



26<sup>th</sup> February 2021  
1<sup>st</sup> Northbridge Sea Scout Group  
296 Sailors Bay Road  
Northbridge  
NSW, 2063

Director, Transport Assessments  
Planning and Assessment

Department of Planning, Industry and Environment  
Locked Bag 5022  
Parramatta, NSW 2124

*(Via DPIE website, EIS digital submission)*

## RE: RMS BEACHES LINK (SSI-8862) – Submission in Objection

We refer to the Department of Planning, Industry and Environment (DPIE, and Department) public notification to the 'State Significant Infrastructure' (SSI) and 'Environmental Impact Statement' (EIS) for the Transport for NSW - Roads & Maritime Services (RMS, the Proponent) – Beaches Link and Gore Hill Freeway Connection project (the Project, SSI-8862).

1<sup>st</sup> Northbridge Sea Scout Group lodges a **submission in objection** to the proposed works, to the maritime crossing, to the potential land/seafloor toxins and contamination re-animation, and to potential impacts to Aboriginal shelters/caves, artwork and artefacts within the Clive Park Heritage Area, if the works are carried out as currently planned within the EIS documents.

Our submission responds to the currently planned pre-construction phase works (i.e. consultation, further detail investigations and detailed design phase), the prolonged Middle Harbour construction phase (including maritime waterway restrictions, coffer dam piling, construction vibration, dredging and immersion of the new road crossing tunnel), the short and long term impacts of potential **toxins and heavy metal** contaminated re-animation and sedimentation on our land, during the dredging works.

Of particular concern to our Scout Group is the substantial loss, some **3 ½ to 4 years** of our Middle Harbour boating and waterway training areas, which are **reduced by over 50%**, and the affects that un-planned restrictions will have to normal waterway passaging and boating activities. We are also significantly concerned with the **potential health effects** that the dredging works will have to our **young Scouts** (the EIS does not contain a health assessment for water access, swimming, or general water activities) and that prolonged construction noise will have to our young Scouts and to the Public using the Clive Park beach, the local foreshore and adjacent sail training and activity areas.

## BACKGROUND

Scouts Australia and Scouts NSW provide young Australians aged between 6 and 25 years of age with fun and challenging opportunities to grow through adventure. With over 17,000 youth and adult members from various cultural and religious backgrounds and with varying abilities, Scouts is one of the largest and most successful youth organisations in New South Wales.

The 1<sup>st</sup> Northbridge Sea Scout Group (established c1926) have been and are active members of the Lower North Shore, of Willoughby and of Northbridge local community for over 95 years. The 1<sup>st</sup> Northbridge Scout Hall is located at 296 Sailors Bay Road (established c1935) and our Boat Shed (established c1939) is located at Bethwaite Lane, Northbridge (i.e. on Clive Park foreshore).

The Boat Shed is used for swim training, canoeing, rowing, sailing and yachting activities, and it is located approximately 100m from the planned restricted Middle Harbour waterway construction zone and approximately 200 metres from the southern coffer dam construction site (BL7).

The Boat Shed which was initially shared by 1<sup>st</sup> Northbridge and 1<sup>st</sup> Sailors Bay Sea Scouts, was established in c1939<sup>1</sup> and is one of the first community foreshore facilities constructed at Clive Park in Northbridge, and it has been in almost continuous operation serving as a base for Middle Harbour waterway activities since opening.

Our Scout Group has approximately 95 active members including Scouts (i.e. Sea Cubs, Sea Scouts and Venturers), Sea Scout Leaders, Committee Members, Volunteer members and Adult helpers. Our Scout Group currently consists of 2x Cub Packs (for 8 to 11 year old's), 1x Sea Scout Troop (for 11 to 14 year old's) and 1x Venturer Unit (for 14 to 17 year old's). And we are investigating re-opening another Scout Troop on Thursday nights (which previously operated), due to large waiting lists and community requests (post COVID) for local adventurous activities.

We run 'Primary Boating Activities' (swim training, canoeing, rowing, sailing and yachting) in the highlighted blue area (refer to **Figure 1**) in the summer months, generally to the west of Split Bridge, these activities are typically held between August-September to April-May of each year and are weather and wind dependant. Our swim training events are located at Clive Park beach (refer to **Figure 2**), along the foreshore or at adjacent Northbridge Baths.

Our boating activities are generally held from our Boat Shed between 17:30 to 20:30 hours on Monday, Tuesday, Wednesday and Friday nights, with intermittent Thursday nights set aside for wider Lower North Shore scout water activities (e.g. a canoe training exercise for 1<sup>st</sup> Roseville Scouts was held in December 2020, with canoes transiting between the Boat Shed and Beauty Point, directly through the proposed coffer dam CL7 and temporary mooring sites).



Figure 1 - Middle Harbour - 1<sup>st</sup> Northbridge and 1<sup>st</sup> Sailors Bay Sea Scouts – Primary Boating Activity Area (Note, some activities transit Balmoral Beach)



Figure 2 - Clive Park beach – Cub Scouts Water Training (Aug 2019)

Note: The photo has been blurred to respect our youth

<sup>1</sup> Extracts and historical information have been derived from – *The Suburb of Northbridge A Community History*, Municipality of Willoughby, compiled by Ester Leslie (Copyright Australia 1788 -1988, Published for the Bicentennial Community Committee of Willoughby Municipal Council, Sydney 1988)

We also carry out additional boating activities in the wider Middle Harbour area on Saturday, Sunday and at Public Holidays, whilst fitting in with our adjacent neighbours Northbridge Sailing Club and 1<sup>st</sup> Sailors Bay Sea Scout Group (e.g. regional sail leadership training sail training was held in January of 2021).

## OUR EIS SUBMISSION AND REQUESTS TO THE DEPARTMENT

We raise to the Department, significant concerns with the currently planned works, the Middle Harbour immersed tunnel proposal, including the coffer dam construction, tunnelling under Clive Park and the duration of the programmed work. The EIS does not include a plan for, nor offer alternatives or options to, mitigate equitable access for swimming, canoeing or sailing craft (refer to **Attachments A and B** for further commentary).

The proposed extended construction program duration, of **3 ½ to 4 years** of disruptive construction activities and waterway restrictions, raises substantial logistical and planning impacts to our normal rosters Middle Harbour activities, when overlaid with the potential for re-animation of toxins and heavy metals including tributyltin and lead (Pb) contamination<sup>2</sup>, with the potential unknown health impacts to our Scouts<sup>3</sup>, to general public and to aquatic life<sup>4</sup>, and with cumulative Sydney Water sewage spills (c2020 and c2021) the compounded risks and hazards of these major works and events pose **significant risk** to our young Scouts.

Also of concern, is the limited consideration for the protection and conservation of Clive Park's Aboriginal caves/shelters, artwork (including whale and snake engravings/carvings, refer to **Figure 3**) and the risk of disturbing unknown artifacts within the Clive Park Heritage Area (CPHA) due to construction works, vibration and water draw down settlement affects.

1<sup>st</sup> Northbridge Sea Scout Group is an active participant in 'Clean-up Australia Day', and our Group regularly assists Willoughby Council and Clive Park Volunteer groups in the management, protection and cleaning up of the Clive Park Heritage Area. Our submission provides for additional site investigations, detailed analysis and protection of the area, which contains irreplaceable Aboriginal works and artifacts.

Key EIS issues are discussed further in **Attachments A and B**, and are summarised below:

- A) **Planning and Consultation:** The EIS infers that 'active consultation' has been carried out with directly affected landowners, waterway users and adjacent parties. The EIS (Chapters 7, 8 and 13) confirms that the planned maritime works will impact our boating activities and our lands, the Northbridge Sailing Cub (activities and lands) and 1<sup>st</sup> Sailors Bay Sea Scout Group (boating activities and potentially lands) and that the dredging of toxic and potentially contaminated materials will be deposited (10-30mm) within Clive Park beach, along the foreshore and within the Northbridge Sailing Cub and 1<sup>st</sup>

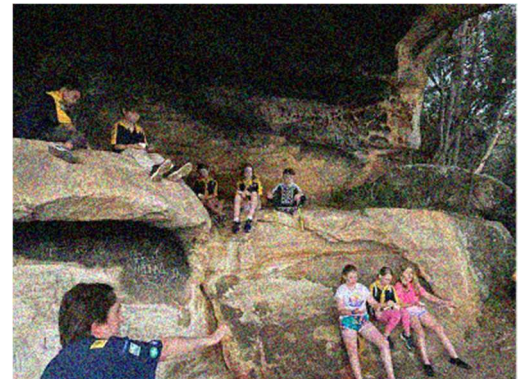


Figure 3 Clive Park – Aboriginal caves/shelters and Snake artwork (Dec 2020)

*Note: The photo has been blurred to respect our youth*

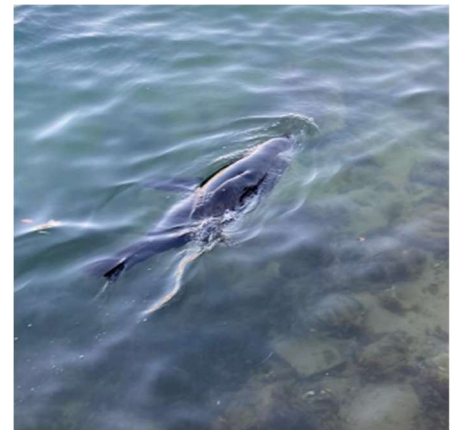
<sup>2</sup> Chapter 6.1 Contamination, Sydney Harbour Background Report (2014) Report prepared for NSW Department of Primary Industries by the Sydney Harbour Research Program at the Sydney Institute of Marine Science

<sup>3</sup> 'Young children are most at risk from lead' NSW EPA [Weblink](#)

<sup>4</sup> Chapter 3, Freewater, P. (2018) Sydney Harbour Estuary Processes Study - Stage 2 Detailed Studies of Vulnerabilities and Opportunities. Report prepared for Greater Sydney Local Land Services, June 2018

Northbridge Scout Group land areas (EIS, Chapter 17 and Appendix P) in layers up to between 2-10mm. The sediment toxicity and potential odour release from dying fauna and flora may directly affect our remaining Boat Shed activities and those of our neighbour.

Our Scout Group Committee and Scout Leadership have not been formally consulted<sup>5</sup>, and we hereby confirm to the Department that we have not been contacted by the Proponent (directly or indirectly) to discuss the changes/restrictions to Middle Harbour navigational areas, nor consulted on the risks and hazards to planned boating activities, nor consulted on the risks and hazards to scout or human health and to existing aquatic life or to our land.



*Figure 4 A seal passing beneath jetty at Northbridge Sailing Club (Dec 2020)*

- B) Proposed Initial Maritime Works:** The detailed investigations, geotechnical drilling, sea floor survey and other preparatory works (in advance of the main works) have the potential to affect our planned boating activities and aquatic life, including marine fauna and flora around the Middle Harbour area (refer to **Figure 4**).

Our Scout Group Committee and Scout Leadership request that the Department condition a new working group (Maritime Working Group), which should be created to mitigate the specific maritime risks and hazards of the Proponents planned works (refer to **Attachment C**).

We further request that a specific 'Maritime Construction and Environmental Management Plan' (M.CEMP) be developed for all pre-construction and primary construction works to address the location specific risks and hazards to the maritime waterway and to Clive Park, which are generated by the project and from the generally un-substantiated work methods/plans appended to the EIS (refer to **Attachments B and C**). We request that our Boat Shed Master (Scout Leader - Rolland Lindsay) be part of the Maritime Working Group, his contact details are noted below.

- C) Proposed Maritime Works:** The proposed primary works pose considerable risks and hazards to our normal boating activities. One of our activity and safety boats will now be generally isolated from our Boat Shed ('Herbie II' is our J24 keeler and is located on a mooring located between Fig Tree Point and Clive Park). The existing mooring location is potentially affected by the proposed floating tube yard work zone and will be segregated from our Boat Shed and our newly restricted boating activity area.

Our Scout Group Committee and Scout Leadership request that the Proponent relocate our J24 keeler to a new mooring (located within 200m of our Boat Shed) for the duration (or permanently) of the primary maritime works and for at least until 12 months post Substantial Completion of the works (to allow for works maintenance). If an existing mooring is not available, we request that the Proponent establish a new mooring and/or a piled-fixed/tandem mooring (at their cost) for the full duration of the pre-construction and primary maritime works.

- D) Proposed Construction and Vehicle Movements:** As discussed above and within **Attachments A and B**, the proposed construction activities will directly affect our normal Flat Rock, Waterway and boating activities. The potential re-activation of toxins and contamination during the works and dredging and

<sup>5</sup> Oxford Dictionary reference: "The act of discussing something with somebody or with a group of people **before making a decision about it**" and "Consultation with somebody/something. The decision was taken after **close consultation with local residents**". We have directly approached the Proponent to confirm EIS documentation status (in late Feb 2021) and commence urgent discussions with regards to the significant potential affects to our Scouts and to our lands.

the Proponents sediments being deposited along the Clive Park foreshore, beach and within our land, pose **significant health risks and hazards to our young Scouts** and to the Public.

The proposed works may also potentially affect (through above and below ground construction vibrations and ground water drawdowns and settlement) the Clive Park Heritage Area (CPHA) and **Aboriginal heritage listed areas and rock artwork**.



Figure 5 Proponent map extract – indicating a side tunnel.

We strenuously object to any construction phase and/or permanent tunnel access being established within Clive Park at the corner of Coolawin Road and Sailors Bay Road (refer to **Figure 5**) and we object to any planned truck movements along Sailors Bay Road to construct and/or maintain the tunnel access location.

Our Scout Group Committee and Scout Leadership request that the Department condition additional site investigations, additional detailed analysis and additional vibration monitoring (pre-construction and during the primary works), and condition the Proponent to provide the Maritime Working Group with regular reporting and event briefings, to mitigate the risks and hazards from the project (refer to **Attachments B and C**).

- E) Compensation Fund:** As a Group, we believe that we will incur additional planning efforts, risk and hazard reviews, and additional costs for safety boats, for fuelling, and for potentially additional off water activities when the significant restrictions to the waterway and/or when odours are excessive.

Scouts NSW and our Scout Group are 'Not-for-profit' organisations, and we believe that we will incur additional costs during the pre-construction and primary construction periods. The Proponents construction spans a period of some 3 ½ to 4 years, and the restrictions to our normal waterway activities are currently un-known, due to a lack of appropriate consultation and technical planning.

Our Scout Group Committee and Scout Leadership request that the Proponent be required to provide a 'Compensation Fund', which are related to the Proponents proposed Flat Rock, and Middle Harbour activities and Clive Park Heritage Area construction activities. Further, we request that the Department condition that the Maritime Working Group is tasked with direct management of a waterway 'Compensation and Restoration Fund' (at the Proponents' cost) to allow for compensation payments and restoration, if required.

## IN SUMMARY

1<sup>st</sup> Northbridge Sea Scout Group is an active local community group, with over 80 years of continuous use of the Middle Harbour waterway area, we are an affected landowner, and we are extremely disappointed in the Proponents consultation and community engagement process undertaken to date.

We request that the Department requires the Proponent to proactively engage and consult with all directly affected community groups, with all affected maritime users and with affected adjacent landowners, and with



conservation and Aboriginal groups especially where there are significant Commonwealth and State heritage listed elements/areas which are subject significant risk by the proposed works.

For general communications and advice on our Middle Harbour boating activities, we make available to the Department and Proponent, our Boat Shed Master and Scout Leader, Mr. Rolland Lindsay, his contact details are Mobile: 04 57536189 and Email: [Rolland.Lindsay@nsw.scouts.com.au](mailto:Rolland.Lindsay@nsw.scouts.com.au).

We also request that all formal and legal communications, and for any matters affecting or relating to our titled land (on behalf of NSW Scouts, the ultimate landowner), that communications are directed to the 1<sup>st</sup> Northbridge Sea Scout Group Committee (via the 'Leader In Charge'), contact information as noted below.

We look forward to the Department's EIS review of the public, community, affected party and governmental submissions, and we are available for further discussion and local maritime advice as required.

Yours in Scouts,

**Melanie Stray**

Leader in Charge, 1<sup>st</sup> Northbridge Sea Scout Group

Email: [Melanie.Stray@nsw.scouts.com.au](mailto:Melanie.Stray@nsw.scouts.com.au)

Mobile: 04 05447101

CC:

- Hon Gladys Berejiklian, Member for Parliament (Willoughby) - 151 Sailors Bay Road, Northbridge
- Hon Gail Giles-Gidney, Mayor of Willoughby - 31 Victor Street, Chatswood
- Hon Michael Regan, Mayor of Northern Beaches - 725 Pittwater Rd, Dee Why
- Dr Kerry Chant, Chief Health Officer, NSW Health - E: [info@health.nsw.gov.au](mailto:info@health.nsw.gov.au)
- Ms Susan Harrison, Office of Environmental & Heritage - E: [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au)
- Ms Claire Miles, Environmental Protection Agency (EPA) – E: [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au)

AND

- 1<sup>st</sup> Northbridge Sea Scout Group, Committee
- 1<sup>st</sup> Sailors Bay Sea Scout Group, Committee
- Mr. Matthew Brownlie, District Scout Leader, Lower North Shore/Turrumburra District, Sydney
- Mr. Steve Tufts, Lower North Shore/Turrumburra District Scout Commissioner, Sydney
- Northbridge Sailing Club, Committee and Commodore

**Attachments:**

- A. Middle Harbour and Clive Park, Background Information
- B. EIS Review
- C. Proposed Conditions and Mitigations

## ATTACHMENT A - MIDDLE HARBOUR AND CLIVE PARK, BACKGROUND INFORMATION

### A1. Location and General Background

The 1<sup>st</sup> Northbridge Sea Scouts Hall is located on Sailors Bay Road, and our 'Boat Shed' (the location of our waterway activities, refer to **Figure 1**) is located to the north west of Clive Park Heritage Area (CPHA) and is immediately adjacent to the Northbridge Sailing Club, it is located on the northbridge peninsula and adjoining the 'Sailors Bay' estuary area, which is part of the larger Middle Harbour inner harbour waterway.

The foreshore in the area Clive Park and Northbridge area, remains relatively intact and does not exhibit densification or major structural changes that have occurred throughout other areas of Middle Harbour.

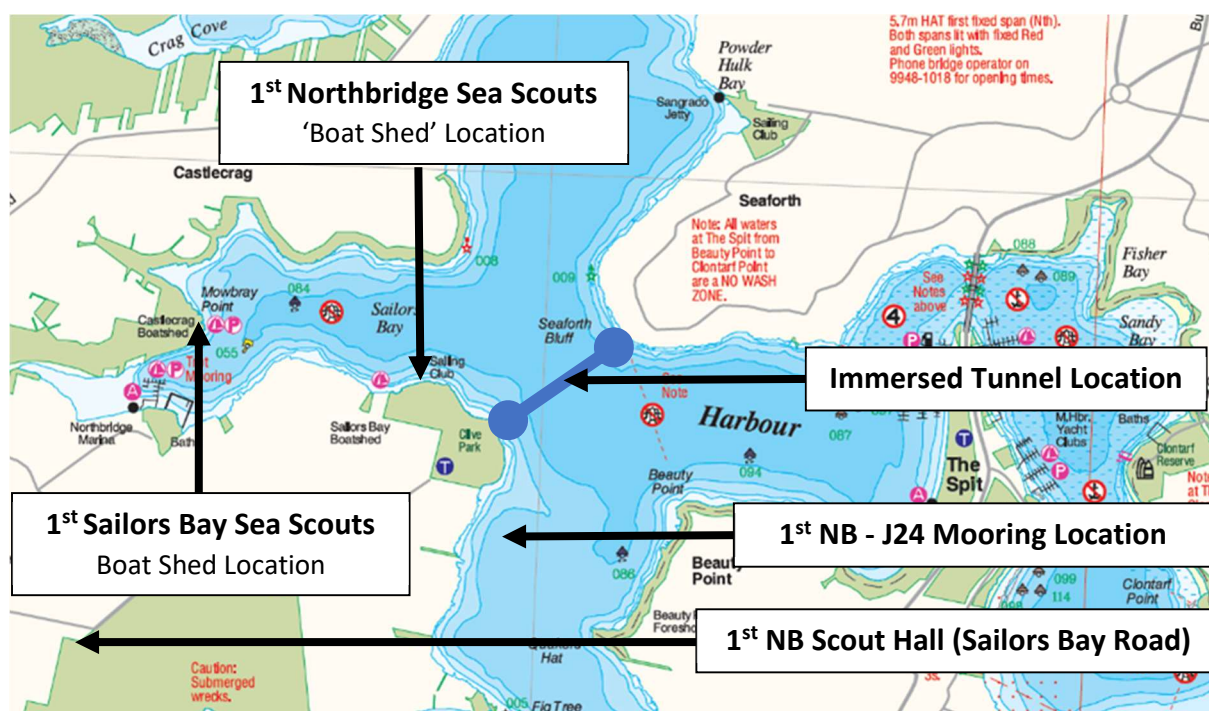


Figure 1 Middle Harbour Key Chart (Map)

The Middle Harbour Catchment is defined within the 'Sydney Harbour Estuary Processes Study' (c2018), which states:

Extracts from paragraph 2.4.3 Middle Harbour Catchment, page 17:

*'The Middle Harbour catchment covers approximately 100 km<sup>2</sup>. The river is a northern tributary arm to Sydney Harbour and an inlet of the Tasman Sea located north of the Sydney central business district between Grotto Point near Clontarf and Middle Head. Middle Harbour has its main source in the upper reaches of Garigal National Park where it forms Middle Harbour Creek and flows southeast to become Middle Harbour at Bungaroo. Bushland covers one-quarter of the catchment mostly in Garigal National Park (22 km<sup>2</sup>).*

*The shore of Middle Harbour is mostly rugged, forested or barren with few flat land areas so the area was almost entirely neglected for the first two centuries of European settlement in Sydney. Land use in the catchment is mainly residential with a population of approximately 200,000 people. There is also*

*some industrial and commercial land use. Middle Harbour has a sparsely developed catchment in comparison to the other catchments. Furthermore, development is relatively young and largely devoid of heavy industry, predominantly featuring business and residential zoning...'*

The 1<sup>st</sup> Northbridge Boat Shed location, the Clive Park beach and Clive Park rocky foreshore remain relatively consistent and intact from the 1939's to present day. The Northbridge Volunteer Defence Corps (VDC, 1939 to 1945)<sup>1</sup> and the Northbridge VDC Association (c1945 to 1955) as part of their community works established the Clive Park tidal pools (refer **Figure 2**) for **'the benefit of local children'**.



*Local V.D.C. Association constructing tidal wading pool, Clive Park.  
(Photo by courtesy of Miss M. Brown)*

Figure 2 Northbridge VDC Association - Construction of the Clive Park tidal wading pool (c1945-55)

## A2. Clive Park Heritage Area (CPHA)

1<sup>st</sup> Northbridge Sea Scouts (1<sup>st</sup> NB) have a long attachment and history with the Clive Park Heritage Area (CPHA), however that is nothing compared to that of Aboriginal peoples who used Middle Harbour and in particular the Clive Park Heritage Area for fishing, for fish trapping, for shellfish gathering, using the caves/shelters as dwellings and using of the sandstone rock faces for carvings and storytelling.

The following is extracted<sup>2</sup> from the Willoughby Councils website for Clive Park:

*'Named after Clive Norman Backhouse, Mayor (1912-13) and Chatswood East Ward Alderman (1911-14). The park occupies part of the first Crown grant in Northbridge in 1837. It later became the Albert Town Estate, a proposed residential subdivision in 1840. The subdivision did not proceed and the land was resumed for park purposes in 1914. After the Government gazetted the park in 1933, it was placed under the management and control of Willoughby Council.'*

<sup>1</sup> Extracts and historical information have been derived from – The Suburb of Northbridge A Community History, Municipality of Willoughby, compiled by Ester Leslie (Copyright Australia 1788 -1988, Published for the Bicentennial Community Committee of Willoughby Municipal Council, Sydney 1988)

<sup>2</sup> <https://www.willoughby.nsw.gov.au/Residents/Parks-and-recreation/Parks-reserves-and-playgrounds/Clive-Park>

*Clive Park is an important area for Aboriginal people as it contains **twenty six registered Aboriginal sites, including shelters, middens, burials, a fish trap, shelter art and engravings.***

*The Park provides important habitat for some remnant populations of small-range species, such as Brown Antechinus, skinks species as well as woodland birds. Its harbour foreshore also provides habitat for the threatened microbat species, the Southern Myotis, and is visited by Little Penguins.*

*To reach the swings, walk down the path next to the public toilet block at the bus stop at the end of Sailors Bay Road. The swings are set amongst the bushland of the park, next to a beautiful Sydney Red Gum (Angophora costata). There is a double plated BBQ, 4 picnic tables and 2 park benches in a picnic area with water views further along the very steep path. At the swings another path with steps also reaches the picnic area.'*

### A3. Clive Park Heritage Area and Aboriginal use

Note: "We (1<sup>st</sup> Northbridge Sea Scout Group) would like to acknowledge Aboriginal peoples as the traditional owners and custodians of the land and waterways, which we use and enjoy today. We would also like to pay our respects to Elders past, present and future, extending this respect to all Aboriginal people that frequent the Clive Park Heritage Area, no matter where they come from".

The 'Suburb of Northbridge A Community History' booklet states the following (refer to **Figure 3**) about the 'Aborigines in the Middle Harbour Area' and the people of the 'Camaraigal or Cam-mer-ray-gal', who are now known as the 'Camaraygal people of the Guringai nation':

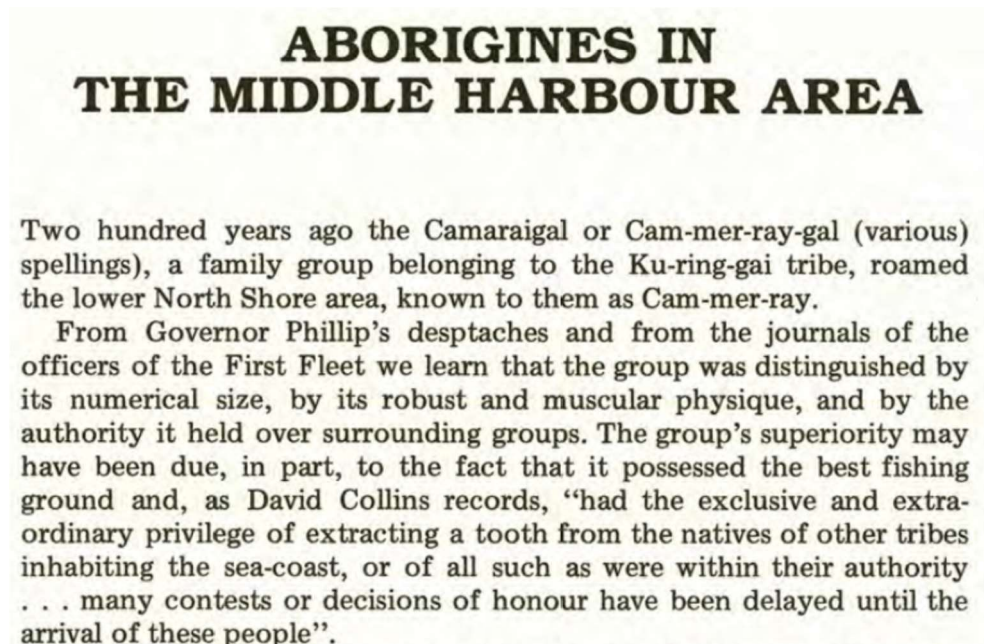


Figure 3 Extract from the Suburb of Northbridge booklet

While there may be no formal "literature" or "formal record" of use, we dispute the EIS statements (Chapter 15.3.7 Significance assessment) that the position that the 'Historical Significance' site is 'N/A'.

The 'Willoughby City Council' (WCC) 'Clive Park - Reserve Action Plan' (RAP) states<sup>3</sup>:

*'Clive Park is classified as bushland as defined in State Environmental Planning Policy No 19 (\*Vol 1, 1.4), and is protected under State and Commonwealth Legislation (\*Vol 1, 1.5.2). It is zoned E2 Environmental Conservation in the Willoughby Local Environment Plan (WLEP) 2012.*

*ABORIGINAL CULTURAL SIGNIFICANCE: The Camaraygal people of the Guringai nation originally occupied the area.*

*Clive Park is an important area for Aboriginal people as it contains twenty six registered Aboriginal sites, including shelters, middens, burials, a fish trap, shelter art and engravings. However many sites have deteriorated over time.*

*There is a prominent large rock engraving that has unfortunately been vandalised many times in the past. A replica of this engraving has been recreated by an indigenous artist at Mowbray Park, Lane Cove North.'*

#### A4. Previous contamination studies and reporting

Initial review of the technical studies and materials available<sup>4</sup> and EIS reports and appendices by the Proponent for Middle Harbour area, indicate that the proposed Middle Harbour tunnel crossing and construction area, is potentially contaminated by past boating activities (e.g. antifouling activities and by other commercial activities) which can contain numerous toxins, including 'Tributyltin' or TBT and heavy metals including lead (Pb). This type of potential toxin and contamination is highlighted in the 'Sydney Harbour Background Report' (MEMA, c2014), as shown in **Figure 4** below.

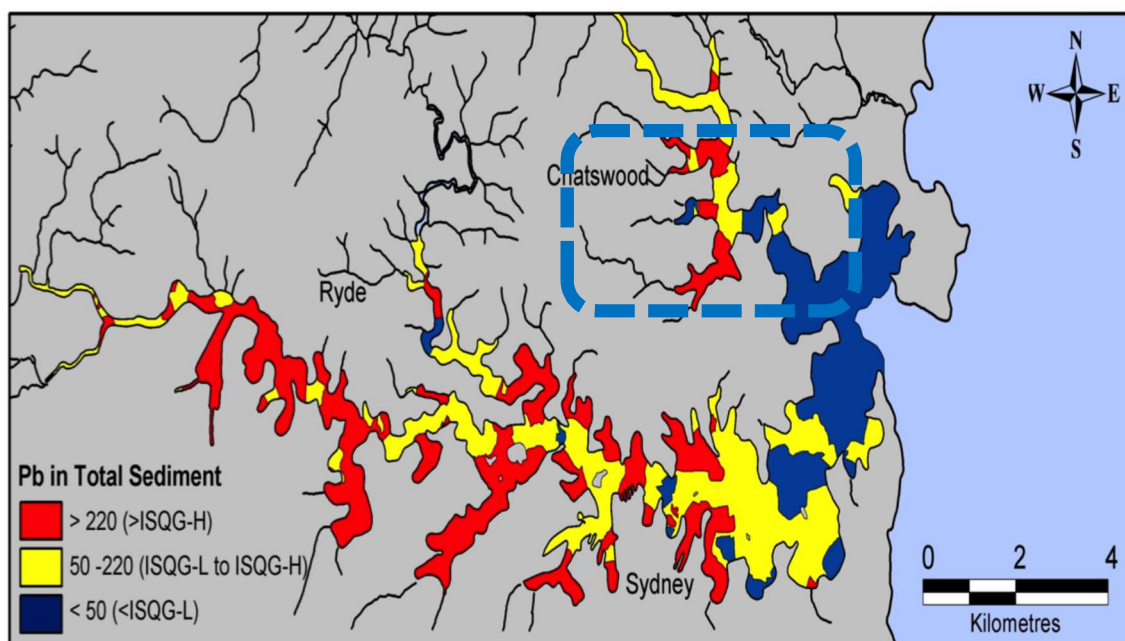


Figure 4 Distribution of Lead contamination (extract from 'Figure 13: Sediment in Sydney Harbour where lead concentrations are at a level to cause possible biological effects on fauna' Source: Gavin Birch, University of Sydney; Sydney Harbour Background Report, MEMA, c2014)

<sup>3</sup> [Clive Park Willoughby City Council \(nsw.gov.au\)](http://www.willoughby.nsw.gov.au)

<sup>4</sup> <https://www.smh.com.au/national/nsw/harbour-sludge-to-be-dug-up-for-new-tunnel-contains-alarming-levels-of-toxins-20210212-p5721z.html>

Runoff from inland developed areas (i.e. greater Willoughby commercial and Killara-Davidson catchments) and from adjacent developed marina hard stand areas, local pontoons/jetty's , commercial slipways and mooring areas within Sailors Bay estuary and upper Middle Harbour areas, has led to the potential elevated risk of TPT and heavy metal contamination on the sea-floor.

Various heavy metal contamination studies into the Greater Sydney Harbour and inshore towards the Middle Harbour waterway and estuary areas, have been carried out since early 2000. These studies generally indicate and conclude that land use have contaminated the seafloor contain various heavy metal concentrations.

The proposed harbour crossing area is situated in a zone of 'Pb sediment fine fraction' varying between '200-400' up to greater than '400' (refer to **Figure 5**) as shown below:

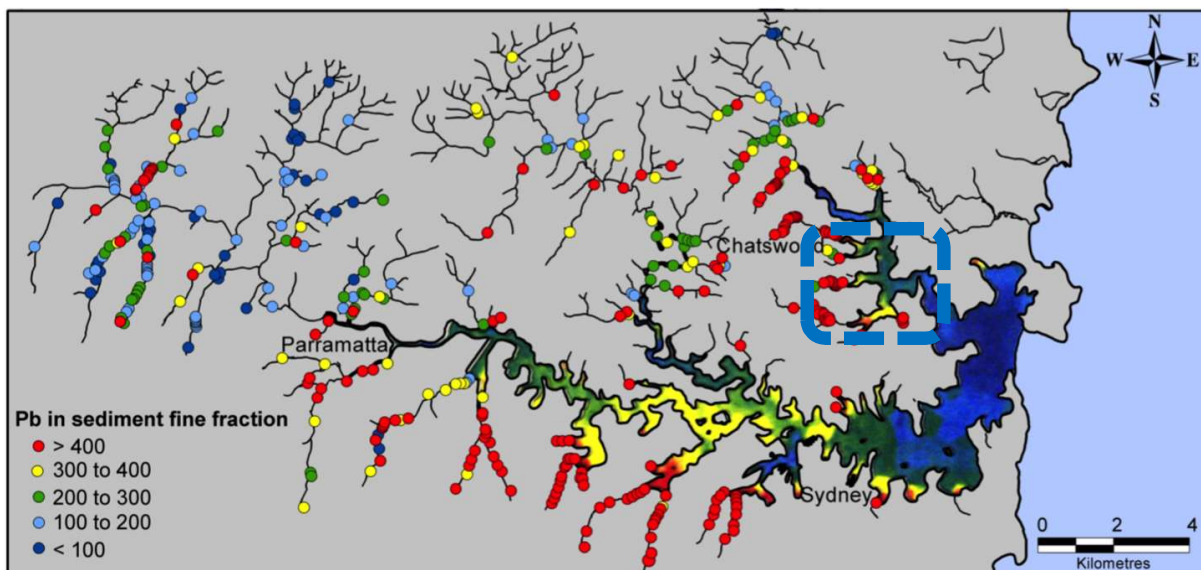


Figure 5 Distribution of Lead contamination (extract from 'Figure 12: Distribution of Lead contamination in the Sydney Estuary'. Source: Gavin Birch, University of Sydney; Sydney Harbour Background Report, MEMA, c2014)

Fine fraction may/will present as a significant human health risk and hazard, when re-activated by the proposed construction activities.

#### A5. Northbridge to Naremburn area

1<sup>st</sup> Northbridge Sea Scouts use the 10ha Flat Rock Gully walking tracks and Tunks Park public reserve area (refer to **Figure 6**) for tramping training and for 'wide area Scout games' (refer to **Figure 7**) to train for our hikes and to allow for practical supervision of our Scouts in a safe and controlled location.

Recent Sydney Water sewerage spills and stormwater overflows and access restrictions in this area, have reduced our use of the area, however the regenerating bush land and wildlife corridor offers a uniquely local Willoughby experience within easy walking distance of our Scout Hall.

The loss of Wilksch's Walk, the loss of the regenerating bushland, and the loss of upper reaches of the walkway to the proposed Beaches Link construction staging site, will further impact our normal Scouting activities.

The potential for construction contamination re-activation of past tip/waste areas with potential trapped leachate discharges, potential slit discharges and construction noise from the site activities, provides further proof of "cumulative effects" to our Scouts normal activities, and to the local residents and Public.

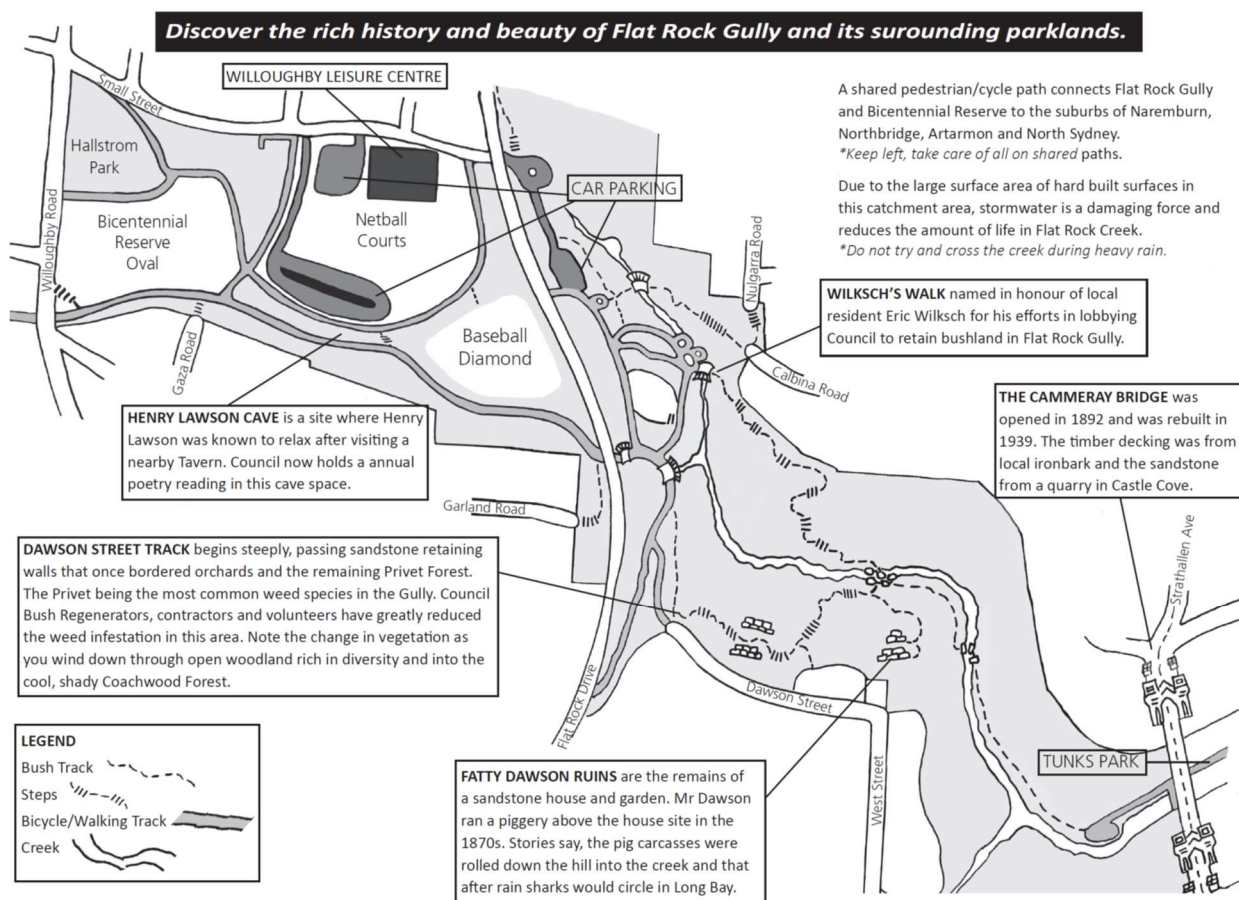


Figure 6 Willoughby Council Flat Rock Walking Track<sup>5</sup>



Figure 7 1<sup>st</sup> Northbridge Sea Scouts using Tunks Park (February 2021) for 'wide area' games and activities

Note: The photo has been blurred to respect our youth

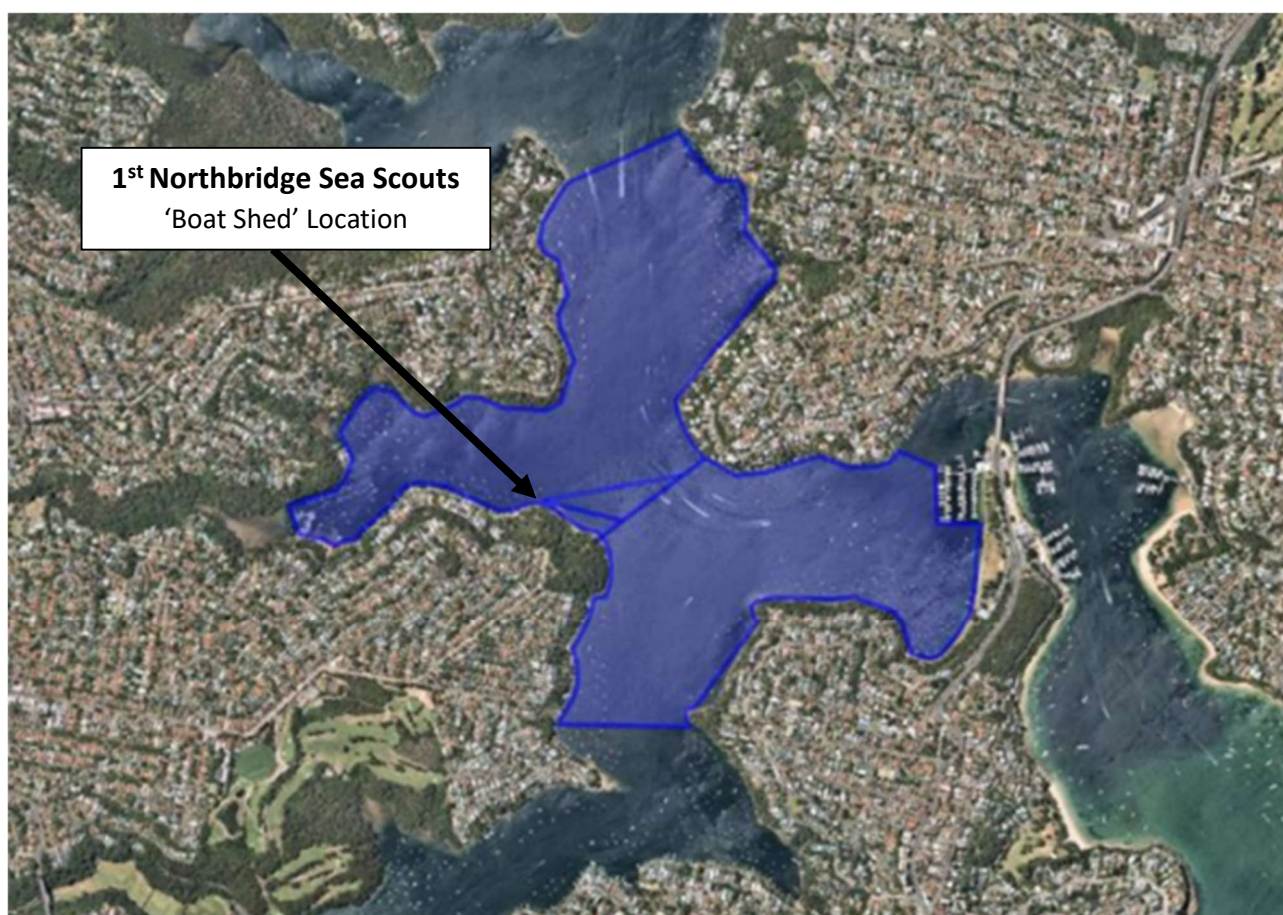
<sup>5</sup> <https://www.willoughby.nsw.gov.au/Environment/Bushland-and-Wildlife/Bushwalking-Tracks/Tracks/Flat-Rock-Gully-Walking-Track>

## ATTACHMENT B - EIS REVIEW

The 1<sup>st</sup> Northbridge Sea Scouts Boat Shed is located approximately **100 metres** from the planned restricted Middle Harbour waterways and approximately **200 metres** from the southern coffer dam (BL7) construction site.

Clive Park beach and foreshore area is located within the restricted waterway area<sup>6</sup> and within **20-50m** of the southern coffer dam (BL7) construction site. Our young Scouts and the Public regularly swim, canoe and sail from Clive Park beach and foreshore.

The central Middle Harbour waterway area is used by 1<sup>st</sup> Northbridge Sea Scouts, 1<sup>st</sup> Sailors Bay Sea Scouts and Northbridge Sailing groups and is shown in 'dark-blue' on **Figure 8** below:



*Figure 8 Middle Harbour - 1st Northbridge and 1st Sailors Bay Sea Scouts – Primary Boating Activity Area (Note, some activities transit Balmoral Beach)*

Our young Scouts (our Cubs, Scouts and Venturers) carry out:

- swim training (and other water based activities) at Clive Park beach and along the foreshore areas;
- canoeing training at Clive Park beach and canoeing from Clive Park to Beauty Point; and
- general sailing courses and yachting areas (i.e. non-motorised movements) in the main Middle Harbour area (refer to **Figure 8** and **Figure 9**)

<sup>6</sup> Note: Various EIS documents, show different waterway restrictions and envelopes, e.g. one shows all of Clive Beach within the restriction and another shows the beach area clear of the restriction.

## B1. Proposed overlapping activity areas

The 'dark-blue' shaded area represents our 'Primary Boating Activity' area, it is actively used by 1<sup>st</sup> Northbridge Sea Scouts, 1<sup>st</sup> Sailors Bay Sea Scouts and Northbridge Sailing Club, along with numerous other Middle Harbour sailing vessels, rowers, larger yachts and motorised watercraft. There are over 1000 vessels moored vessels (at marinas or on moorings) and numerous watercraft launched (Roseville Bridge and Tunks Park boat ramps) to the West of Spit Bridge, which are potentially affected by the proposed work elements.

It can be seen from **Figure 9** and **Figure 10** that the location of the Proponents new harbour crossing, the construction zones, the restricted waterways, and the location of the temporary tunnel storage units and Spit West construction site, is in direct conflict with the Primary Boating Activity waterway area of Middle Harbour.

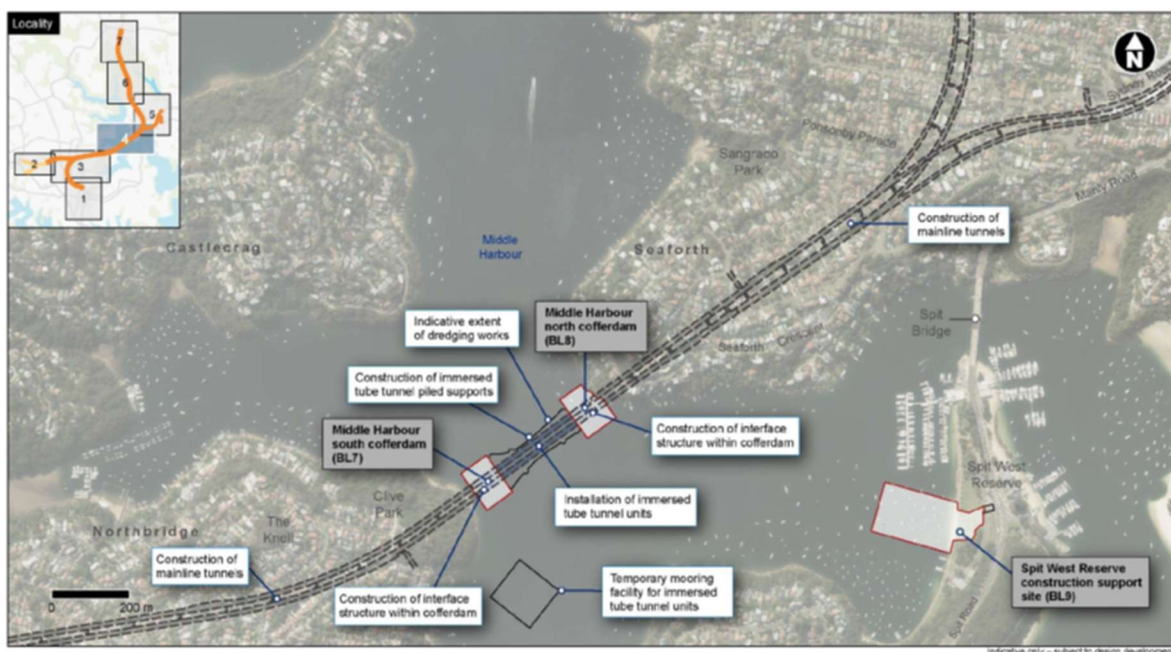


Figure 9 EIS chapter 6 – Key plan and construction footprint

EXTRACTED FROM RMS 9D MIDDLE HARBOUR (Web version Feb 2020)

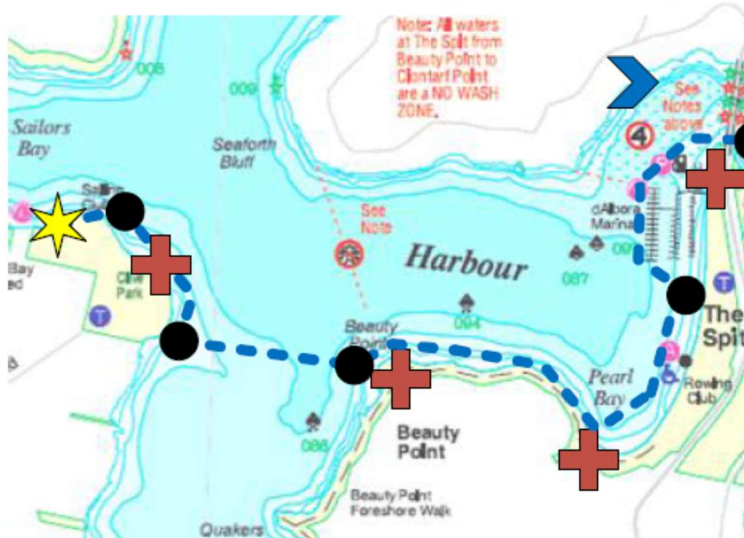


Figure 10 Lower North Shore/Turrumburra District, examle leadership canoe training trip ('+' indicate safe places for emergencies, black 'dots' indicate waypoints along the canoe route)

We typically have three canoe training paths, the first two are to the North and West of the Boat Shed (used for young cubs), however our preferred trip path (for Sea Scouts, Venturers, and Leadership training) is between our Boat Shed, Clive Park and Beauty Point and sometimes to Spit Bridge. The Clive Park to Pearl Bay area is generally not used by larger powered watercraft transiting from Spit Bridge and it is therefore safer for training of our youth.

The tunnel construction and the location of the temporary tube mooring facility is in direct conflict with our current and preferred canoe training areas and our Primary Boating Activity areas, refer to **Figure 11** below:

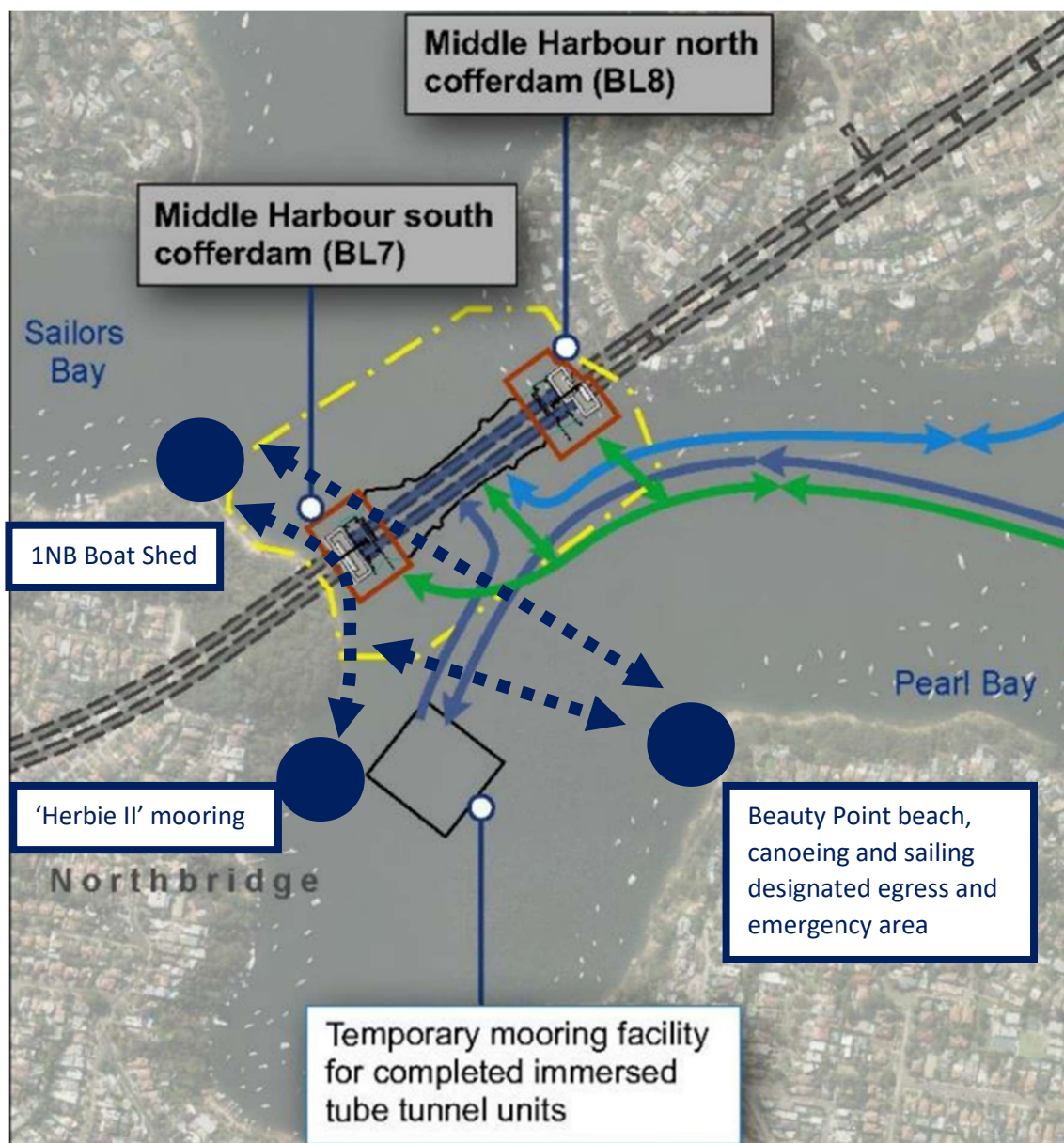


Figure 11 Harbour Crossing construction, overlaid with the 1<sup>st</sup> NB Boat Shed, J24 Mooring and Beauty Point canoe training area

Further, our 'Herbie II' (a J24 keeler) and its swing mooring location, is now effectively isolated (refer to **Figure 11**) from our Boat Shed. This boat is used for sail training and as a secondary safety boat. Herbie II is 'typically' sailed north from its mooring between 17:30-18:30hrs (most summer weeknights) to the central Middle Harbour area and then west to our Boat Shed and it is then returned to the swing mooring between 19:30 and 20:30hrs.

With the proposed restricted waterway, this removes an active training boat and a safety boat from our normal use. Without mitigations in place this elevates the risks and hazards to our normal Middle Harbour Primary Boating Activities and to our Scouts, Leaders and volunteers/adults that support our water activities.

### Risk Assessment

The proposed waterway restriction area (refer to **Figure 12**) poses significant risks and hazards to our normal Primary Boating Activity waterway operational area. The planning and location of the navigation markers, immersed tubes and coffer dam works have not been made in discussion with the local maritime users, the navigational impingements are not safe for canoeing and/or sailing vessels (i.e. non-powered vessels).

When our 'Safe Work Method Statements' (SWMS) and risk management/mitigation processes have been reviewed, and overlaid with the proposed Beaches Link construction works, the restricted areas generate "High Risk" to "Extreme Risk" for our young Scouts, Leaders and Adult helpers.

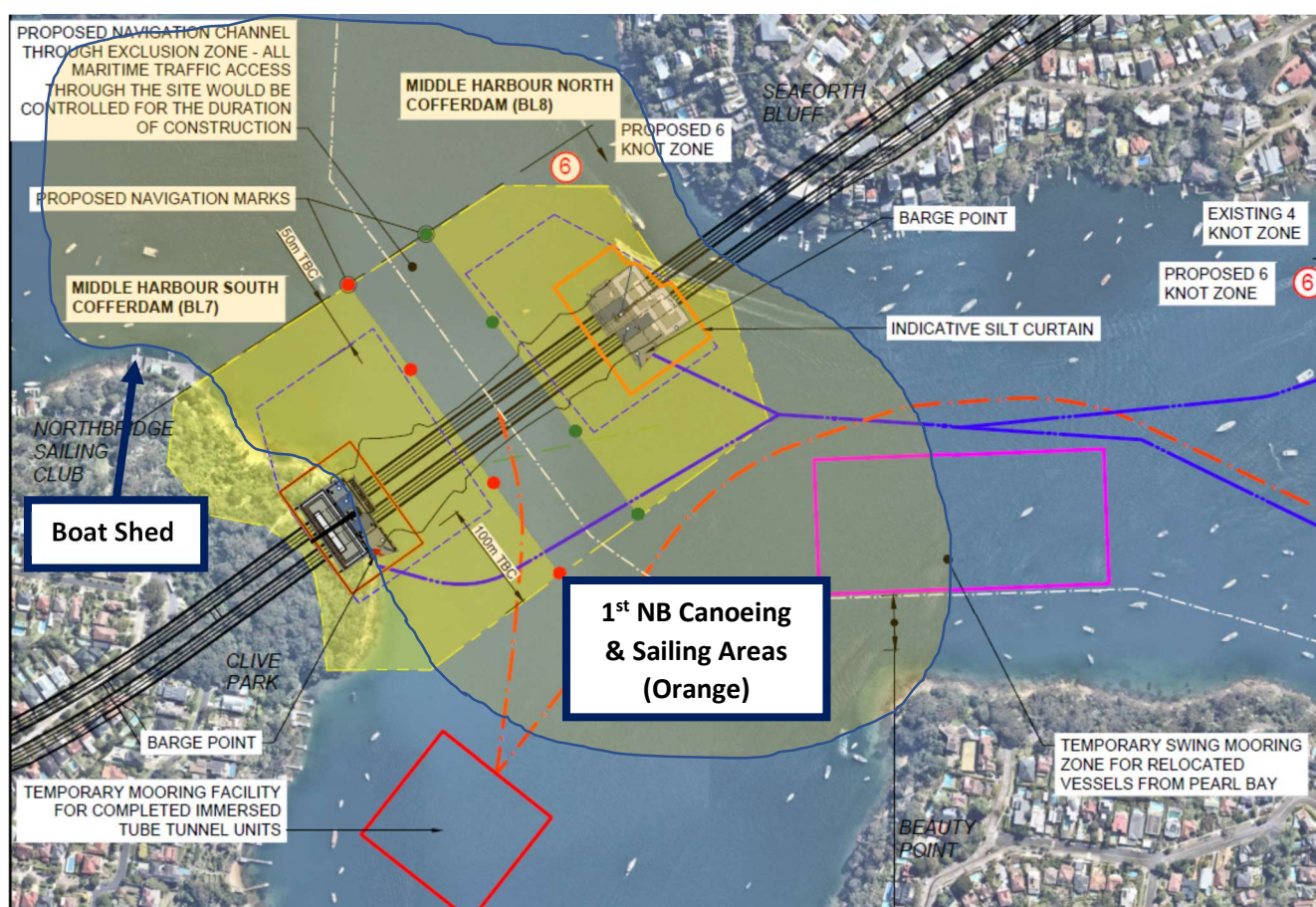


Figure 12 EIS Appendix F – Traffic and Transport (Part 2) – Draft Construction Management Plan (with unconfirmed restrictions)

**Note: Another EIS documentation “error”,** the maritime construction site and coffer dam work area (BL7) are now shown within the Clive Park Heritage Area and overlay with the Aboriginal caves/shelter and artwork site locations.

Due to the Clive Park rocky shoreline and shallow depth around the headland, we will not be able to pass our canoes behind the coffer dam (BL7) as it will be too dangerous, and we will be severely restricted by the proposal and need to modify our swimming, canoeing and sail training times, locations and general Scout water activities, which have been in a regular pattern of waterway use since the 1930's.

Our Primary Boating Activity areas have been **reduced by over 50%**, for some **3½ to 4 years** of construction phase activities, a significant impingement to our normal waterway operations.

As a group (1<sup>st</sup> Northbridge Sea Scouts, 1<sup>st</sup> Sailors Bay Sea Scouts and Northbridge Sailing Club) we will be severely restricted for all canoeing and sailing activities, and we will be restricted to an area within Sailors Bay western reach, which is not preferred for sailing due to its changeable wind conditions and gusting around the headlands.

## B2. Dredging and Contamination affects

The following key graphics have been extracted from the EIS and EIS Appendices:

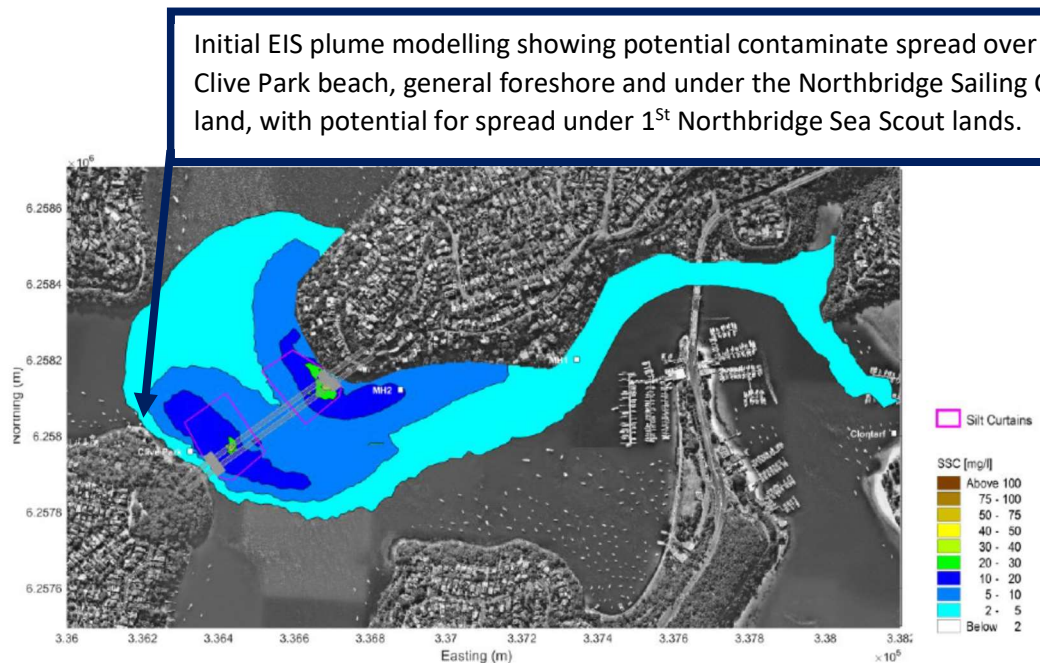


Figure 9-18: 95<sup>th</sup> percentile, for surface (top), mid-water column (middle) and near the seabed (bottom) for the BHD only dredging period (weeks 1 to 4)

Figure 13 EIS Chapter 17 and Appendix P - Hydrodynamic and dredge plume modelling (the 98<sup>th</sup> percentile would the wider fetching)

Initial EIS plume modelling showing potential contaminate spread over Clive Park beach, general foreshore and under the Northbridge Sailing Club land, with potential for spread under 1<sup>st</sup> Northbridge Sea Scout lands.

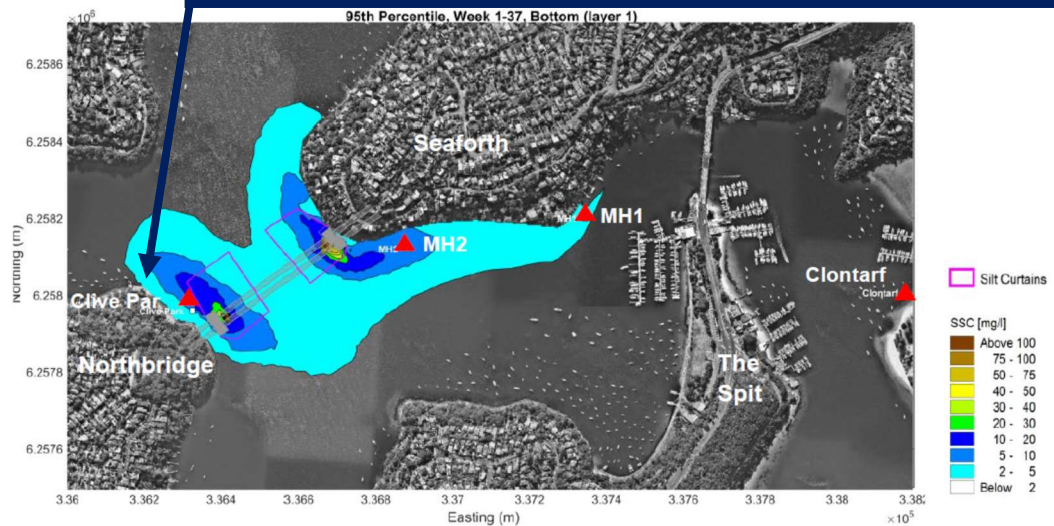


Figure 7-6: 95<sup>th</sup> percentile, for surface (top), mid-water column (middle) and near the bed of the harbour (bottom) for the entire dredging period (weeks 1 to 37)

Figure 14 EIS Chapter 17 and Appendix P - Hydrodynamic and dredge plume modelling

The 'State Environmental Planning Policy No. 55 – Site Remediation (SEPP 55)' prescribes a statutory process associated with the development of land (including in this case we suggest, land includes the contaminated seafloor, the Clive Park rocky fore shore, the Clive Park beach area and adjacent titled lands) that are which is potentially/known to be contaminated, and that require assessment and remediation. Clause 7 of SEPP 55 provides the following:

- '(1) A consent authority must not consent to the carrying out of any development on land unless:*
- (a) it has considered whether the land is contaminated, and*
  - (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
  - (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.'*

Toxins, TBT materials and heavy metal contamination within the proposed work zones are a high risk. Release of contained toxins, TBT and heavy metals by the proposed dredging and tunnelling activities, especially during and post changes in existing tidal movements which are caused by sea channel/bed changes and sedimentation affects brought about by the immersed tube bedding in works, in our opinion pose a significant health risk to our youth and to the public.

In our opinion and using a best practise approach, we request that the initial EIS plume modelling and material deposition (at only a 95<sup>th</sup> percentile model) should be reviewed by an **independent professional party and**



that a 98<sup>th</sup> percentile drift and sedimentation profile is adopted for human health risk assessment purposes, and that human health effects are tested as a primary outcome of the revised modelling.

The existing EIS models do not include for 'cumulative effects' brought about by the dredging, piling and barge anchoring activities, they do not include cumulative effects of the changes to local tidal flows (EIS, Chapter 13, 17 and EIS Appendix P Hydrodynamic and dredge plume modelling) brought about by the four construction and staging sites in operation at the same time.

Nor do the models include risk assessment models, for the loss of base anchoring of the slit curtains (refer to NSW EPA, WA EPA and USA EPA guidance on 'deep' silt curtains and the effectiveness of containing dredging materials at depth), or for the discharge from accidental construction loses (i.e. a loss of dredged material at the surface from a faulting bucket or other containment system) and the potential unknown health impacts to our young Scouts and to the Public, which have not been assessed as part of the EIS documentation development to date.

### ***B3. Noise and Vibration***

The construction noise and vibration events affecting the Northbridge Sailing Club rooms, 1<sup>st</sup> Northbridge Sea Scouts Boat Shed and our combined groups (including for 1<sup>st</sup> Sailors Bay Sea Scouts) waterway activities are proposed tunnelling activities MHC\_07 and MHC\_10 (refer to **Figure 15, dashed-blue** highlight). Which once started, must be generally continuous until they are complete.

As such the most appropriate scheduling of these severely disruptive activities should be commenced in May and be complete before the end of August of each calendar year (i.e. the winter months), when the Middle Harbour waterway use is generally at its lowest use.

Note: these disruptive activities water activities and significant transit restrictions, are currently scheduled for the peak summer months, with limited regard for our Scouts and the public's waterway use.

Table 5-104 – Middle Harbour crossing – construction hours

Stage	Representative activity	Reference	Activity description <sup>1</sup>	Work hours <sup>2</sup>			
				Day (Standard)	Day (OOHW)	Evening	Night
Installation of temporary cofferdam structure	1. Build Middle Harbour north cofferdam	MHC_01	Piling for cofferdams	◆			
	2. Build Middle Harbour south cofferdam	MHC_02	Piling for cofferdams	◆			
	3. Dewater cofferdams	MHC_03	Pump water out of cofferdams	◆	◆ <sup>4</sup>	◆ <sup>4</sup>	◆ <sup>4</sup>
Excavation of sediment and rock within cofferdam	4. Excavate cofferdams	MHC_04	Remove sediment and rock from cofferdams	◆			
Pile temporary mooring facility east of Clive Park	5. Pile moorings	MHC_05	Pile moorings	◆			
Construction of interface structure	6. Cast interface structures	MHC_06	Cast concrete interface structures	◆			
Inundation and removal of cofferdam structure	7. Remove cofferdams	MHC_07	Inundate and remove cofferdams	◆	◆ <sup>4</sup>	◆ <sup>4</sup>	◆ <sup>4</sup>
Dredging of a trench for the immersed tube tunnels	8. Prepare foundations	MHC_08	Dredge and place gravel foundations	◆ <sup>3</sup>			
Construction of immersed tube tunnel piled supports	9. Pile foundations	MHC_09	Pile foundations for immersed tube tunnel	◆			
Installation of immersed tube tunnel units	10. Immerse tunnel units	MHC_10	Immerse and connect tube tunnel units	◆	◆	◆	◆
Notes:	<ol style="list-style-type: none"> <li>Annexure E describes the modelled plant for each activity</li> <li>Day Standard is 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm Saturday Day Out-of-Hours Work is 1.00pm to 6.00pm Saturday and 8.00am to 6.00pm Sunday/Public holiday Evening is 6.00pm to 10.00pm Monday to Friday and 6.00pm to 10.00pm Saturday/Sunday/Public holiday Night is 10.00pm to 7.00am Monday to Friday and 10.00pm to 8.00am Saturday/ Sunday/Public holiday</li> <li>Following the ceasing of dredging activities, the barge spoil transportation may extend beyond standard construction hours</li> <li>Pumps are to remain operating, no other activities proposed.</li> </ol>						

Figure 15 EIS Appendix G – Noise and vibration (Part 1), Section 5.7.1.3 (1<sup>st</sup> NB Green & Blue highlights, refer to text)

EIS Appendix G - Section 5.7.2.4 states:

*‘During piling for moorings temporary mooring east of Clive Park (MHC\_05), no receiver buildings are predicted to be highly noise affected (>75 dB(A)), as moorings would be screw piles bored into rock (quieter than impact piling). However, up to 124 receiver buildings are predicted to be noise affected (>NML) across Northbridge, Castlecrag and Seaforth in NCAs 39.1, 39.2, 40.1, 40.2 and 41.1.’*

We dispute this positions, both the Northbridge Sailing Club rooms and 1<sup>st</sup> Northbridge Boat Shed (along with numerous residents in Northbridge and Seaforth) will be subjected to prolonged periods of construction noise between 70-75dB(A) as shown in **Figure 16**, extracted from the EIS.

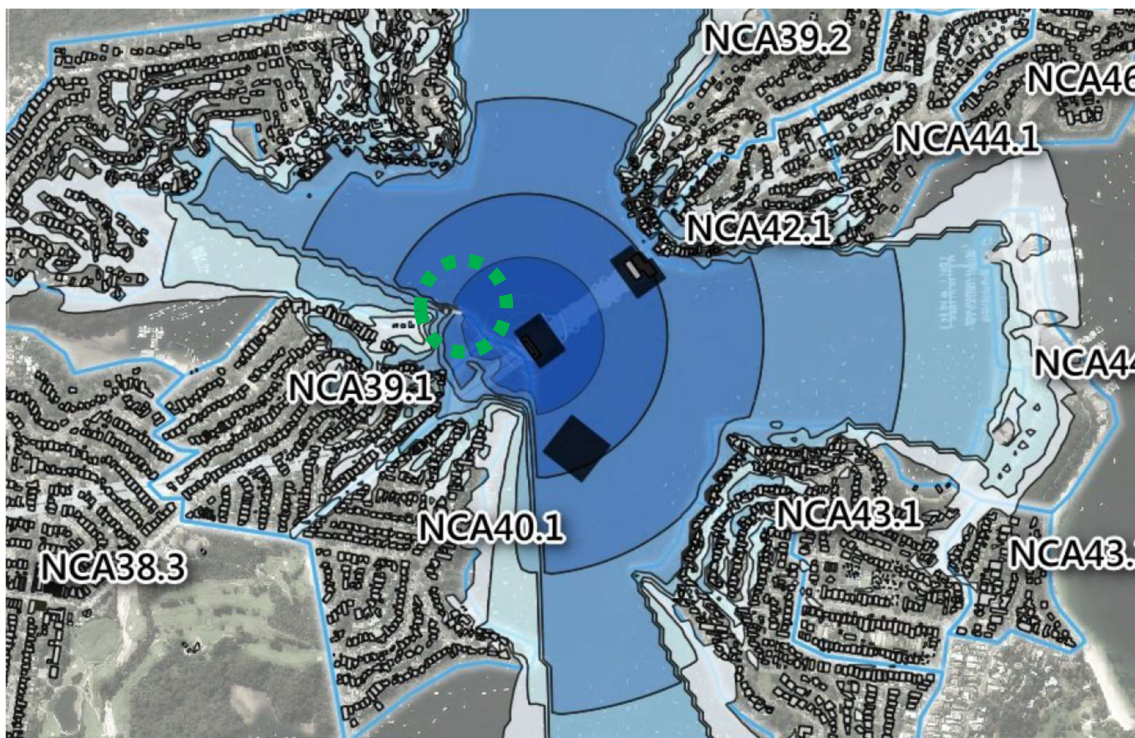


Figure 16 App G Noise and Vibration – BL7 (Standard Hours), LAeq (15min) at 70-75dB(A) at the Northbridge Sailing and Boat Shed (Green)

This level of noise exposure is considered by the NSW Environmental Protection Authority (NSW EPA), as a **‘Highly Noisy’** environment (refer to **Figure 17**) and in our opinion, prolonged periods of exposure to this high level of construction noise can and will be damaging<sup>7</sup> to our young Scouts, to our canoeing and sailing groups, and to the local residential and to the public using Clive Park Heritage Area.

NSW EPA guidance: *‘The impacts of noise depend on the noise level, its characteristics and how it is perceived by the person affected.’*

Short-term effects of noise can be annoying, as it can

- interfere with speech
- disturb sleep
- interrupt work

Prolonged exposure to loud noise can result in

- anxiety
- other health effects

*‘The impacts of noise depend on the noise level, its characteristics and how it is perceived by the person affected.’*

The EIS noise assessment suggests that the northern and southern coffer dam construction, the immersed tube works, and construction staging sites, and spit construction sites will not be simultaneous, however other EIS documents show these works being developed simultaneously.

<sup>7</sup> <https://www.epa.nsw.gov.au/your-environment/noise>

The EIS noise assessment should include for cumulative construction noise from the immersed tubes, tube staging site and spit bridge construction sites, as all sites have elements of cumulative overlapping high noise envelopes.

While not specialist in the noise modelling, we find the EIS models showing 'noise cut-offs' at the shorelines to be overly optimistic, especially when reviewing the EIS noise modelling and the Actual effects on other motorway construction sites.

We request that an **independent professional party** review the modelling inputs (modelling bounds, water born noise assumptions and constraints), the topographic constraints used, and the impacts of cumulative effects to determine the quantum of affected residents and other parties, which maybe subjected to 3 ½ to 4 years of medium to highly noisy construction affects.

**Table 3** Noise at residences using quantitative assessment – during the recommended standard hours: noise affected and highly noise affected management levels

Time of day	Management level L <sub>Aeq, 15min</sub> 1, 2, 3, 4, 5	How to apply
Recommended standard hours Monday to Friday 0700 to 1800 Saturday 0800 to 1300 No work on Sundays or public holidays	Noise affected RBL + 10dB	Where the predicted or measured L <sub>Aeq, 15min</sub> is greater than the noise affected management level, the proponent shall apply all feasible and reasonable work practices to meet this level. As a matter of good practice, noise should be reduced as far as reasonably practicable. The proponent should notify all potentially impacted residents.
	Highly noise affected 75dB(A)	Where noise is above the highly noise affected management level, all feasible and reasonable mitigation shall be applied as well as engagement with the consent authority or regulator to identify other measures to manage noise impacts. Where appropriate, engagement with the community is encouraged to determine the preferred mitigation approach, such as: <ul style="list-style-type: none"> <li>• negotiated agreements and/or respite periods to restrict work activity</li> <li>• identification of times when the community is less sensitive to noise, including options for longer periods of construction in exchange for restrictions on construction times.</li> </ul>

Figure 17 EPA Draft Construction Noise Guideline – Section 5.3 'Highly Noise Affected'.

We fully expect that there will be long periods of disruptive maritime construction activity with high noise thresholds, and we will be seeking noise and vibration **respite and compensation** for loss of waterway use and loss of use of our Boat Shed activities, in accordance with the EPA Construction Noise Guidelines (refer to **Figure 18**) .

The **respite and compensation** will be in accordance with the development of the Maritime Construction and Environmental Management Plan (M.CEMP), and which will be actively managed and regularly reviewed by the Maritime Working Group and stakeholders, and our Scout Group committee (on behalf of Scouts NSW, as landowner).

Consultation and evaluation of respite periods and alternative accommodation	<p>The proponent must justify the selection of feasible and reasonable mitigation emphasising community views, particularly work scheduling and respite periods, as described in section 5.4. Alternative accommodation offers should be provided to give respite from potential sleep disturbance, if appropriate, and:</p> <p>any offers should be clearly communicated and negotiated with the affected individuals</p> <p>where alternative accommodation is not offered, the reasons must be fully justified to the relevant consent authority or regulator if required.</p> <p>Insufficient justification may result in specific mitigation measures being included within a licence or consent.</p>	<p>Where activities are likely to result in noise of around RBL + 20dB or more and/or where the highly noise affected management level of 65dB(A) or more is predicted, proponents are expected to:</p> <p>engage with, and seek feedback from, the affected community (and appropriate regulatory authority as appropriate) on preferred working hours, including respite periods</p> <p>evaluate whether the offer of alternative accommodation is feasible and reasonable.</p> <p>These steps should be documented, and the outcomes justified. Section 5.4 provides further advice.</p>
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Figure 18 EPA Draft Construction Noise Guideline – Section 5.3.1 ‘Noise Management’ and ‘Respite’ over 65dB(A)

#### B4. Construction Vibration (Tunnel and Cofferdam) and Aboriginal shelter/cave review

EIS Appendix L - Section 8.2.1.2 states:

*‘Tunnel excavation, combined with the subsequent impacts on groundwater levels, is expected to result in settlement at the ground surface. To assess the impact on Aboriginal sites (particularly rock shelters and engravings), it is important to estimate potential levels of settlement.’*

And

*“However, calculated surface settlement at Aboriginal archaeological sites within the study area is predicted to range between **10 millimetres and 30 millimetres**. A damage classification model (CIRIA 1996)”*

*[Note: 1<sup>st</sup> NB **highlight** of the predicted EIS contaminated sediment values]*

And

*“The results of Sefton’s analysis showed that the determining probability of subsidence related impacts to a rock shelter was overhang size, with larger shelters (greater than 50 cubic metres) at greater risk of impact’.*

The EIS infers that the Clive Park shelters/caves are less than 50m<sup>3</sup> and ‘suggesting that harm from subsidence related impacts would be unlikely to these Aboriginal site types’.

It can be seen in the NearMaps® (refer to **Figure 19**) area calculations and using an averaged rock depth of approximately 3m (some areas of the shelter/cave sections are over 4m in rock depth) that the closest (to BL7) rock shelter/cave at Clive Park Heritage Area is 167m<sup>3</sup> of existing rock mass, which is substantially greater than Sefton’s 50m<sup>3</sup> threshold (a 3x times increase in rock volume).

**Another EIS documentation ‘error’**, the construction impacts are potentially 3x times the stated trigger levels (or approx. **30 to 90mm of settlement**), and as the EIS has under rated the local effects, Statutory stakeholders (including Commonwealth and State reviewing departments) and local officers (e.g. OEH) have not appropriately reviewed the potentially significant risks and potential impacts of the works to the Commonwealth and State listed Aboriginal caves/shelters and artworks.



Figure 19 Rock shelter/cave approx. 55.7m<sup>2</sup> (plan area) x average 3m (rock depth) = approx. 167m<sup>3</sup> of rock mass

**Commonwealth and State approval to disturb and/or damage listed Aboriginal Heritage Sites, has not been obtained due to an 'error' in the EIS documentation.** Of significant concern, is the proposed road header type tunnel construction method, and the northbound tunnel tube is located directly beneath the Commonwealth and State listed heritage shelter/cave and beneath artwork sites.

Note: The EIS does not contain any geotechnical modelling of deformation and risk due to the road header construction under the CHPA.

The north bound tunnel and associated rock bolting used with this type of construction, and based on the EIS tunnel and coffer dam sections/sketches (which are not detailed nor definitive), the rock bolts will probably be located within 10-15 metres and the tunnel crown at 15-20 metres to the bottom of the rock outcrop.

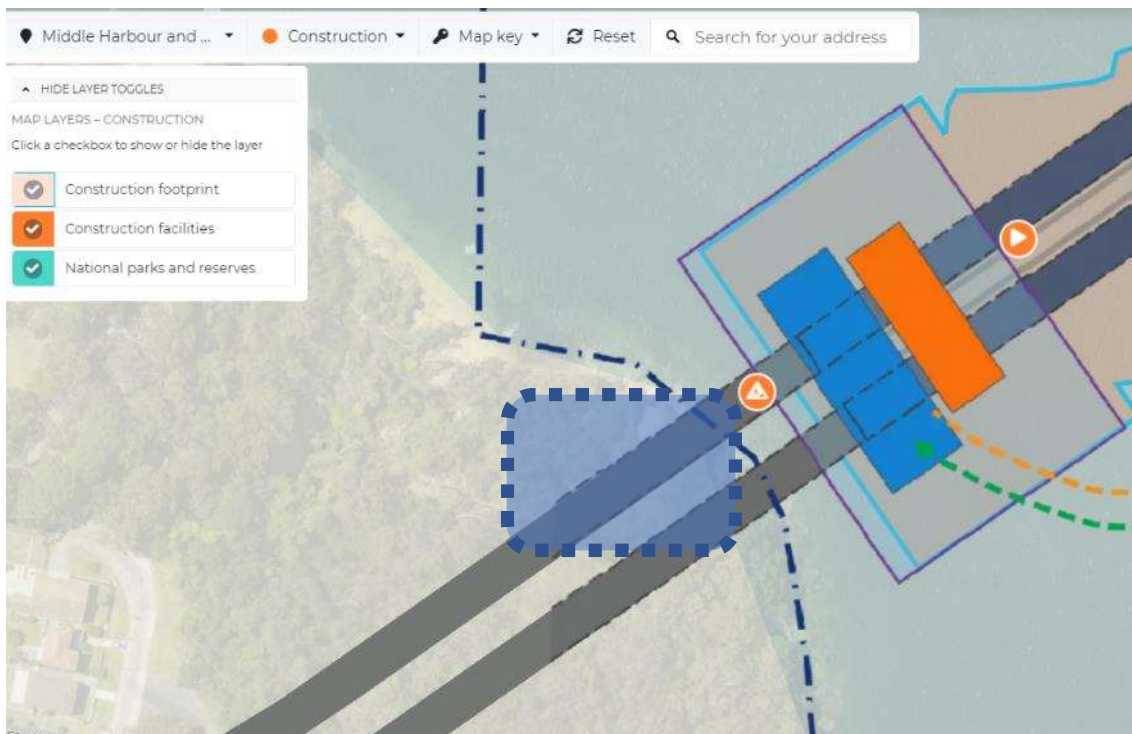


Figure 20 Beaches Link interactive portal overlaid with the Clive Park shelter/cave location (blue shaded and dashed line)

There is therefore high potential of Aboriginal shelter/cave site subsidence, high potential for significant damage to irreplaceable Aboriginal caves/shelters and to listed artworks, or in the **worst case full rock face collapse** and the risk/hazard to our young Scouts and to the public, who frequent this park area, due to the Proponents tunnelling and adjacent coffer dam works (refer to **Figure 20 and Figure 21**).



Figure 21 The proposed coffer dam works are located approx. 40-50m from Aboriginal shelter/cave (green), however the road header tunnelling works are located directly beneath the largest CPHA shelter/cave and rock art area.

### B5. Cumulative Impacts

Further, the impacts of the proposed construction (flat Rock and Northbridge peninsula tunnelling and the maritime activities), the particular dredging activities and toxin/contamination re-animation are significant when combined with the cumulative Flat Rock Gully and Middle Harbour waterway restrictions, and when overlaid by existing and well known (and ongoing) Sydney Water sewage and stormwater discharge events<sup>8</sup>, which further reduce public use of Flat Rock Gully and Middle Harbour waterway.

These ongoing major NSW Government and Statutory Authority events create the potential for significantly higher local and maritime cumulative effects and cumulative public health effects at Flat Rock Gully, Middle Harbour and Clive Park headland area, and these have not been assessed in accordance with the project SEARs (refer to **Figure 23**).

<sup>8</sup> <https://www.willoughby.nsw.gov.au/Council/News-and-media/Sewage-leak-at-Flat-Rock-Reserve-bush-tracks-closed>;  
AND  
<https://www.thinklocal.com.au/article/local/community/sewage-spill-sparks-environmental-health-concerns>  
AND  
<https://www.epa.nsw.gov.au/news/media-releases/2018/epamedia180326-sydney-water-enters-enforceable-undertaking-for-tunks-park-sewage-discharge>

Assessment of Key Issues	
<p>2. For each key issue the Proponent must:</p> <p>c. identify, describe and quantify (if possible) the impacts associated with the issue, including the likelihood and consequence of the impact (comprehensive risk assessment), and the cumulative impacts of:</p> <p>a) concurrent project construction activities; and</p> <p>b) proposed and approved projects (where information is available at the time of writing)</p>	<p>Potential cumulative impacts during construction and operation for the key issues discussed in Chapters 8 to 26 are described in Section 27.3 and Section 27.4.</p>
Consultation	
<p>4. The Proponent must assess the potential for complaint fatigue to occur during construction of the project and describe how mitigation measures, complaint handling procedures and community consultation mechanisms will mitigate complaint fatigue. The assessment must consider the cumulative impacts from the project and other major projects in the local area.</p>	<p>The potential for complaint fatigue to occur and proposed mitigation measures and complaint handling procedures are described in Chapter 7 (Stakeholder and community engagement).</p> <p>Potential impacts of construction and complaint fatigue are described in Section 27.3.7.</p>

Figure 22 EIS chapter 27, Table 27-1

We **strongly dispute** the Beaches Link EIS assertion that the project “*would be unlikely to produce cumulative impacts*” (refer to **Figure 23**) especially with the number of existing major events, currently predicted and prolonged Beaches Link project activities located in the upper Middle Harbour and Willoughby area.

#### 27.3.4 Middle Harbour

Works at the Middle Harbour cofferdams and the Spit West Reserve construction support site (BL9) would be unlikely to produce cumulative impacts with the projects identified in Table 27-3 and strategic plans in Table 27-4.

Figure 23 EIS chapter 27, section 27.3.4

When the Beaches Link works are measured against an existing baseline of generally nil waterway construction activities in the upper Middle Harbour area and generally nil construction works within Flat Rock Gully, the Proponents cumulative project activities and real construction impacts **are significant**, and will lead to some **3 ½ to 4 years of cumulative impacts and disruptions** to the Public, to local residents, to our young Scouts and to our adjacent Northbridge Sailing Cub neighbours.

#### B5. EIS Review Summary

In our opinion, the EIS contains gross errors and findings, which are based on a number of technically reports which is flawed and in our opinion the Proponents responses to the Departments SEARs have focused on the impacts of existing use to that of the future construction activities (i.e. to the Proponents works and future construction workers etc) and have not migrated the substantial effects that the cumulative project elements have to the Flat Rock Gully, Middle Harbour waterway and CPHA users.

The currently submitted EIS and supporting technical documents provides little assurance to 1<sup>st</sup> Northbridge Sea Scout Group that the effects of the planned construction activities in the Flat Rock Gully, Middle Harbour, and works under and immediately adjacent to the Clive Park Heritage Area, can be adequately addressed by the submitted high level management plans and high level control processes.

The resolution of environmental impacts is prerequisite required by the Secretaries in the project SEARs requirements (refer to **Figure 22** and **Figure 23**) and in our opinion these key requirements have not been answered by the Proponent.

**Table 23-1 Secretary's environmental assessment requirements – hazards and risks**

Secretary's requirement	Where addressed in EIS
<b>Transport and traffic</b>	
1. The Proponent must assess construction transport and traffic (vehicle, marine, pedestrian and cyclists) impacts, including, but not necessarily limited to:	Within Chapter 6 (Construction work), <b>Section 6.7</b> and <b>Section 6.8</b> show the land and maritime construction traffic/vessel movements for each temporary construction support site, as well as the operating hours of each site.
a. a considered approach to route identification and scheduling of marine and land transport movements, particularly outside standard construction hours	Construction traffic routes are discussed in <b>Chapter 8</b> (Construction traffic and transport). <b>Section 8.4</b> discusses the proposed marine and land transport movements.
j. impacts to water-based traffic on Middle Harbour.	<b>Section 23.2.4</b> outlines interactions between maritime traffic and tunnel infrastructure during construction.

Figure 24 EIS chapter 23, Table 21-1

The EIS has not addressed the impacts to the existing maritime users of Middle Harbour, nor has it addressed the use by the Public and our Scouts of the Flat Rock Gully, to Clive Park Heritage Area and Clive Park beach, nor has it addressed the re-animation of potential toxins and existing seabed contamination, and the impacts that potential odour release during dredging and sedimentation may/will have to our young Scouts, to the Public, and to maritime users of Clive Park beach and the waterway.

**Table 23-1 Secretary's environmental assessment requirements – hazards and risks**

Secretary's requirement	Where addressed in EIS
<b>Transport and traffic</b>	
1. The Proponent must assess construction transport and traffic (vehicle, marine, pedestrian and cyclists) impacts, including, but not necessarily limited to:	Within Chapter 6 (Construction work), <b>Section 6.7</b> and <b>Section 6.8</b> show the land and maritime construction traffic/vessel movements for each temporary construction support site, as well as the operating hours of each site.
a. a considered approach to route identification and scheduling of marine and land transport movements, particularly outside standard construction hours	Construction traffic routes are discussed in <b>Chapter 8</b> (Construction traffic and transport). <b>Section 8.4</b> discusses the proposed marine and land transport movements.
j. impacts to water-based traffic on Middle Harbour.	<b>Section 23.2.4</b> outlines interactions between maritime traffic and tunnel infrastructure during construction.

Figure 25 EIS chapter 23, Table 21-1

In our opinion, this project is for the **sole benefit of the Northern Beaches and Mosman**, and the Northbridge and Naremburn communities, and the wider Willoughby area are bearing an **unfair burden** to reduce (as stated in the EIS) traffic congestion **by as little as 5%-10%**.

We request appropriate consideration of the impacts that this Beached Link project will have to our young Scouts, to our local community and to the heritage listed Aboriginal artefacts in Clive Park.



## ATTACHMENT C - PROPOSED CONDITIONS AND MITIGATIONS

In our opinion, the current EIS analysis, work methods and proposed management plan approach (EIS, chapters 6, 7, 10 and 13) are based on technical documents that are flawed and deficient, and do not adequately address the significant risks, hazards and impacts to the Flat Rock Gully, Middle Harbour maritime waterway users and/or to adjacent Clive Park Heritage Area.

The works are contrary to the requirements of the 'Environment Protection and Biodiversity Conservation Act 1999' (EPBC Act) and to the protection and/or restoration of the Aboriginal heritage caves/shelters and artworks, and to protection heralded<sup>9</sup> by the Commonwealth and State governments for other Sydney Areas.

There has been no formal consultation and/or discussion between the Proponent and the directly affected parties (including 1<sup>st</sup> Northbridge Sea Scouts, 1<sup>st</sup> Sailors Bay Sea Scout, NSW Scouts and/or North Bridge Sailing Club<sup>10</sup>) on the waterway restrictions to be put in place which directly overlaying our Middle Harbour waterway activities, and as such, we request that the Department condition the Proponents proposal to protect public waterway use; to protect affected titled lands; and to protect (and where possible enhance) the existing listed heritage elements within Clive Park and at the Clive Park beach and foreshore (i.e. the remaining rock pool elements and remaining aboriginal fish traps, middens, rock shelter/caves and rock art).

We request the Department's decision and instrument of approval contain conditions and mitigations that reflect the following objectives and requirements:

### 1. Middle Harbour Consultation and Maritime Working Group (MWG)

The potential maritime navigational waterway changes are significant and cannot be easily mitigated at this stage of project and design development.

The waterway activities, sailing and boating risks and hazards have not been adequately addressed in the EIS documentation to date, and the risks and hazards require additional and specialist review and mitigation prior to commencing any pre-construction or primary construction works in the Middle Harbour area.

#### 1.1 Maritime Communications Strategy and Maritime Working Group

**(MWG-01)** *The Proponent must prepare a 'Maritime Communication Strategy' to provide mechanisms to facilitate communication about restrictions to waterways, changes in berthing and moorings, pre-construction and construction activities.*

*The Strategy must address who (the Proponent, Independent Appointments and/or Construction contractor) in the maritime community, relevant councils and maritime agencies, and how they will be engaged and the timing of engagements.*

*The strategy must provide:*

- *A four (4) week look approach ahead for external party communications planning;*
- *a six (6) and twelve (12) month calendar including a forward plan of:*
  - *upcoming work, planned engagements and stakeholder activities;*
  - *maritime stakeholder, community and Middle Harbour Maritime and CPHA meetings; and*

<sup>9</sup> <https://minister.awe.gov.au/lev/media-releases/historic-sydney-precinct-joins-national-heritage-list>

<sup>10</sup> We acknowledge that the Proponent has carried out wider area consultation in c2017-18, c2020 and in early 2021 with the release of EIS, however the significant maritime restrictions and potential impacts to landowners by way of toxin and contamination discharge during dredging activities, were never disclosed in these initial information releases.



- updating processes for notifications and newsletters;
- an update on any current or emerging maritime and CPHA issues;
- an update on complaints received and actions taken to resolve them; and
- an update on any neighbouring construction projects (including Sydney Water sewerage/stormwater contamination treatment works which affect Middle Harbour) where cumulative impacts need to be actively communicated and locally managed.

**(MWG-02)** The Proponent must establish an independent 'Maritime Working Group' to provide input into the Maritime Communication Strategy, into the maritime planning and design elements of the project, pre-construction detailed planning and maritime construction risks, hazards and mitigations for the project.

The Proponent must establish the working group before relevant works commence including any intrusive excavations. The Secretary must be informed of the members and the working group must comprise maritime planning, geotechnical and engineering experts independent of the design and construction team.

The working group should contain a representative selection of regular waterway users, of immediately adjacent potentially affected landowners and local aboriginal groups (i.e. Clive Park Heritage Area RAP representatives). The working group must meet bi-monthly during the pre-construction phase and then quarterly during the primary construction phase, unless agreed otherwise by the parties.

The Maritime Working Group must:

- not be used as or for 'presentation sessions';
- be attended by suitably qualified and experienced key individuals, who have the appropriate levels of delegated authority from the stakeholders and adjacent landowners to bind the objectives, inputs and outcomes;
- assess the Proponents intended approach to meeting the requirements of the EIS and other Planning Approvals (including any Environmental Protection License - EPL);
- review any specific maritime technical requirements (e.g. navigational changes and restricted work areas) and agree these between the Proponent and future contractor(s); and
- identify, discuss, resolve, agree resolution of problems or mitigation measures associated with the maritime technical designs and maritime construction methods.

Note: Where an impasse exists between members of the working group, the Planning Secretary will provide final approval/endorsement.

**(MWG-03)** The Proponent must gain endorsement of the Maritime Communication Strategy and Maritime Working Group composition from the Planning Secretary, prior to the commencement of pre-construction activities, unless otherwise agreed by the Planning Secretary.

## 1.2 Pre-construction phase

**(MWG-04)** The Proponent must develop a 'Maritime - Construction Environmental Management Plan' (M.CEMP) in consultation with Maritime Working Group and with feedback from other maritime stakeholders (e.g. Maritime Rescue and NSW Water Police) and maritime user of the Middle Harbour waterway and stakeholder of the Clive Park Heritage Area (CPHA).

The Plan must provide technical staging, programming and detail all preliminary investigations, any pre-construction and construction phase maritime impingements to navigational waters (refer MWG-01 to MWG-03) and/or to the CPHA.



**(MWG-04)** *The M.CEMP must be submitted to the Sydney Harbour Master for approval/endorsement prior to any changes in navigational waters. Where maritime notices and publications are required, the Proponent must allow a minimum of two (2) months' notice prior to any changes to those navigational patterns, unless in an emergency and at the approval of the Sydney Harbour Master.*

*Further, any changes to navigational waters must be notified in accordance with the Sydney Harbour Masters requirements and in accordance with the Maritime Communication Strategy (MWG-01).*

### **1.3 Construction phase**

**(MWG-05)** *The proposed construction methods must reduce navigational risks and hazards while optimising the use of the Middle Harbour for maritime users. The Proponent must implement the requirements of the M.CEMP (MWG-04) and provide regular updates on the maritime activities to the Maritime Working Group and to the Secretary Planning (MWG-02) .*

**(MWG-06)** *The proponent must restrict construction activities MHC\_07 and MHC\_10 to being carried out between May and be complete before the end of August of each calendar year, when Middle Harbour waterway use is generally at its lowest.*

Note: these intrusive and disruptive works are currently scheduled for the Middle Harbour 'peak summer' sailing and waterway activity periods in 2025 and 2026.

## **2. Clive Park Heritage Area (CPHA) – Investigations, Excavation, Noise, Vibration and Blast affects**

The current EIS construction methodologies, noise and vibration assessments (EIS, chapters 6, 7 and 10) propose 'generic' and 'high level' construction methods and plans to mitigate risks from construction vibrations, blast over-pressures, ground water draw-downs and ground vibration / sedimentation (post construction and during normal operation), this are deficient and require additional mitigation and control.

Construction and operational noise, vibration and sedimentation posed significant risks and hazards to the Clive Park Heritage Area (CPHA), and have the potential to damage irreplaceable Aboriginal heritage elements/items and potentially destabilise rock caves/shelter and artwork walls, that a used by our young Scouts and the Public.

We recognise that controlled blasting can have significant public benefits by reducing the need and duration of other forms of intensive excavation techniques, such as rock breaking and rock sawing, however, with the proposed tunnels being located directly beneath the Aboriginal caves/shelters and artworks, and with the southern portal maritime works (site BL7) being located less than 50m from the Clive Park Heritage Area, further detailed works plans, localised work restrictions and heritage protection is required.

### **2.1 Clive Park Heritage Area (CPHA)**

**(CPHA-01)** *At the approval of the Maritime Working Group, and for all works (including investigations, pre-construction works, general excavation, tunnelling, piling, jack hammering, compaction and blasting activities) located adjacent to the Clive Park Heritage Area (CPHA), commencing at a line generally located between 453 Sailors Bay Road and 6 Tycannah Road, including all Beaches Link tunnel works up to and including the Southern Coffey Dam location (BL7), that the Proponents construction planning, work methods and work activities be developed to ensure that the CPHA is protected and enhanced.*

## 2.2 Pre-construction analysis

**(CPHA-02)** A detailed geotechnical, structural and vibration analysis is carried out prior to any excavation or land lowering or ground water lowering activity. The Proponent must undertake a geotechnical, structural and vibration analysis of the CPHA aboriginal and heritage listed cave/shelter structures and artwork rock faces, to determine the effects of the tunnel works and activities on those elements. The Proponent must provide regular updates on the maritime and CPHA activities to the Maritime Working Group and to the Secretary Planning.

**(CPHA-03)** The Proponent must review alternative methods to rock hammering and blasting for excavation, as part of the detailed construction planning with a view to adopting methods that minimise impacts on sensitive receivers and heritage assets/artefacts. The geotechnical, structural and vibration analysis must:

- **(CPHA-03a)** be sufficient to identify and provide all geotechnical (including geological variations), structure (including short and long term rock fracture risk) and vibration information required to design, construct and maintain public and heritage asset safety during and post construction;
- **(CPHA-03b)** determine the most appropriate construction method, excavation sequence, temporary supports, primary or permanent structural supports, and construction impacts to ground levels and rock faces, or for ground water and potential ground water induced settlement at the CPHA;
- **(CPHA-03c)** encompass the structural adequacy, short and long term settlement or deformation and durability of Aboriginal heritage cave/shelter structures and adjacent artwork rock faces;
- **(CPHA-03d)** predict the in-situ ground movements, structural movements and groundwater movements; and
- **(CPHA-03e)** predict effects over time.

**(CPHA-04)** The Proponent must survey, monitor and control all pre-construction investigations, and primary construction tunnelling, excavation, water table draw down, and work activities in accordance with the geotechnical and vibration analysis findings.

**(CPHA-05)** The Proponent must at minimum of six (6) months prior to any site activities commencing and then at six (6) monthly intervals until 24 months post completion, provide updates on the monitoring findings, trigger levels and/or exceedances (if any) to the Maritime Working Group and to the Secretary Planning.

## 2.3 Construction phase

**(CPHA-06)** The construction methods must reduce air and ground born vibration(s) to mitigate the risk to and potential damage to, the Clive Park Heritage Area (including aboriginal shelter/caves, aboriginal artwork and community pool artifacts);

**(CPHA-07)** the construction methods reduce any blasting activities to mitigate the risk to and potential damage to, the Clive Park Heritage Area;

**(CPHA-08)** the construction methods must reduce vibration and adopt the least impact alternative resulting from construction and received at any structure and/or heritage assets/artifacts, shall be limited to:

- (a) For structural damage vibration, the highest asset protection elements of – the acceptable vibration values set out in the German Standard DIN 4150: Part 3- 1999 'Structural Vibration in



*Buildings: Effects on Structures' and/or British Standard BS 7385-2:1993 'Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration'; and*

*(b) For human exposure to vibration - the acceptable vibration values set out in the 'Assessing Vibration: A Technical Guideline' (DEC 2006);*

**(CPHA-09)** *Wherever practical, the Proponent shall undertake piling activities using non-percussive piles; and*

**(CPHA-10)** *Wherever practical, the Proponent shall undertake all relevant construction activities with the objective of not exceeding the following ground-borne noise criteria at community facilities (including adjacent boat sheds) and residential receivers:*

*a) an internal LAeq(15min) of 40 dB(A) between 6:00 pm and 10:00 pm; and*

*b) an internal LAeq(15min) of 35 dB(A) between 10:00 pm and 7:00 am.*

**(CPHA-11)** *The Proponent must develop and implement all reasonable and feasible noise and vibration mitigation measures with the aim of minimising ground-borne noise and vibration impacts to the Clive Park Heritage Area and at adjacent community facilities (including the 1s Northbridge Boat Shed and Northbridge Sailing Club), and*

**(CPHA-12)** *The Proponent must take all reasonable steps so as not to harm, modify or otherwise impact any Aboriginal areas and artefacts associated, except as authorised by this approval.*

The intent the above proposed conditions (CPHA-01 to CPHA-12) are for the Maritime Working Group to provide local maritime community oversight, technical inputs and review of all activities that have the potential to affect the Middle Harbour waterway and the Clive Park Heritage Area, while balancing the risk of localised impacts (or in the extreme, damage to heritage items/fabric) with that of the wider community.

Note: Any relaxation of preliminary investigations, and/or changes to construction methodologies and/or excavation/blasting activities should be contingent on identifying investigation and construction delivery methods that reduce the risk of cosmetic and/or in the worst case structural damage to the listed Aboriginal heritage caves/shelters and artworks.

### 3. Potential Contamination, Dredging and Sediments

The proposed tunnel construction, coffer dam piling, dredging and trenching works associated with the construction of the harbour crossing, submerged tubes and coffer dams, have the potential to re-activate and re-animate existing sea floor toxins and heavy metal contamination, and deposit toxin and heavy contamination as siltation within adjacent titled lands (i.e. 1<sup>st</sup> Northbridge Sea Scouts and Northbridge Sailing Club) and upon regenerating fauna and flora in the area.

The current construction methodologies (EIS, chapters 13, 16, and 17) indicate that during and post construction, that new potentially contaminated sedimentation will overlay the Clive Park Beach, foreshore and bay, Northbridge Sailing Club lands and 1<sup>st</sup> Northbridge Sea Scout lands wider sea floor areas. The current EIS high level modelling indicates some 2-10mm of toxic sedimentation (containing re-animated toxins, heavy metals and odour release) will be deposited on areas used by the public and in particular young children.



### 3.1 Pre-construction analysis

**(CON-01)** A detailed contamination analysis (i.e. Phase 2 site audit) and is carried out prior to any sea floor excavations. The contamination audit must be prepared by a suitably qualified and experienced person in accordance with guidelines made or approved under the Contaminated Land Management Act 1997 (NSW).

The Proponent must undertake a detailed analysis of sea floor for 500m either side of the immersed tube and coffer dam works, and for 50m surrounding at all temporary construction sites that incorporate sea floor disturbance (e.g. anchoring and piling).

The Proponent must undertake a detailed maritime analysis of sea floor for all expected sedimentation deposit areas (based on 98<sup>th</sup> percentile plume/drift models), and base-line any existing lands/sea floor areas, to determine any existing pre-construction and post construction effects of the Proponents activities on the lands/sea floor, foreshore, beach and CPHA.

The Proponent must submit the maritime analysis and plan as part of the M.CEMP to the Maritime Working Group and to the Secretary Planning. The maritime contamination analysis and plan must:

- **(CON-01a)** be sufficiently detailed to identify and provide existing contamination information required to enabled detailed design, construction and maintenance of human and aquatic health and safety pre, during and post construction;
- **CON-01b)** include detailed flow or changes in flow, and contaminant flow models to allow prediction of human and aquatic life exposure levels (i.e. Target, Trigger and Alarm event levels), during various months of the year;
- **(CON-01c)** contain and determine exposure limits for human and in particular children (including under 10 years of age group) and set maximum thresholds for toxins and heavy metal contaminants of the area (Trigger and Alarm event levels). Of particular concern and based on previous scientific studies are the following heavy metals, which present in the Middle Harbour; Copper (Cu), Lead (Pb), Zinc (Zn), Chromium (Cr), and potentially 'Per- and polyfluoroalkyl substances' (PFAS); and
- **(CON-01d)** determine the most appropriate construction methods and contaminate mitigations (e.g. barge based pneumatic/suction dredging vs cam-bucketing of the toxin laden silt layer must be explored during design development), appropriate excavation and construction sequences/schedules, for appropriate tidal ranges, temporary treatments and target/trigger/alert/alarm monitoring requirements based on the detailed analysis.

### 3.2 Pre-construction and Construction phase

**(CON-02)** The Proponent must survey, investigate, monitor and control all pre-construction phase activities and all primary construction phase activities including tunnelling beneath CPHA, coffer dam excavation and all other work activities in accordance with the maritime contamination analysis, methodologies and findings, as noted in CON-01.

**(CON-03)** The Proponent must at a minimum of six (6) months prior to any pre-construction works, including any intrusive site investigation activities and then following at bi-monthly intervals (until 24 months post completion), provide updates on the contaminant monitoring program findings, trigger levels and exceedances (if any) to the Maritime Working Group and to the Secretary.



**(CON-04)** *The Proponent must provide within four (4) hours of an 'Alarm Level Exceedance' event and within twelve (12) hours of a 'Trigger Level Exceedance' event, provide a draft event report to the Maritime Working Group and to the Secretary Planning, and within 24 hours provide a further report outlining the discharge event and the Proponents planned mitigation works and further detailed reporting, until closure is received by the Secretary Planning, and/or Sydney Harbour Master and/or NSW Environmental Protection Authority (EPA).*

*All 'Alarm Level Exceedance' events must be reported immediately (and no greater than 1 hour) to the Sydney Harbour Master and the Maritime Working Group liaison personnel, who will inform the local waterway users of the risks to waterway use and implement any local response and action plans, as necessary.*