input type="checkbox"/>	Deep sandy deposits		
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<input type="checkbox"/>	Deep sandy deposits														
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<b>Aboriginal heritage potential identified:</b>															
<b>If yes/unsure, refer to AHO</b>															
<b>Date referred:</b>															
<b>If no, works may proceed with caution</b>															

## **ADDENDUM 1**

Please list all attached information to support the Assessment:

XXX







# Bradys Point Seahorse Hotels

Short-Form Review of Environmental Factors

Northern Beaches Council

**eco**  
**logical**  
AUSTRALIA  
A TETRA TECH COMPANY

**DOCUMENT TRACKING**

<b>Project Name</b>	Bradys Point Seahorse Hotels – Short Form Review of Environmental Factors
<b>Project Number</b>	22SYD-2634
<b>Project Manager</b>	Geraint Breese
<b>Prepared by</b>	Courtney Blick
<b>Reviewed by</b>	Geraint Breese, Ian Dixon
<b>Approved by</b>	Rebecca Ben-Haim
<b>Status</b>	<b>Final</b>
<b>Version Number</b>	<b>2</b>
<b>Last saved on</b>	<b>25 October 2022</b>
<b>Cover Image</b>	Young White's Seahorse <i>Hippocampus whitei</i> in Sydney, Australia (Getty Images)

This report should be cited as 'Eco Logical Australia 2022. *Bradys Point Seahorse Hotels – Review of Environmental Factors*. Prepared for Northern Beaches Council.'

**ACKNOWLEDGEMENTS**

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## Abbreviations

Abbreviation	Description
ADD	Aboriginal Due Diligence Assessment
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
ASS	Acid Sulphate Soils
BC Act	<i>Biodiversity Conservation Act 2016</i>
BDAR	Biodiversity Development Assessment Report
Biodiversity Conservation SEPP	<i>State Environmental Planning Policy (Biodiversity Conservation) 2021</i>
Council	Northern Beaches Council
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DPE	Department of Planning and Environment
DPI	Department of Primary Industries
EIS	Environmental Impact Statement
ELA	Eco Logical Australia Pty Ltd
EP&A Act	<i>Environmental Planning &amp; Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning &amp; Assessment Regulation 2021</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
FM Act	<i>Fisheries Management Act 1994</i>
Heritage Act	<i>Heritage Act 1977</i>
KFH	Key Fish Habitat
LEP	Local Environmental Plan
LGA	Local Government Area
Manly LEP 2013	<i>Manly Local Environmental Plan 2013</i>
MNES	Matters of National Environmental Significance
NPW Act	<i>National Parks and Wildlife Act 1979</i>
PMA Regulation	<i>Ports and Maritime Administration Regulation 2021</i>
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
REF	Review of Environmental Factors
Resilience and Hazards SEPP	<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>
SEPP	State Environmental Planning Policy
SHR	State Heritage Register
SREP	Sydney Regional Environmental Plan
TfNSW	Transport for New South Wales
Transport and Infrastructure SEPP	<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>
WM Act	<i>Water Management Act 2000</i>



*Hippocampus whitei* (White's Seahorse) in seagrass habitat  
Image: D. Harasti, DPI Fisheries

## Executive Summary

Northern Beaches Council engaged Eco Logical Australia (ELA) to prepare a short form Review of Environmental Factors (REF) for the proposed installation of 'Seahorse Hotels' at Bradys Point. This is required for the relocation of a population of *Hippocampus whitei* (White's Seahorse) known to be living on and surrounding the Clontarf Tidal Pool.

Northern Beaches Council proposes to install Seahorse Hotels so that White's Seahorse and other Syngnathiformes can be relocated for the duration of demolition and construction of the Clontarf Tidal Pool, mitigating impacts to threatened aquatic fauna. The Hotels are proposed at Bradys Point, a nearby area of seagrass meadows consisting of dense (> 20 plants per 5 m<sup>2</sup>) *Zostera capricorni* and *Posidonia australis*.

Under a separate proposal, Northern Beaches Council is proposing to remove and upgrade the Clontarf Tidal Pool, which involve the demolition of the existing structure and complete replacement with an expanded pool. The pool is located at Clontarf Reserve, in the waters of Middle Harbour. This proposal required the relocation of White's Seahorse, a species that is relatively commonly seen throughout the waters of Sydney Harbour, in particular holding onto the shark nets and rebars of swimming enclosures such as Clontarf (McGrouther, 2019). Despite its visibility in Sydney's waters, White's Seahorse is listed as an endangered species under both the NSW *Fisheries Management Act 1994* (FM Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The primary cause of decline for White's Seahorse is loss of natural habitat across eastern Australia. Important habitat is considered sponge gardens, seagrass meadows and soft corals.

The White's Seahorse has also adapted to utilise artificial habitats, including swimming enclosure nets and rebars. These nets require to be cleaned to remove the marine growth and repair the structural integrity of the nets which can lead to further displacement of White's Seahorse and other Syngnathiformes causing populations to decline. In the case of the proposal Clontarf Tidal Pool works, the net is required to be removed entirely to remove and replace the structure.

Department of Primary Industries (DPI) Fisheries has been working with councils to develop practices which avoid damage to seahorses during net cleaning and repair. One such practice is the creation of 'Seahorse Hotels', which offer an artificial refuge for seahorses while the works are undertaken. On completion of the Clontarf Tidal Pool upgrade works, the net will be reinstated, and seahorses will have access to both the hotels and their original habitat. The installation of the hotels will be undertaken by a contractor to Council, Sea Dragon.

### PROJECT JUSTIFICATION

The proposed works will ensure that the Clontarf Tidal Pool upgrade can be safely undertaken, minimising potential impacts to aquatic fauna. The preferred hotel location at Bradys Point, positioned approximately 340 m north from the pool, aims to provide suitable habitat for the continued survival of White's Seahorse and other Syngnathiformes around Clontarf, while minimising the risk that they would re-enter the construction site as the location is a reasonable distance and has no connective habitat.

### STATUTORY REQUIREMENTS

The proposed works will be assessed under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Pursuant to Section 2.165 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP), the proposed works are considered development permissible without consent, as it allows public authorities to undertake waterway and foreshore management activities (including environmental management works) without consent on any land. In accordance with Part 5 of the EP&A Act, this report addresses the requirements of Section 171 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).

The Port Authority of NSW requires that a Harbour Masters Approval form is to be lodged for a proposed disturbance to the seabed under Section 110 of the *Ports and Maritime Administration Regulation 2021*. This REF will be submitted to the Harbour Master along with a Harbour Master Approval form.

Consultation has occurred with DPI Fisheries and Transport for New South Wales (TfNSW). DPI Fisheries have a licence for seahorse hotels with TfNSW throughout the Harbour and the licence is going to be varied to include the proposed hotels at Bradys Point. In addition, DPI Fisheries have advised Northern Beaches Council that seahorse hotels are not considered artificial structure and do not require a permit under the *Fisheries Management Act 1994* (FM Act).

### ASSESSMENT OF IMPACTS

This REF provides an assessment of relevant environmental factors. No adverse impacts to soils, water quality, heritage (Aboriginal and European), air quality, noise or cumulative matters are expected to arise from the proposed works. Furthermore, no adverse impacts to biodiversity are expected to occur if the proposed mitigation measures are implemented. No seagrass will be harmed because of the installation of the hotels will be place in areas that are close but do not impact seagrass beds.



## EVALUATION

This REF has determined that the proposed works are not likely to have a significant impact on any aspect of the environment, subject to the implementation of some recommended mitigation measures and safeguards. A beneficial outcome will result from the Seahorse hotels, as they provide additional habitat for the threatened aquatic fauna species White's Seahorse, potentially aiding in this population's recovery.

## 1. Introduction

Eco Logical Australia Pty Ltd (ELA) was engaged to prepare this Review of Environmental Factors (REF) for Northern Beaches Council (herein referred to as Council) for the proposed seahorse hotel installation works at Bradys Point, Clontarf NSW 2093. The works are required to enable the relocation *Hippocampus whitei* (White's Seahorse) and other Syngnathiformes (such as pipefish), in relation to the proposed upgrade of Clontarf Tidal Pool, which is located approximately 340 m south of the proposed Hotel site at Brady's Point.

White's Seahorse and other Syngnathiformes (such as pipefish) have been identified as living on the existing tidal pool net, which is proposed to be removed under separate works. This proposal seeks to provide appropriate habitat, in the form of seahorse hotels, near a patch of dense seagrasses including *Zostera capricorni* and *Posidonia australis*. The White's Seahorse and other Syngnathiformes, found during pre-clearance and frequent surveys at Clontarf Tidal Pool, will be relocated to the hotels. The hotels are required to be installed at least 3 months prior to the proposed construction of Clontarf Tidal Pool to allow time for accumulation of marine organisms (biofouling) on the hotel structure to occur.

This REF addresses the installation of the seahorse hotels only. The relocation works are included under the Clontarf Tidal Pool works and the associated REF (ELA, 2022). It is expected that the diving company, Sea Dragon Diving Co., will undertake the proposed works on behalf of Council.

### 1.1 Project Details

A summary of the project details is provided in Table 1.

**Table 1: Project Details**

Aspect	Description
Location	Bradys Point, Clontarf NSW 2093 The study area is defined in Figure 3.
Project Site and Description	Bradys Point is approximately 340 m northwest of the Clontarf Tidal Pool. The proposed works are the installation of five (5) seahorse hotels within the study area, allowing for the occupancy of 10 seahorses or other Syngnathiformes per hotel (Sea Dragon, 2022). Each Hotel is 1 m <sup>3</sup> in size placed at a depth between 4 m and 5 m. The proposed works do <u>not</u> include fauna relocation, only the placement of the hotels.  Due to the dynamic nature of seagrass, the exact location of the seahorse hotels is yet to be determined. An approximate layout is shown in Figure 4, which was identified using information from Sea Dragon's validated seagrass mapping as of August 2019. This figure also shows previous mapped seagrass within the study area by DPI Fisheries, which indicates that while the general composition of the seagrass has not changed, its location and extent has. As such, the hotel locations will be determined on the day of works and will be confined to a suitable patch of bare marine sands adjacent to seagrass within the defined study area and within water that is at depth of at least 4 m.
Construction methodology	The seahorse hotels will be placed by divers on the sea floor in appropriate locations as discussed above. The seahorse hotels will be secured in position by the insertion of star pickets through the grate and into the sea floor. See <b>Error! Reference source not found.</b>
Land Ownership	Transport for NSW (TfNSW) is the registered proprietor of the study area. DPI Fisheries holds a license with TfNSW for seahorse hotels throughout the harbour.

Aspect	Description						
	TfNSW are arranging a variation to their existing Licence with DPI Fisheries to include the proposed seahorse hotel under the existing licensee.						
Approval Pathway	<p>The impacts have been assessed under Part 5 of the <i>Environmental Planning and Assessment Act 1979</i> (EP&amp;A Act) with Northern Beaches Council as the determining authority.</p> <p>Pursuant to Section 2.165 of the <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> (Transport and Infrastructure SEPP), the proposed works are considered development permissible without consent, as it allows public authorities to undertake waterway and foreshore management activities (including environmental management works) without consent on any land.</p> <p>In accordance with Part 5 of the EP&amp;A Act, this report addresses the requirements of Section 171 of the <i>Environmental Planning and Assessment Regulation 2021</i> (EP&amp;A Regulation).</p>						
Timeframe	<p>The proposed works will commence as soon as this REF has been determined, in late 2022. This will allow the hotel structures to be installed and for biofouling to occur so that appropriate seahorse habitat can form, prior to the commencement of Clontarf Tidal Pool construction.</p> <p>Latest proposed timeframe is December 2022.</p>						
Work Equipment	<ul style="list-style-type: none"> <li>Seahorse hotels – purpose built artificial habitat structures (x 5)</li> <li>Diving equipment</li> </ul>						
Land Zoning	<p>No land zoning under the <i>Manly Local Environmental Plan 2013</i> (Manly LEP) applies to the study area.</p> <p>In accordance with Chapter 10 (Sydney Harbour Catchment) of the <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> (Biodiversity and Conservation SEPP), predominantly W5 (Water Recreation) and W8 (Scenic Waters: Passive Use) zoning applies to the study area. The following water zones apply:</p> <table> <tr> <th>Water Zone</th><th>Objectives</th></tr> <tr> <td>W5 Water Recreation</td><td> <ul style="list-style-type: none"> <li>to give preference to and increase public water-dependent development so that people can enjoy and freely access the waters of Sydney Harbour and its tributaries,</li> <li>to allow development only where it is demonstrated that the public use of waters in this zone is enhanced and will not be compromised now or in the future,</li> <li>to minimise the number, scale and extent of artificial structures consistent with their function,</li> <li>to allow commercial water-dependent development, but only where it is demonstrated that it meets a justified demand, provides benefits to the general and boating public and results in a visual outcome that harmonises with the planned character of the locality,</li> <li>to minimise congestion of and conflict between people using waters in this zone and the foreshore,</li> <li>to protect and preserve beach environments and ensure they are free from artificial structures,</li> <li>to ensure that the scale and size of development are appropriate to the locality and protect and improve the natural assets and natural and cultural scenic quality of the surrounding area, particularly when viewed from waters in this zone or from areas of public access.</li> </ul> </td></tr> <tr> <td>W8 Scenic Waters: Passive Use</td><td> <ul style="list-style-type: none"> <li>to give preference to unimpeded public access along the intertidal zone, to the visual continuity and significance of the landform and to the ecological value of waters and foreshores,</li> <li>to allow low-lying private water-dependent development close to shore only where it can be demonstrated that the preferences</li> </ul> </td></tr> </table>	Water Zone	Objectives	W5 Water Recreation	<ul style="list-style-type: none"> <li>to give preference to and increase public water-dependent development so that people can enjoy and freely access the waters of Sydney Harbour and its tributaries,</li> <li>to allow development only where it is demonstrated that the public use of waters in this zone is enhanced and will not be compromised now or in the future,</li> <li>to minimise the number, scale and extent of artificial structures consistent with their function,</li> <li>to allow commercial water-dependent development, but only where it is demonstrated that it meets a justified demand, provides benefits to the general and boating public and results in a visual outcome that harmonises with the planned character of the locality,</li> <li>to minimise congestion of and conflict between people using waters in this zone and the foreshore,</li> <li>to protect and preserve beach environments and ensure they are free from artificial structures,</li> <li>to ensure that the scale and size of development are appropriate to the locality and protect and improve the natural assets and natural and cultural scenic quality of the surrounding area, particularly when viewed from waters in this zone or from areas of public access.</li> </ul>	W8 Scenic Waters: Passive Use	<ul style="list-style-type: none"> <li>to give preference to unimpeded public access along the intertidal zone, to the visual continuity and significance of the landform and to the ecological value of waters and foreshores,</li> <li>to allow low-lying private water-dependent development close to shore only where it can be demonstrated that the preferences</li> </ul>
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W8 Scenic Waters: Passive Use	<ul style="list-style-type: none"> <li>to give preference to unimpeded public access along the intertidal zone, to the visual continuity and significance of the landform and to the ecological value of waters and foreshores,</li> <li>to allow low-lying private water-dependent development close to shore only where it can be demonstrated that the preferences</li> </ul>						

Aspect	Description
	<p><i>referred to in paragraph (a) are not damaged or impaired in any way, that any proposed structure conforms closely to the shore, that development maximises open and unobstructed waterways and maintains and enhances views to and from waters in this zone,</i></p> <ul style="list-style-type: none"> <li><i>to restrict development for permanent boat storage and private landing facilities in unsuitable locations,</i></li> <li><i>to allow water-dependent development only where it can be demonstrated that it meets a demonstrated demand and harmonises with the planned character of the locality,</i></li> <li><i>to ensure that the scale and size of development are appropriate to the locality and protect and improve the natural assets and natural and cultural scenic quality of the surrounding area, particularly when viewed from waters in this zone or areas of public access.</i></li> </ul> <p>The proposed works are in accordance with this land use zones. The works will not minimise or otherwise adversely affect public water use, create congesting, or contribute to artificial structures in this zone.</p> <p>The DPI Fisheries consider seahorse hotels a non-artificial structure. This is because once they are installed, they be transformed by encrusting organisms, macroalgae, sponges, soft corals, and other invertebrates, essentially considered to become a natural reef within approximately two (2) years of installation.</p> <p>The hotels will contribute to the protection of natural assets, providing seahorse habitat, and will not affect the scenic quality of Bradys Point or surrounds as they will be completely submerged below the water mark.</p> <p>The proposed works are not anticipated to impede public access to W5 or W8 zoned waters, or negatively impact the scenic character of the study area. The works are water-dependent and meet a need to provide suitable habitat for White's Seahorse and other Syngnathiformes while the Clontarf Tidal Pool is under construction.</p>
<p>Alternatives and Project Justification</p>	<p>The proposed works will ensure that the Clontarf Tidal Pool upgrade can be safely undertaken, minimising potential impacts to aquatic fauna. The preferred seahorse hotel location at Bradys Point, positioned approximately 340 m from the pool, aims to provide suitable habitat for the continued survival of White's Seahorse and other Syngnathiformes around Clontarf, while minimising the risk that they would re-enter the construction site as the location is a reasonable distance and has no connective habitat.</p> <p>An alternative location was identified at the Clontarf Marina (shown in Figure 4), but was not pursued for the following reasons:</p> <ul style="list-style-type: none"> <li>No <i>Posidonia</i> was found at this site. <i>Posidonia</i> is the preferred seagrass habitat for White's Seahorse.</li> <li>There is a steep drop off with limited installation area.</li> <li>Only a thin strip of <i>Zostera</i> was available.</li> <li>It was within a known boating route and slip way, and close to the shoreline and foot traffic. (i.e., not in a well-protected location)</li> </ul> <p>The seagrass existing at Clontarf Tidal Pool, where fauna will be relocated from, was excluded as an option because:</p> <ul style="list-style-type: none"> <li>Seahorses would be required to temporarily relocate outside the Clontarf Tidal Pool for the construction period, then relocated back afterwards. This constitutes additional stress that has unknown impacts on the breeding and pairing of White's Seahorse and other Syngnathids.</li> <li>Habitat is isolated from other habitat areas and is quite small in nature.</li> <li>Seagrasses in the construction buffer may not be able to be adequately protected due to excavation works.</li> </ul>





**Figure 1 Newly Installed Seahorse Hotel (Source: UTS, 2021 - [New 'hotels' a suite haven for baby seahorses](#) | [University of Technology Sydney \(uts.edu.au\)](#))**



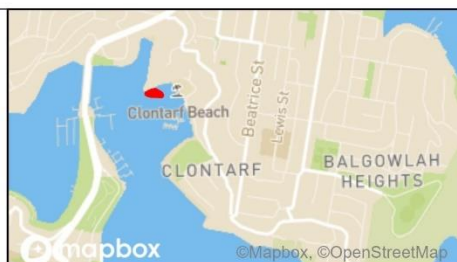


**Figure 2 Bio-fouled Seahorse hotel** (Source: DPI, 2022 - <https://www.dpi.nsw.gov.au/fishing/species-protection/current-threatened-species-projects/current-projects-on-whites-seahorse2>)



#### Location

- Study Area
- Proposed Seahorse Hotel



0 15 30 60  
Metres

Datum/Projection:  
GDA 1994 MGA Zone 56

Project: 2634-KS Date: 17/10/2022



**Figure 3: Location of proposed seahorse hotels and study area**



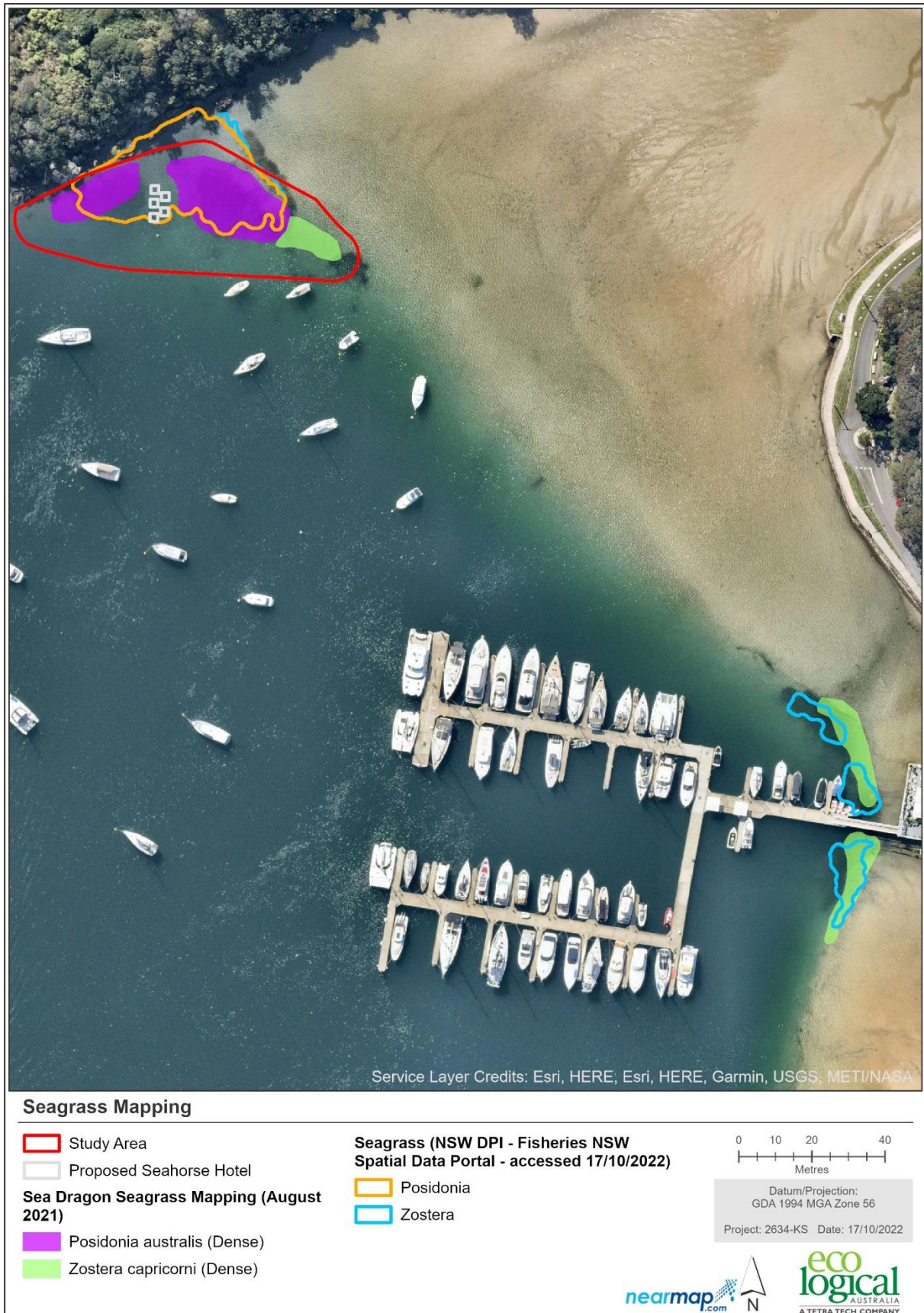


Figure 4: Seagrass mapping



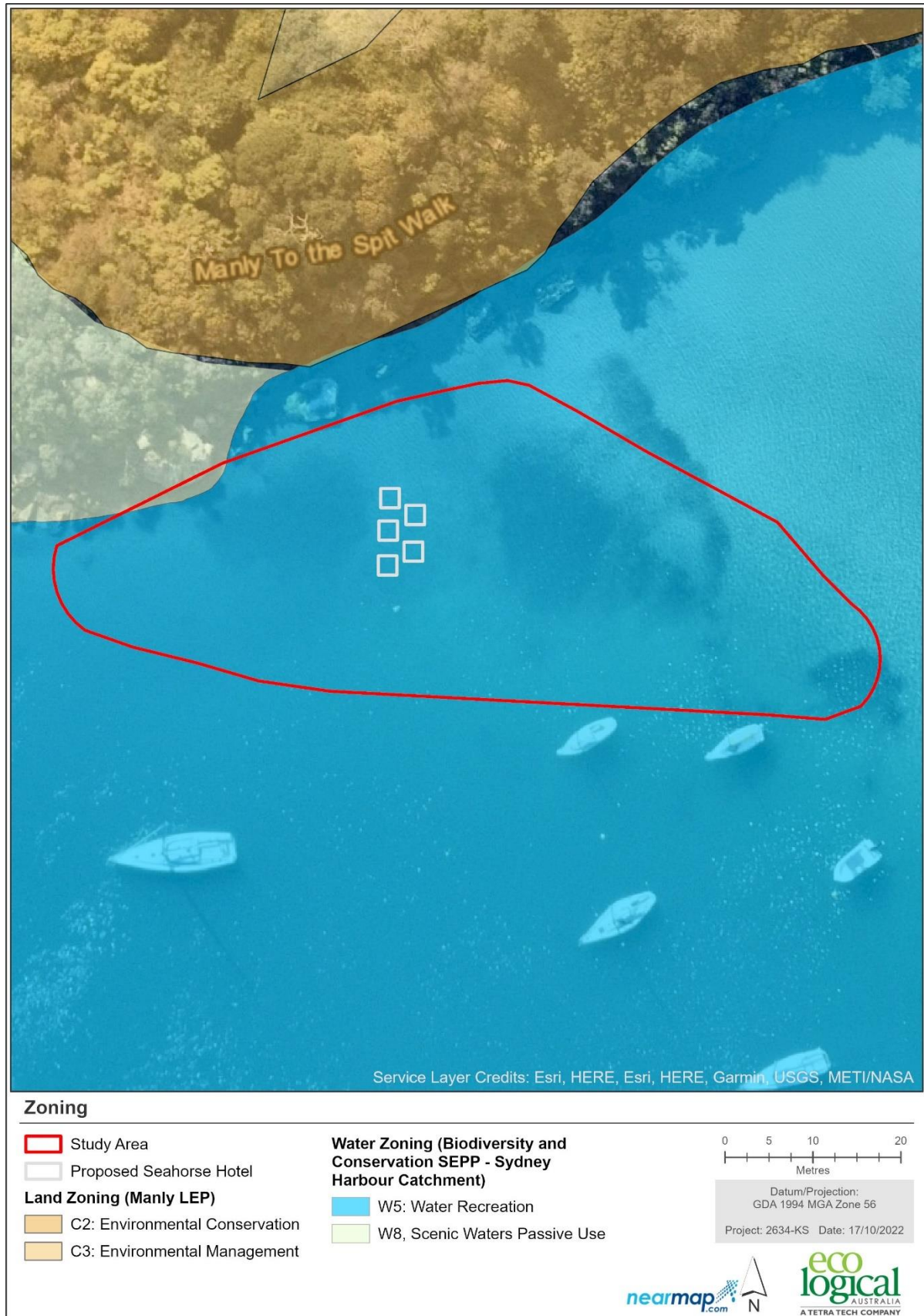


Figure 5: Land Use Zoning

## 2. Statutory and Planning Context

### 2.1 Commonwealth Statutory Framework

**Table 2: Commonwealth Statutory Framework**

Name of Act	Relevance to the Project
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	<p><b>Matters of National Environmental Significance</b></p> <p>The EPBC Act protects matters of National Environmental Significance (MNES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others). Any actions that will or are likely to have a significant impact on the MNES require referral and approval from the Australian Government Environment Minister.</p> <p>Significant impacts are defined by the Commonwealth (see <a href="http://www.environment.gov.au/epbc/guidelines-policies.html">http://www.environment.gov.au/epbc/guidelines-policies.html</a>) for MNES.</p> <p>One MNES has been identified within the study area. One threatened species listed under the EPBC Act has the potential to occur within the study area. <i>Hippocampus whitei</i> (White's seahorse) is listed as Endangered under the EPBC Act as of 12 December 2020. A Significance Assessment under the EPBC Act was undertaken (Appendix A2). A significant impact is not likely to result from the proposed works.</p>

### 2.2 New South Wales State Legislation

**Table 3: NSW State Legislation**

Name of Act	Relevance to the Project
<i>Biodiversity Conservation Act 2016</i> (BC Act)	<p>Section 7.3 of the BC Act requires proponents of activities subject to Part 5 of the EP&amp;A Act to determine whether they will have a significant impact on threatened species. The test for significant impact is described in Section 7.3 of the BC Act. A significant impact also occurs if the activity is carried out in an area of outstanding biodiversity value.</p> <p>Given that the proposed works are within waters, it was concluded no threatened flora or fauna species listed under the BC Act recorded are likely to be impacted by the proposed works. Therefore, no Tests of Significance under the BC Act were undertaken and the preparation of a Species Impact Statement (SIS) or Biodiversity Development Assessment Report (BDAR) is not recommended. Aquatic fauna, listed under the FM Act, are further addressed below.</p>
<i>Biosecurity Act 2015</i> (Biosecurity Act)	<p>The Biosecurity Act provides a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matter, dealing with biosecurity matter, carriers and potential carriers, and other activities that involve biosecurity matter, carriers, or potential carriers.</p> <p>Part 3 of the Biosecurity Act applies a general biosecurity duty for any person who deals with biosecurity matter or a carrier to prevent, eliminate or minimise any biosecurity risk they may pose. Under section 23 of the Act, a person who fails to discharge a biosecurity duty is guilty of an offence.</p> <p>Whilst the Act provides for all biosecurity risks, implementation of the Act for weeds is supported by Regional Strategic Weed Management Plans (RSWMP) developed for each region in NSW.</p> <p>No priority weeds, as identified within the Greater Sydney RSWMP, are likely to be present within the study area.</p>

Name of Act	Relevance to the Project
<p><i>Environmental Planning and Assessment Act 1979</i> (EP&amp;A Act)</p>	<p>The EP&amp;A Act is the principal planning legislation for NSW. It provides a framework for the overall environmental planning and assessment of proposals.</p> <p>As Northern Beaches Council (a public authority) is the proponent, the works are to be assessed as 'development permissible without consent' under Part 5 of the EP&amp;A Act. Accordingly, Council must satisfy Sections 5.5 and 5.7 of that Act by examining, and considering to the fullest extent possible, all relevant matters which are likely to affect the environment. This REF is intended to assess, and ensure compliance, with the EP&amp;A Act including Sections 5.5 and 5.7.</p> <p>The works are considered development without consent in accordance with Section 2.165 of the Transport and Infrastructure SEPP which allows public authorities to undertake waterway and foreshore management activities (including environmental management activities) without consent on any land.</p> <p>This report addresses the requirements of Section 171 of the EP&amp;A Regulation.</p>
<p><i>Fisheries Management Act 1994</i> (FM Act)</p>	<p>FM Act provides for the protection, conservation, and recovery of threatened species defined under the Act. It also makes provision for the management of threats to threatened species, populations, and ecological communities defined under the Act, as well as the protection of fish and fish habitat in general. In particular, the FM Act has mechanisms for the protection of saltmarsh, mangroves, seagrasses and seaweeds on public water land and foreshores.</p> <p>. Sea Dragon Diving Co. has developed a seahorse hotel plan in consultation with DPI Fisheries. The hotels will be held under an amended license between TfNSW (the landholder) and Fisheries (the Licensee). DPI Fisheries have advised Northern Beaches Council that seahorse hotels are not considered artificial structure and do not require a permit under the Fisheries Management Act 1994 (FM Act). A permit under the FM Act is not required</p> <p>White's Seahorse is listed as an endangered species under the FM Act. While the proposed works will not adversely affect White's Seahorse habitat (as no habitat will be removed to install the hotels), an Assessment of Significance under Section 220ZZ of the FM Act was undertaken for this species due to its potential to occur in the study area (Appendix A1). The Assessment concluded that a significant adverse impact to this species is unlikely to result from the proposed works.</p> <p>A Section 37 Scientific Licence and approved relocation plan is required to relocate live seahorses or other members of the Syngnathidae family away from the Clontarf Tidal Pool during construction works. The relocation works are not subject to this REF.</p>
<p><i>National Parks and Wildlife Act 1974</i> (NPW Act)</p>	<p>The proposed works are not within land reserved under the NPW Act. An Aboriginal Due Diligence (ADD) assessment was undertaken within the Clontarf Tidal Pool Upgrade REF (ELA, 2022) to determine if the proposed works will have the potential to impact on any Aboriginal objects or places. The assessment included a search of the Aboriginal Heritage Information Management System (AHIMS) which found no records of known Aboriginal objects or sites within the waterline at Bradys Points. Furthermore, the proposed works do not involve excavation or other activities that are likely to cause adverse impacts to potential items or places of Aboriginal heritage significance. As such, further ADD assessment has not been included within this REF.</p>
<p><i>Heritage Act 1977</i> (Heritage Act)</p>	<p>The Heritage Act provides protection of the environmental heritage of the State which includes places, buildings, works, relics, movable objects, or precincts that are of State or local heritage significance. A key measure for the identification and conservation of State significant items is listing on the State Heritage Register (SHR) as provided in Part 3A of the Heritage Act.</p> <p>A review of local or State listed heritage items within and in the vicinity of the study area found that no heritage items are in the water, therefore no further assessment has been undertaken.</p>
<p><i>Protection of the Environment Operations Act 1997</i> (POEO Act)</p>	<p>The POEO Act is the key environmental protection and pollution statute. The POEO Act is administered by the NSW Environment Protection Authority (EPA) and establishes a licensing regime for waste, air, water, and pollution. Relevant sections of the Act are listed below:</p> <ul style="list-style-type: none"> <li>• Part 5.3 Water Pollution</li> </ul>

Name of Act	Relevance to the Project
	<ul style="list-style-type: none"> <li>Part 5.4 Air Pollution</li> <li>Part 5.5 Noise Pollution</li> <li>Part 5.6 Land Pollution and Waste</li> </ul> <p>The proposed works involve passive diving activity and placement of the seahorse hotels. Pollution of water, noise air or land is not expected to result from the proposed works.</p>
<i>Water Management Act 2000</i> (WM Act)	<p>The main objective of the WM Act is to manage NSW water in a sustainable and integrated manner that will benefit current generations without compromising future generations' ability to meet their needs. The WM Act is administered by Natural Resources Access Regulator (NRAR) and establishes an approval regime for activities within waterfront land, defined as the land 40 m from the highest bank of a river, lake, or estuary.</p> <p>Section 91E (1) of the WM Act identifies that it is an offence to carry out a controlled activity in, on or under waterfront land without gaining a controlled activity approval. However, under Clause 41 of the <i>Water Management (General) Regulation 2018</i> (WM Regulation) public authorities are exempt from Section 91E (1) of the WM Act, and therefore do not require any approvals for controlled activities on waterfront land.</p>

## 2.3 Environmental Planning Instruments

**Table 4: NSW Environmental Planning Instruments (EPIs)**

Name of EPI	Relevance to Project
<b>State Environmental Planning Policy (SEPP)</b>	
<i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> (Transport and Infrastructure SEPP)	<p><b>Permissibility</b></p> <p>The aim of this Policy is to facilitate the effective delivery of infrastructure across NSW by identifying whether certain types of infrastructure require consent, can be carried out without consent or are exempt development.</p> <p>Pursuant to Section 2.165 (Part 2.3 Division 25) of the Transport and Infrastructure SEPP, development for the purpose of waterway or foreshore management activities may be carried out by or on behalf of a public authority without consent on any land. This includes environmental management works.</p> <p><b>Consultation</b></p> <p>Part 2.2 Division 1 of the Transport and Infrastructure SEPP contains provisions for public authorities to consult with other agencies prior to the commencement of development. Consultation requirements are detailed in Section 4 of this REF.</p>
<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> (Resilience and Hazards SEPP)	<p><b>Coastal Management</b></p> <p>Chapter 2 of the Resilience and Hazards SEPP aims to manage development within coastal zones and protect the environmental assets of the coast. In accordance with Section 5 of the <i>Coastal Management Act 2016</i> (CM Act), the term coastal zone is defined as any area of land that is comprised of the following coastal management areas:</p> <ul style="list-style-type: none"> <li>Coastal wetlands and littoral rainforests</li> <li>Coastal vulnerability areas</li> <li>Coastal environment areas</li> <li>Coastal use areas.</li> </ul> <p>The study area is mapped under the NSW Department of Planning and Environment Coastal Management SEPP Interactive Map. The proposed works are located within the Coastal Environment Area (Figure 6).</p> <p>Section 2.10(3) of the Resilience and Hazards SEPP states that development controls for Coastal Environment Areas do not apply to land within the Foreshores and Waterways Area</p>

Name of EPI	Relevance to Project
	<p>within the meaning of the <i>Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005</i> (SREP). As of 1 March 2022, the SREP was repealed by Chapter 10 of the Biodiversity and Conservation SEPP. The study area is within the boundary defined by the Sydney Harbour Catchment Map (Amendment 2016).</p> <p>Therefore, this SEPP does not apply.</p>
<p><i>Ports and Maritime Administration Regulation 2021</i> (PMA Regulation)</p>	<p>Section 110 states that a person must not use drags, grapplings, or other apparatus for lifting any object or material from the bed of a port described in Schedule 1, or otherwise disturb any such bed in any way, except with the written permission of the relevant Harbour Master and in accordance with the conditions attaching to such permission. The Port Authority of NSW requires that a Harbour Masters Approval form is to be lodged for a proposed disturbance to the seabed.</p> <p>The placement of seahorse hotels on the seabed will be done so under an amended license between TfNSW and DPI Fisheries, in consultation with the Harbour Master. This REF will be submitted to the Harbour Master along with a Harbour Master Approval form.</p>
<p><i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> (Biodiversity and Conservation SEPP)</p>	<p>Chapter 10 of the Biodiversity and Conservation SEPP contains controls for the Sydney Harbour Catchment area. The aim of this chapter is to carry over the provisions of the repealed Sydney Harbour Catchment SREP, by protecting and maintaining the catchment, foreshores, and waterways of the Sydney Harbour.</p> <p>Zoning under Chapter 10 applies to the study area and has been addressed in Zoning is presented in Figure 5.</p> <p>The study area is also mapped as a <b>Wetlands Protection Area</b> under the SEPP (Figure 7). Development consent is not required for works within a wetlands protection area if the development is of a minor nature, and if the proposed development would not adversely affect the wetlands or wetlands protection area. Given the minor nature of the proposed works, and that no marine vegetation or fauna would be impacted by the installation of the Seahorse Hotels, development consent would not be required.</p>
<p><b>Local Environmental Plan (LEP)</b></p>	
<p><i>Manly Local Environmental Plan 2013</i> (Manly LEP 2013)</p>	<p>No land use zoning under the Manly LEP is relevant to the proposed works.</p>



3. Environmental Assessment and Mitigation Measures

Table 5:Environmental factors, mitigations and impact rating

Environmental Factor	Existing Environment	Potential Impacts	Impact Mitigation Measures	Rating	Prior to	Mitigation Measures	Impact Rating
Waterways	The proposed works are within the waters of Middle Harbour, at Bradys Point. The study area includes mapped Wetlands Protection Area under Chapter 10 of the Biodiversity and Conservation SEPP (Figure 7). Photographs of the study area (Sea Dragon, 2021) indicate that the water is of good quality with high visibility.	<p>The proposed works are in accordance with the objectives of the Part 10.6 of the Biodiversity and Conservation SEPP, in relation to wetlands The hotels will be set into place by hammering a star picket into the seabed. Short-term and temporary disturbance may occur, which may result in slight turbidity in the waterway.</p> <p>Turbidity and sedimentation has the ability to impact aquatic flora by reducing access sunlight impeding the ability flora to photosynthesis. In addition, sediment can clog up small holes in the sea floor which provide habitat for infauna. However, the hotels are small in scale and is unlikely to result in significant sediment plumes and long-term disturbances.</p>	<div><input type="checkbox"/> n/a</div> <div><input checked="" type="checkbox"/> Low</div> <div><input type="checkbox"/> Medium</div> <div><input type="checkbox"/> High</div>			<ul style="list-style-type: none"><li>Seahorse hotels are to be installed one-by-one to avoid cumulative impacts of sand movement/turbidity.</li></ul>	<div><input type="checkbox"/> n/a</div> <div><input checked="" type="checkbox"/> Low</div> <div><input type="checkbox"/> Medium</div> <div><input type="checkbox"/> High</div>
Biodiversity	<p><b>Flora</b></p> <p>The study area contains patches of seagrass including dense (&gt; 20 plants per 5 m<sup>2</sup>) <i>Posidonia australis</i> and <i>Zostera capricorni</i>. The location of previously mapped seagrass is presented Figure 4. As at the time of field survey undertaken by Sea Dragon (2021), the patch of <i>Posidonia</i> was large at 300m<sup>2</sup> and the <i>Zostera</i> was approximately 35m<sup>2</sup>.</p> <p><b>Fauna</b></p> <p>White’s Seahorse is an aquatic fauna species in the Syngnathidae family that has the potential to occur in the study area. The seahorse hotels will provide a place for relocating White’s Seahorse individuals from the Clontarf Tidal Pool. White’s Seahorse is listed as an endangered species under the FM Act and EPBC Act.</p>	<p>No seagrass will be removed because of the proposed works. The Hotels will be installed adjacent to patches of seagrass. Due to the dynamic nature of seagrass, the exact location of the seahorse hotels will be determined at the time of works to ensure no seagrass will be removed or harmed because of their placement. The placement will be contained within the study area. Mitigation measures have been provided to ensure no seagrass is harmed.</p> <p>The proposed works subject to this REF do not include the relocation or handling of any White’s Seahorse individuals. No White’s Seahorse were recorded to be living in the seagrass habitat within the study area at the time of the Sea Dragon survey (Sea Dragon, 2021). However, due to the potential for this species to occur in the study area and given the suitable habitat, an Assessment of Significance under the FM Act (Appendix A1) and Test of Significance under the EPBC Act (Appendix A2) were undertaken, which concluded that a significant impact is unlikely to result from the proposed works. The works provide additional habitat for this species to use, thereby having a positive effect on the recovery of the White’s Seahorse population.</p>	<div><input type="checkbox"/> n/a</div> <div><input checked="" type="checkbox"/> Low</div> <div><input type="checkbox"/> Medium</div> <div><input type="checkbox"/> High</div>			<ul style="list-style-type: none"><li>Do not harm or remove seagrass.</li><li>Hotels will be installed adjacent to, not on top of or after removing, seagrass habitat.</li><li>No anchors or similar devices are to be placed on the seabed or on seagrass. Only hotels are to be placed on the seabed.</li><li>Works must cease if White’s Seahorse individuals or other native fauna are identified during the proposed works. Work must remain stopped until the animals move naturally outside of the hotel placement area.</li></ul>	<div><input checked="" type="checkbox"/> n/a</div> <div><input type="checkbox"/> Low</div> <div><input type="checkbox"/> Medium</div> <div><input type="checkbox"/> High</div>
Historic Heritage	<p>No historic heritage items are located within the study area. The following heritage items are listed near the study area under the Manly LEP:</p> <ul style="list-style-type: none"><li>Harbour Foreshores (Item I1)</li></ul>	<p>The proposed works will not impact on any local or State heritage items. The local heritage items in the vicinity of the works will not be impacted. Any vistas or curtilage associated with these items will not be adversely affected, as the Hotels will be completely submerged beneath the water and will not visually alter the landscape.</p> <p>A standard unexpected finds policy will apply.</p>	<div><input checked="" type="checkbox"/> n/a</div> <div><input type="checkbox"/> Low</div> <div><input type="checkbox"/> Medium</div> <div><input type="checkbox"/> High</div>			<ul style="list-style-type: none"><li>In accordance with Section 146 of the Heritage Act, if an archaeological relic (such as a deposit or artefact) is uncovered during works, work must cease in the affected area and a qualified archaeologist contacted to assess the find.</li></ul>	<div><input checked="" type="checkbox"/> n/a</div> <div><input type="checkbox"/> Low</div> <div><input type="checkbox"/> Medium</div> <div><input type="checkbox"/> High</div>



Environmental Factor	Existing Environment	Potential Impacts	Impact Mitigation Measures	Rating Prior to Mitigation Measures	Impact Rating
	<ul style="list-style-type: none"><li>Fisher Bay Reserve (Item 1272)</li></ul> <p>Heritage items in the vicinity of the proposed seahorse hotels are presented in Figure 8.</p>				
Aboriginal Heritage	An AHIMS search which covered the study area was previously undertaken within the Clontarf Tidal Pool Upgrade REF (ELA, 2022). No AHIMS sites or objects have previously been recorded within the study area (Figure 9).	The proposed works are unlikely to impact any Aboriginal sites or objects. The works take place beneath the water mark and will not involve excavation or other works which would typically harm such objects. A standard unexpected finds policy applies as some artefacts may have the potential to exist underwater.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<ul style="list-style-type: none"><li>If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and the area fenced off with suitable markers (star pickets, flagging or barrier mesh). Engage an archaeologist to assess the finds. If the finds are found to be Aboriginal objects, Heritage NSW must be notified under section 89A of the NPW Act.</li><li>In the extremely unlikely event that human remains are found, works should immediately cease, and the NSW Police should be contacted. If the remains are suspected to be Aboriginal, Heritage NSW may also be contacted at this time to assist in determining appropriate management.</li></ul>	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Air Quality	The air quality within the study area is expected to be typical of an urban coastal environment, likely of moderate quality.	The proposed works will not impact on factors that are likely to alter air quality in or around the study area. Works are to take place below the surface of the water.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Not applicable.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Noise	The study area is located nearby a highly urbanised residential environment. The closest sensitive receiver is a kiosk located directly adjacent to the study area. The Clontarf Marina is located nearby to the south. The closest residential receiver is approximately 100 m from the study area. Existing noise sources in the general vicinity include the current vehicle movement and general residential and community activities.	Given the passive nature of the works (diving and placement of hotels), no noise impacts are expected to occur.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	Not applicable.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Visual Amenity	The study area is in the water of Middle Harbour just off Bradys Point in Clontarf. The foreshore of Bradys Point is a listed heritage item and is considered to contribute to the scenic quality of the	The hotels will be submerged entirely beneath the water. No impacts to visual amenity are expected	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High	<ul style="list-style-type: none"><li>Seahorse hotels will be placed at sufficient depth (4-5 m) below the water’s surface.</li><li>Placement will be contained to the study area</li></ul>	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High

Environmental Factor	Existing Environment	Potential Impacts	Impact Rating	Prior to Mitigation Measures	Mitigation Measures	Impact Rating
	Northern Beaches local government area’s landscape.					
Traffic and Navigability	The study area is located north of the Clontarf Marina and directly adjacent to a group of private moorings (Figure 3). The study area is adjacent to navigable waters but is not within boating channels.	<p>The hotels will not impact the ability for these vessels to navigate the waters of Middle Harbour because:</p> <ul style="list-style-type: none"><li>• The hotels will be at a sufficient depth so they do not interfere with the navigation of marine traffic (4-5 m)</li><li>• The location of the hotels is also away from boating traffic, being close to both the shoreline and rocky platforms.</li><li>• Does not interfere with boating channels.</li><li>• The study area is within a no-wash zone indicating the slow speed of boats that may drive along or over the study area.</li></ul>	<input type="checkbox"/> n/a <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High		<ul style="list-style-type: none"><li>• Contain Seahorse hotels to the study area to avoid impacts to the operation of boating channels.</li><li>• Place hotels at sufficient depth (4-5 m) to avoid impacts to navigation.</li></ul>	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Waste, Contamination and Hazardous Materials	The Contaminated Land Register (EPA, 2022) identified no known or potential contamination risks in the Northern Beaches Local Government Area. There are no current contamination notices within or near the study area.	There is a low risk for contamination to exist or be exacerbated on site. Potential impacts are negligible.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High		<ul style="list-style-type: none"><li>• Any suspected contamination identified during the works is to be reported to Council’s project management or the relevant authority.</li></ul>	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Social	The study area is within a zoned W5 Water Recreation zone. Social aspects of the study area include its use for moorings, boating, swimming, and other passive water recreation activities.	The proposed works will not impact the community’s ability to use the study area and surrounds for recreational purposes.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High		Not applicable.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Cumulative Impacts	Several other seahorse hotels have been installed around the Northern Beaches local government area.	Cumulative negative impacts are not expected to result from the proposed works. The preferred option has been chosen because it does not require additional stress to fauna caused by relocating them after the construction of the Clontarf Tidal Pool upgrade works. The cumulative impacts resulting from multiple hotels being placed around the local government area are positive in nature, as more habitat is being installed for the threatened species White’s Seahorse.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High		Not applicable.	<input checked="" type="checkbox"/> n/a <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High

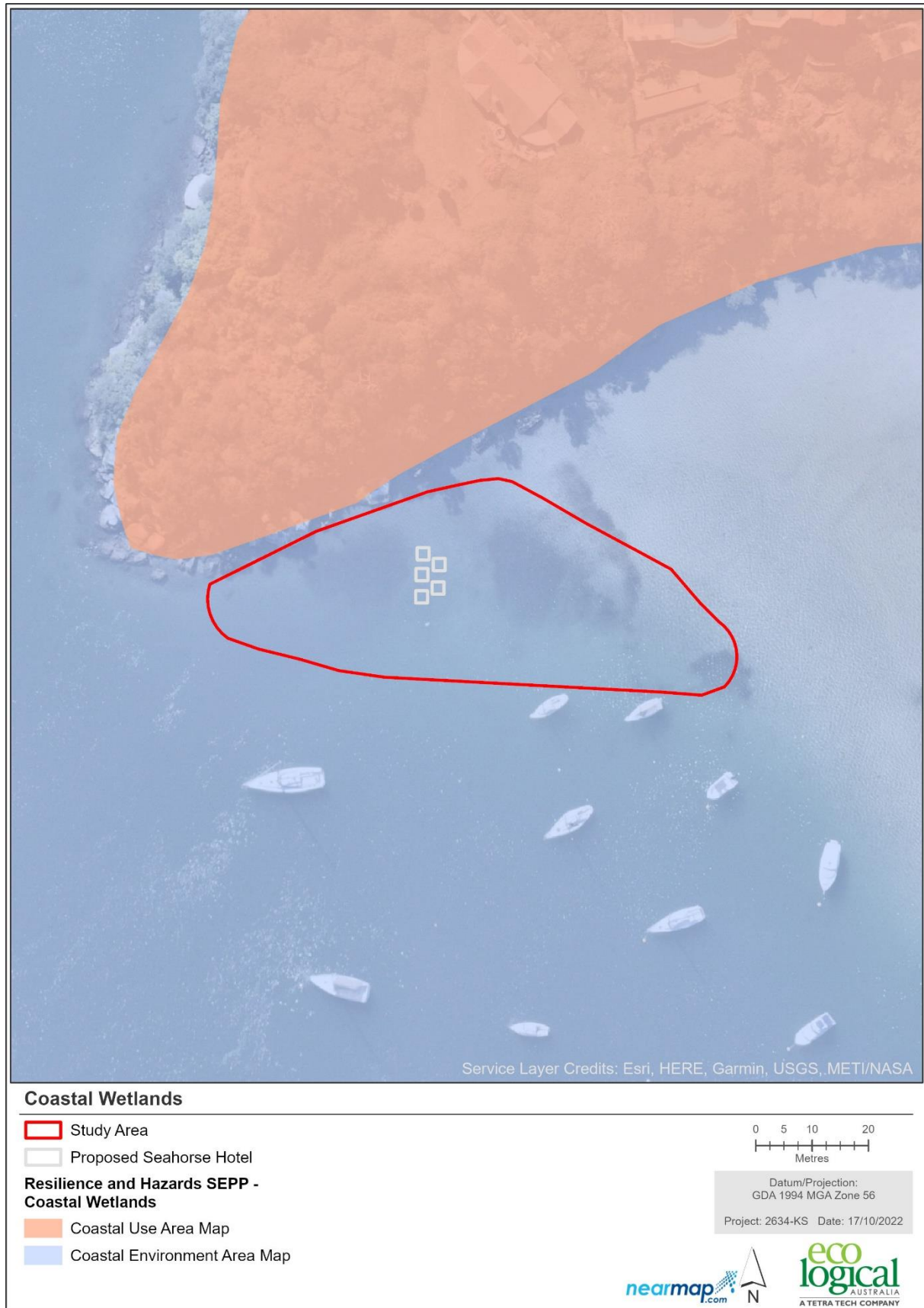


Figure 6: Coastal Wetlands mapping under the Resilience and Hazards SEPP





Figure 7: Wetlands Protection Area under the Biodiversity and Conservation SEPP



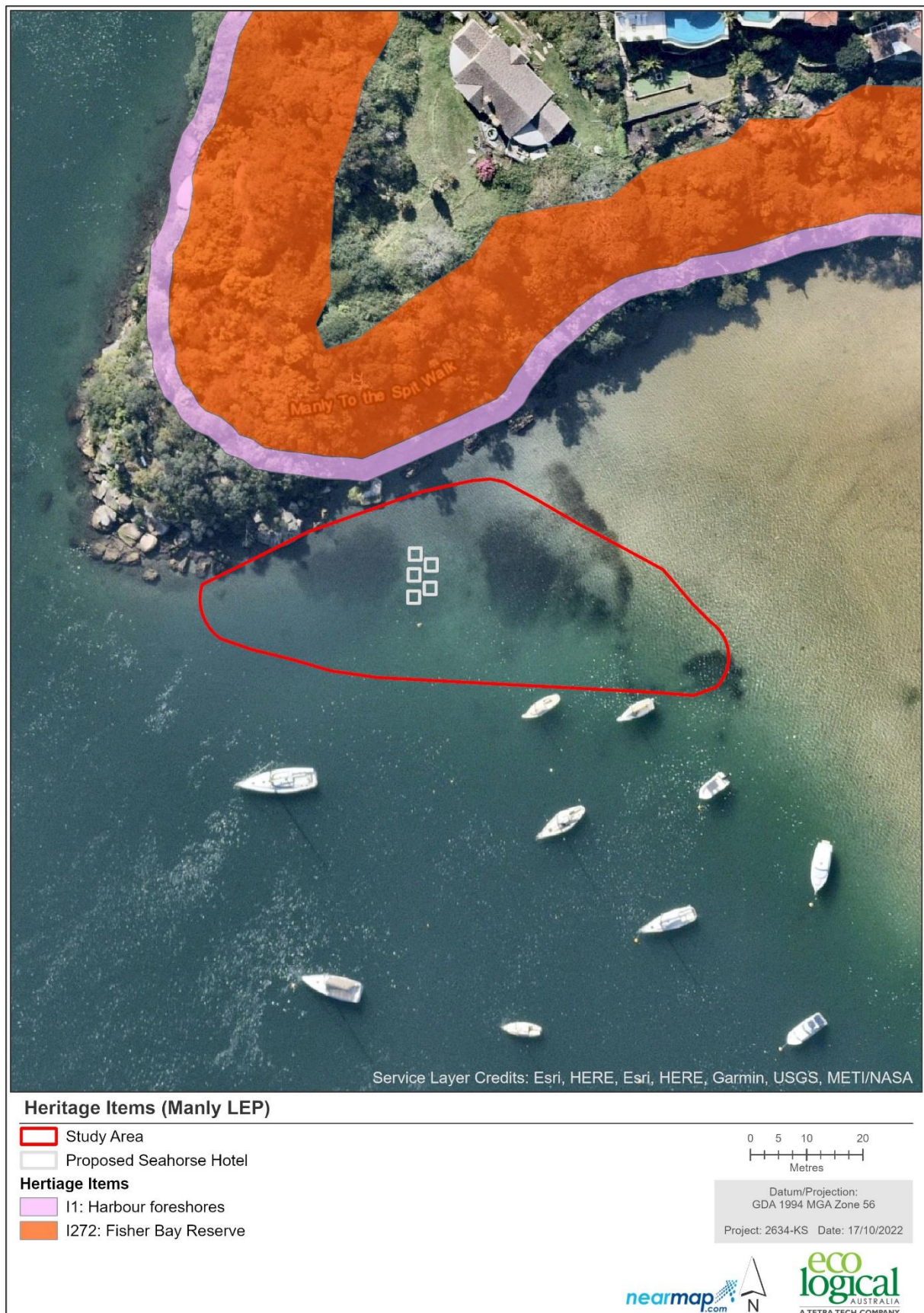


Figure 8: Heritage items





Figure 9: AHIMS Search

## 4. Consultation

Division 1 of the Transport and Infrastructure SEPP provides guidance on consultation with Council, agencies, and stakeholders. Additional consultation has been undertaken between Council and TfNSW in relation to works taking place within TfNSW owned land. This consultation process is summarised below.

### 4.1 Consultation Requirements under the Transport and Infrastructure SEPP

**Table 6: Transport and Infrastructure SEPP consultation requirements**

Section	Section Relevance	Consultation Required
Section 2.10	<p><b>Consultation with councils – development with impacts on council-related infrastructure or services</b></p> <p>Consultation is required if the development:</p> <p>(a) will have a substantial impact on stormwater management services provided by a council, or</p> <p>(b) is likely to generate traffic to an extent that will strain the capacity of the road system in a local government area, or</p> <p>(c) involves connection to, and a substantial impact on the capacity of, any part of a sewerage system owned by a council, or</p> <p>(d) involves connection to, and use of a substantial volume of water from, any part of a water supply system owned by a council, or</p> <p>(e) involves the installation of a temporary structure on, or the enclosing of, a public place that is under a council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential, or</p> <p>(f) involves excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which a council is the roads authority under the Roads Act 1993 (if the public authority that is carrying out the development, or on whose behalf it is being carried out, is not responsible for the maintenance of the road or footpath).</p>	No, Northern Beaches Council is the determining authority.
Section 2.11	<p><b>Consultation with councils – development with impacts on local heritage</b></p> <p>Consultation is required if the development:</p> <p>(a) is likely to affect the heritage significance of a local heritage item, or of a heritage conservation area, that is not also a State heritage item, in a way that is more than minor or inconsequential, and</p> <p>(b) is development that this Chapter provides may be carried out without consent</p>	No, Northern Beaches Council is the determining authority.
Section 2.12	<p><b>Consultation with councils – development with impacts on flood liable land</b></p> <p>In this section, flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the manual entitled Floodplain Development Manual: the management of flood liable land published by the New South Wales Government and as in force from time to time.</p> <p>A public authority, or a person acting on behalf of a public authority, must not carry out, on flood liable land, development that this Chapter provides may be carried out without consent and that will change flood patterns other than to a minor extent unless the authority or person has –</p> <p>(a) given written notice of the intention to carry out the development (together with a scope of works) to the council for the area in which the land is located, and</p>	No, Northern Beaches Council is the determining authority.



Section	Section Relevance	Consultation Required
	<i>(b) taken into consideration any response to the notice that is received from the council within 21 days after the notice is given.</i>	
Section 2.13	<p><b>Consultation with State Emergency Service – development with impacts on flood liable land</b></p> <p><i>A public authority, or a person acting on behalf of a public authority, must not carry out development on flood liable land that may be carried out without development consent under a relevant provision unless the authority or person has—</i></p> <p><i>(a) given written notice of the intention to carry out the development (together with a scope of works) to the State Emergency Service, and</i></p> <p><i>(b) taken into consideration any response to the notice that is received from the State Emergency Service within 21 days after the notice is given.</i></p>	No, the works are not proposed within flood liable land.
Section 2.14	<p><b>Consultation with councils – development with impacts on certain land within the coastal zone</b></p> <p>Consultation is required of the development:</p> <p><i>(1) This section applies to development on land that is within a coastal vulnerability area and is inconsistent with a certified coastal management program that applies to that land.</i></p>	No, Northern Beaches Council is the determining authority.
Section 2.15	<p><b>Consultation with public authorities other than councils</b></p> <p>Consultation is required if the development is:</p> <p><i>(a) development adjacent to land reserved under the National Parks and Wildlife Act 1974 or to land acquired under Part 11 of that Act — Department of Planning and Environment (DPE) / Biodiversity Conservation Division (BCD),</i></p> <p><i>(b) development on land in Zone E1 National Parks and Nature Reserves or in a land use zone that is equivalent to that zone, other than land reserved under the National Parks and Wildlife Act 1974 — DPE/BCD,</i></p> <p><i>(c) development comprising a fixed or floating structure in or over navigable waters—Transport for NSW,</i></p> <p><i>(d) development that may increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map—the Director of the Observatory</i></p> <p><i>(e) development on defence communications facility buffer land within the meaning of clause 5.15 of the Standard Instrument—the Secretary of the Commonwealth Department of Defence,</i></p> <p><i>(f) development on land in a mine subsidence district within the meaning of the Mine Subsidence Compensation Act 1961—the Mine Subsidence Board.</i></p>	<p>Yes.</p> <p>Consultation with TfNSW has been undertaken as the proposed works are within TfNSW owned land and comprises works to a fixed structure in navigable waters.</p> <p>Details are provided in Section 4.2 below.</p>

## 4.2 Consultation with DPI Fisheries / Transport for NSW

**Table 7: Consultation outcomes**

TfNSW & DPI Fisheries Comments	Council / Sea Dragon Response and Actions
Hotels need to be in at least 4 – 5m water for navigation clearances	<ul style="list-style-type: none"> <li>Hotels will be suitably placed in waters that won't interfere with navigation. This includes proximity to the rocky platforms at Bradys Point and the foreshore.</li> </ul>
The hotels will be added to an amended License with DPI Fisheries (same as other hotels in the harbour). Fisheries will be the Licensee.	<ul style="list-style-type: none"> <li>N/A</li> </ul>
No Fisheries Permit is required.	<ul style="list-style-type: none"> <li>N/A</li> </ul>

TfNSW & DPI Fisheries Comments	Council / Sea Dragon Response and Actions
TfNSW will need to review the environmental assessment.	<ul style="list-style-type: none"> <li>• Council will provide TfNSW with a draft copy of this REF. Any comments made by TfNSW will be addressed in the final REF.</li> </ul>
Weather conditions (i.e., La Nina) will influence the ability for marine biota to accumulate on the hotels. Additional time may be required to allow for this.	<ul style="list-style-type: none"> <li>• Council and Sea Dragon will consider this and monitor weather conditions. Weather statements issued by the Bureau of Meteorology indicate that La Nina rainfall is expected to continue for its third consecutive year which may influence water quality and prevent bioaccumulation on the hotel prior to seahorse relocation.</li> </ul>



## 5. Conclusion

### 5.1 Section 171 Check

Section 171 of the EP&A Regulation sets out a non-exhaustive list of factors which must be considered when undertaking a REF under Part 5 of the EP&A Act. These factors have been addressed throughout this report and are summarised in Table 8 below.

**Table 8: Section 171 Factors under the EP&A Regulation**

Section 171 Factor	Assessment Outcome
(a) the environmental impact on the community,	No adverse environmental impact on the community.
(b) the transformation of the locality,	No transformation of the locality.
(c) the environmental impact on the ecosystems of the locality,	A positive environmental effect on the White's Seahorse population around Clontarf will result from the hotels. No seagrass or other natural habitat will be removed or harmed.
(d) reduction of the aesthetic, recreational, scientific, or other environmental quality or value of the locality,	There will be no reduction in the quality or value of the locality. Environmental quality will increase as the habitat available for White's Seahorse will increase.
(e) the effects on any locality, place or building that has— <ul style="list-style-type: none"> <li>aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or</li> <li>social significance, or other special value for present or future generations,</li> </ul>	No adverse effect on these factors.
(f) the impact on the habitat of protected animals, within the meaning of the <i>Biodiversity Conservation Act 2016</i> ,	White's Seahorse is not listed under the BC Act. The proposed works will not have a negative impact on the habitat of protected animals within the meaning of the BC Act. The proposed works will have a temporary and short-term impact on protected fauna including White's Seahorse (endangered under the FM Act and EPBC Act). No seagrass habitat will be removed because of the proposed works. A positive impact on habitat of White's Seahorse will result, as additional habitat is being installed.
(g) the endangering of a species of animal, plant, or other form of life, whether living on land, in water or in the air,	No plants or fauna will be harmed during the proposed works.
(h) long-term effects on the environment,	The proposed works will have a negligible short-term effect on the environment by placing temporary structures in the water for the purpose of the hotels. In the long term these structures are considered beneficial as they provide additional habitat for a threatened fauna species, White's Seahorse, and will become naturalised in their marine environment after a period of time. As such, a positive long-term effect on the environment will result from the proposed works.
(i) degradation of the quality of the environment,	No degradation of the environment is expected to result from the proposed works.

Section 171 Factor	Assessment Outcome
(j) risk to the safety of the environment,	A low risk to the safety of the environment is associated with the proposed works.
(k) reduction in the range of beneficial uses of the environment,	There would be no long-term reduction in the range of uses of the environment including for boating and passive water recreation. The works would increase White's Seahorse ability for beneficial use of its environment by providing additional habitat.
(l) pollution of the environment,	No pollution is expected to occur.
(m) environmental problems associated with the disposal of waste,	Waste produced would be taken off site and disposed of at a suitably licensed facility.
(n) Any increased demands on resources (natural or otherwise) that are or are likely to become in short supply?	No resources that would be used as part of the proposed works are, or are likely to become, in short supply.
(o) the cumulative environmental effect with other existing or likely future activities,	The proposed works will be in synergy with the associated Clontarf Tidal Pool upgrades. No other proposed works in the near vicinity are known to occur at the same time. Seahorse hotels throughout the Northern Beaches local government area are unlikely to have a negative cumulative effect as the populations are geographically distinct and the hotels provide a positive benefit for White's Seahorse and other Syngnathids.
(p) the impact on coastal processes and coastal hazards, including those under projected climate change conditions,	<p>The seahorse hotels are a temporary structure and would eventually naturalise in the marine environment. DPI Fisheries consider seahorse hotels a non-artificial structure. This is because once they are installed, they are transformed by encrusting organisms, macroalgae, sponges, soft corals, and other invertebrates, essentially considered to become a natural reef within approximately two years of installation.</p> <p>The structure is small in scale and unlikely to impact on coastal processes or hazards. It is not anticipated to have an impact on climate change conditions or other coastal hazards.</p>
(q) applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1,	The proposed works are in accordance with the objectives of local, regional and district strategic plans which universally support actions that protect the environment and increase biodiversity.
(r) other relevant environmental factors.	All relevant factors have been addressed in this REF.

## 5.2 Evaluation

This REF has determined that the proposed works are not likely to have a significant impact on any aspect of the environment, subject to the implementation of recommended mitigation measures and safeguards. A beneficial outcome will result from the seahorse hotels, as they provide additional habitat for the threatened aquatic fauna species White's Seahorse, potentially aiding in this population's recovery.

## 6. REF Determination and Conditions

### 6.1 Assessor Declaration

This REF provides a true and fair review of the activity in relation to its likely effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the project and provides sufficient information to determine whether there is likely to be a significant impact on the environment as a result of the Project.

I have considered all environmental impacts and safeguards to the best of my knowledge and have sought advice where required.

#### Assessor's Declaration and Approval

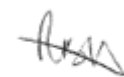
**Project Director**

Rebecca Ben-Haim

Eco Logical Australia

Level 3, 101 Sussex Street, Sydney 2000

Ph: 02 9259 3745



Date: 25/10/2022

**Project Manager**

Geraint Breese

Eco Logical Australia

Level 3, 101 Sussex Street, Sydney 2000

Ph: 02 9259 3754



Date: 25/10/2022

### 6.2 Determiner Declaration and Approval

I have reviewed the document and consider that the project will not have a significant impact and can proceed subject to the controls outlined in this REF.

#### Determiner's Declaration and Approval

Role:

Name:

Company:

Address:

Ph:

See PDF page 16-17 for Council Manager and Executive Manager signatures. Matthew Holt 23/11/22

Role:

Name:

Company:

Address:

Ph:

Date:

## 7. References

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McGrouther, Mark. “White's Seahorse, *Hippocampus Whitei* Bleeker, 1855.” The Australian Museum. Australian Museum, 2019. <https://australian.museum/learn/animals/fishes/whites-seahorse-hippocampus-whitei-bleeker-1855/>.

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University of Technology Sydney. “New 'Hotels' A Suite Haven for Baby Seahorses.” University of Technology Sydney, June 7, 2021. <https://www.uts.edu.au/news/health-science/new-hotels-suite-haven-baby-seahorses>.



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APPENDIX A

# Assessments of Significance

## A1 Assessment of Significance (FM Act)

If a species, population, or ecological community is listed under Division 2 of the FM Act, an Assessment of Significance must be undertaken. Section 221ZV of the FM Act requires the determination of whether the action proposed is likely to significantly affect threatened species, populations or ecological communities, or their habitats. Section 221ZV outlines the factors that must be considered when assessing an impact under this section.

### *Hippocampus whitei* (White's Seahorse)

The Fisheries Scientific Committee has listed *Hippocampus whitei* as an Endangered species under Schedule 4 Part 1 of the FM Act. As the proposed activities are in the vicinity of potential habitat for *Hippocampus whitei* and records of this species have been recorded in nearby habitat, it is necessary to undertake assessment of significance under Section 221ZV of the FM Act.

**Table 9: FM Act s221ZV Assessment of Significance - *Hippocampus whitei***

Question	Response
(a) in the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction,	No <i>White's Seahorse</i> will be disturbed or relocated during the proposed installation of hotels at Bradys Point. No potential habitat for White's Seahorse in the study area, such as dense <i>Posidonia australis</i> will be impacted or removed because of the proposed works. The hotels will be placed on bare marine sands and relocation will occur as part of separate works outside of the White's Seahorse breeding seasons.
(b) in the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction,	<i>White's Seahorse</i> is not a listed endangered population under Schedule 4 Part 2 of the FM Act.
(c) in the case of an endangered ecological community or critically endangered ecological community, whether the action proposed: (i) and (ii)	Not applicable, as it is not an ecological community.
(d) in relation to the habitat of a threatened species, population or ecological community:	No habitat in the form of sponges, artificial structures or seagrass meadows will be removed because of these proposed works. Additional habitat in the form of seahorse hotels will be added to the study area, which will become colonised with marine biota to provide suitable habitat for White's Seahorse.
(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and	
(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and	No fragmentation or isolation will occur because of the hotels. The hotels will potentially link patches of seagrass in close proximity together.

Question	Response
(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality,	Not applicable as no habitat is to be removed.
(e) whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly),	There are currently no declared areas of critical habitat for White's Seahorse .
(f) whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan,	<p>The <i>Priorities Action Statement – Draft Actions for White's Seahorse (Hippocampus whitei)</i> is published by DPI Fisheries. The consistency of the proposed works has been considered in relation to the following actions:</p> <p><b>Advice to consent and determining authorities</b></p> <p><i>Provide information on the distribution of White's Seahorse to coastal councils, consent authorities and determining authorities to ensure appropriate consideration during development assessment processes or approval of other activities which may impact this species (e.g. cleaning of swimming nets in key areas) (High priority).</i></p> <p>Sea Dragon have engaged with DPI Fisheries on behalf of Council on appropriate methods to ensure appropriate habitat is available to relocate <i>White's Seahorse</i> from Clontarf Tidal Pool. As such, it is considered that Council has accurate information to ensure appropriate consideration throughout the approval process.</p> <p><b>Community and stakeholder liaison, awareness, and education</b></p> <p><i>Implement education initiatives to improve identification and awareness of the status of White's Seahorse and ways to minimise impacts on the species by preparing and distributing appropriate advisory material (High priority).</i></p> <p>The publication of this REF and other Council community consultation (e.g., 'Your Say' conducted by Council in relation to the Clontarf Tidal Pool) helps to educate residents on the existence and threats to the population of White's Seahorse, and provides a platform for Council to respond to public concerns about the seahorses.</p> <p><b>Habitat protection and rehabilitation</b></p> <p><i>Reduce the impact of public and private boat moorings on White's Seahorse habitats (High priority).</i></p> <p>The proposal does not include any changes to private boat moorings. The hotels will not impact the ability for boats to navigate in and out of existing moorings.</p> <p><i>Develop and trial artificial habitats to promote recovery of White's Seahorse populations (High priority).</i></p> <p>The hotels is considered to provide habitat for White's Seahorse populations, which will eventually be bio fouled and naturalised in the marine environment as it collapses under the weight of the encrusted marine biota.</p>
(g) whether the action proposed constitutes or is part of a KTP or is likely to result in the operation of, or increase the impact of, a KTP	The primary cause for the decline in abundance of White's Seahorse is the loss of natural habitats across their range in eastern Australia. The proposed works will ensure new habitat is created, as such is not part of a key threatening process.

## A2 Test of Significance (EPBC Act)

### *Hippocampus whitei* (White's Seahorse)

**Table 10: Test of Significance (Endangered Species)**

Criterion	Question	Response
<b>An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility of the following:</b>		
1)	will the action lead to a long-term decrease in the size of a population	No, the proposed works will provide suitable habitat so that the White's Seahorse in the Clontarf Tidal Pool area can be appropriately relocated in the future, ensuring the continuance of the population.
2)	will the action reduce the area of occupancy of the species	No, the hotels offer White's Seahorse with suitable habitat of similar or greater size than is currently available at their current location (Clontarf Tidal Pool).
3)	will the action fragment an existing population into two or more populations	No, White's Seahorse found within the Clontarf Tidal Pool area will be relocated together to the one alternate habitat site. However, the relocation of fauna is not part of the proposed works. The proposed works are for the installation of the hotels only. The installation process will not fragment any existing White's Seahorse population.
4)	will the action adversely affect habitat critical to the survival of a species	No. The proposed works provide habitat outside of the Clontarf Tidal Pool area that will aid in the survival of the species. This habitat will not be subject to the disturbances that the Pool has been, and likely will be. No habitat will be removed as part of the proposed seahorse hotel works.
5)	will the action disrupt the breeding cycle of a population	No, the installation of the hotels will not impact the breeding of White's Seahorse. No White's Seahorse will be relocated during the installation, which is to be completed approximately three months prior to relocation. Future relocation will occur outside of the breeding cycle of the White's Seahorse population.
6) i	will the action modify, destroy, remove, isolate, or decrease the availability or quality of habitat to the extent that the species is likely to decline	No. The proposed works will not remove or isolate any habitat that the species would use. The hotels will be placed on bare marine sands adjacent to seagrass meadows of species such as <i>Posidonia australis</i> . It has been shown that White's Seahorse prefers, and survives, living in artificial biofouled structures such as protective swimming enclosures. As such, the hotels will provide quality habitat and will enable the continuance of this species.
6) ii	will the action result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	No, the works will not introduce invasive species.

Criterion	Question	Response
7)	will the action introduce disease that may cause the species to decline	No, the works will not introduce disease.
8)	will the action interfere with the recovery of the species	<p>Unlikely. A recovery plan under the EPBC Act has not been issued for this species.</p> <p>Under the conservation advice, cleaning of swimming enclosure nets poses a moderate threat to the recovery of the species, causing a decline in population numbers which may take years to recover (TSSC, 2020). However, the swimming net will be replaced, and fauna will be relocated to alternate suitable habitat prior to the works commencing. As such, this is not expected to have a significant impact on the recovery of the White's Seahorse population at Clontarf. The hotels mitigate interference with White's Seahorse by ensuring suitable alternate habitat is available for the relocation of this species in relation to the Clontarf Tidal Pool upgrade works. In a best-case scenario, the hotels offer a less disturbed environment for this species to occupy and will aid in its recovery by providing additional habitat.</p>
<b>Conclusion</b>	<b>Is there likely to be a significant impact?</b>	No.



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APPENDIX B

# Seahorse Relocation Plan

(Sea Dragon Diving Co. 2021)



