Our reference: EF13/5145
Contact: John Goodwin

Cameron Sargent
Department of Planning and Infrastructure
GPO BOX 39
SYDNEY 2001

Dear Mr Sargent

SSD 6611 – COCKLE BAY MARINE STRUCTURES RENEWAL PROJECT

I am writing to you in reply to your invitation to the EPA to comment on the EIS for the Cockle Bay marine structures renewal project.

The EPA has identified the following site specific concerns based on the information in the Environmental Impact Statement as obtained from the Department's Major Projects web site:

(a) demolition, site preparation, construction and construction-related noise impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work);

(b) construction phase dust control and management, including controls for works over harbour waters

(c) construction phase runoff and sediment control and management of a harbour side work site;

(d) construction related waste handling and management, particularly concrete waste and rinse water;

(e) construction phase chemical handling and storage;

(f) construction phase air quality impacts; and

(g) operational impacts.

The EPA expands on its concerns in Attachment A to this letter.

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Should you require clarification of any of the above please contact John Goodwin on 9995 6838.

Yours sincerely

3-7-15

FRANK GAROFALOW
Manager Metropolitan Infrastructure
Environment Protection Authority
Encl. Attachment A

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

COCKLE BAY MARINE STRUCTURES RENEWAL PROJECT

1. General

The EPA considers that the project comprises two distinct phases (construction and operational) and has set out its comments on that basis.

2. Construction phase

The EPA anticipates a range of environmental impacts during the staged construction phase of the development and notes the proximity of surrounding residences in Darling Drive .

The EPA anticipates that demolition, site preparation, construction and construction-related activities will be undertaken in an environmentally responsible manner with particular emphasis on –

- compliance with recommended standard construction hours,
- intra-day respite periods from high noise generating construction activities (including jack hammering, rock breaking, pile boring or driving, saw cutting),
- feasible and reasonable noise and vibration minimisation and mitigation,
- effective dust control and management for both landward and on/over water activities,
- runoff and sediment control and management of a harbour-side work site,
- waste handling and management, particularly concrete waste and rinse water,
- chemical handling and storage (including self-bunded storage facilities protected from rainfall ingress and secure against unauthorised access),
- air quality impacts.

2.1 Site investigation and remediation

EIS Appendix 9 provides information on the contamination status of soils and marine sediments likely to be affected by demolition and construction work associated with the renewal project.

acid sulfate soils

Any potential acid sulfate soils that need to be excavated or disturbed as part of the site redevelopment must be managed in accordance with the *Waste Classification Guidelines Part 4: Acid Sulfate Soils* which are available at the following web page:

http://www.environment.nsw.gov.au/resources/waste/08446acidsulfsoils.pdf

If Acid Sulfate Soils (ASS) or Potential Acid Sulfate Soils (PASS) are to be removed from the site for disposal there is only one landfill currently licensed to accept that type of waste.

Recommendation

The proponent be required to assess and manage any acid sulfate soil (ASS) and potential acid sulfate soil (PASS) in accordance with:

(a) the 1998 *Acid Sulfate Soils Manual* published by the NSW Acid Sulfate Soil Management Advisory Committee (ASSMAC) and ;

(b) the EPA's *Waste Classification Guidelines Part 4: Acid Sulfate Soils.*

2.2 Waste control and management

The proponent should manage waste in accordance with the waste management hierarchy. The waste hierarchy, established under the Waste Avoidance and Resource Recovery Act 2001, is one that ensures that resource management options are considered against the following priorities:

Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government

Resource recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources

Disposal including management of all disposal options in the most environmentally responsible manner.

All wastes generated during the project must be properly assessed, classified and managed in accordance with the EPA's guidelines to ensure proper treatment, transport and disposal at a landfill legally able to accept those wastes.

The EPA further anticipates that, without proper site controls and management, mud and waste may be tracked off the site during the course of the project.

Recommendation

The proponent should commit to ensuring that :

(1) all waste generated during the project is assessed, classified and managed in accordance with the "*Waste Classification Guidelines Part 1: Classifying Waste*" (Department of Environment Climate Change and Water, December 2009);

(2) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and

(3) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.

2.3 Water quality impacts

The EPA emphasises that it is an offence to pollute waters and that pollute waters includes cause or permit the pollution of waters.

The proponent should ensure that adequate measures are adopted to prevent water pollution and where it does occur to prevent its spread until appropriate clean up can be implemented.

2.3.1 dust and debris control and management

The EPA considers dust control and management to be an important air quality issue, particularly during demolition and pile installation activities. And, especially during activities over or adjacent to the harbour.

EIS Appendix 11 recommends the use of water sprays to control dust emissions. However, as much of the work is to be undertaken over harbour waters water sprays may in conjunction with dust emissions cause water pollution which would be an offence under the Protection of the Environment Operations Act 1997.

Recommendation

The proponent be required to:

(a) minimise dust emissions on the work sites, and

(b) prevent dust emissions from the work sites.

The EPA is also aware from experience that replacement timber piles are supplied with bark attached and that significant debris is likely to drop or fall into harbour waters without appropriate precautions that should include:

(a) surrounding pile installation activities with a floating boom to contain any dropped or fallen wood dust and debris;

(b) keeping timber piles and associated debris and wood dust sufficiently clear of the edge of barge decks to prevent such material dropping or falling into harbour waters;

(c) providing netting or the like around replacement timber piles to capture (as far as practicable) any debris, dust and saw dust detached during any pile trimming operations; and

(d) providing dedicated and appropriately trained clean up crews to implement procedures to promptly scoop up any residual material (i.e. not captured otherwise) that may drop or fall into harbour waters during pile installation activities.

Recommendation

The proponent be required to implement all such measures as may be necessary-

(a) to prevent dust and debris from demolition activities, pile replacement and construction activities dropping or falling into harbour waters,

(b) to ensure material is not placed or stored on the project site (including on a vessel, work boat or barge engaged in project construction or construction-related work) in a

position where it is likely to fall, descend, be washed, be blown or percolate into the harbour;

(c) to contain and promptly clean up any dust and debris that may fall, descend, be washed, be blown or percolate into the harbour; and

(d) to provide dedicated work boats and appropriately trained and resourced dedicated clean up crews to clean up and remove from harbour waters any debris or dust which may fall, descend, be washed, be blown or percolate into the harbour.

2.3.2 disturbed marine sediment

The EPA anticipates that marine sediments may be disturbed in the course of pile removal and replacement activities. The EPA is concerned that section 3.2.3 to EIS Appendix 9 '*Water and Sediment Impact Assessment*' fails to acknowledge that the Protection of the Environment Operations Act 1997 prohibits the pollution of waters.

However, section 6.2 to Appendix 9 (p.25) goes on to identify "Project components which may result in significant effects ..." and confirms at section 6.4.1 that removal of existing piles "... is expected to result in disturbance of seabed sediments." (p.28)

Appendix 9 states in the penultimate paragraphs on pages 28 and 29 that silt curtains will be installed prior to any construction works.

Recommendation

The proponent be required to implement all such measures as may be necessary to-

(a) minimise disturbance of marine sediments during the course of pile removal and replacement activities, and

(b) enclose each work site with adequate silt curtains.

2.3.3 concrete waste and rinse water

The EPA understands from the EIS that wharf and jetty decks will be pre-fabricated off site and delivered by barge for installation at the work sites.

However, the EPA is unclear whether concrete is to be used in replacement steel piles or applied as a screed to wharf and jetty decks.

Recommendation

The proponent be required to ensure that –

(1) a dedicated self-propelled work boat is available on the project site at all times to provide a timely response to the containment and clean up of any spills or leaks into or onto harbour waters; and

(2) concrete waste and rinse water are not disposed of on the development site.

2.4 Runoff and sediment control and management

The Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective erosion and sediment control on construction sites.

The EPA is mindful that construction will occur over and in immediate proximity to harbour waters and that excavation is likely to be of a minor nature. Nevertheless, the EPA emphasises the importance of daily inspection of erosion and sediment controls which is fundamental to ensuring timely maintenance and repair of those controls.

2.5 Noise and vibration

Section 2.1 (p.9) to EIS Appendix 9 *Water and Sediment Impact Assessment* indicates that the project involves the removal and replacement of 265 timber and steel piles. And, Table 5-1 (p.11) to EIS Appendix 12 *Noise and Vibration Impact Assessment* indicates that concrete steps are to be removed using a concrete saw.

However, EPA experience would suggest that replacement of timber piles may also involve the use of chainsaws.

The EPA notes that the Oaks Goldsborough apartment complex on the western side of Cockle Bay is not so distant as to be completely unaffected by impacts of activities (such as those listed in section 4.5 to the EPA's Interim Construction Noise Guideline (ICNG)) which typically generate high noise levels and exhibit annoying characteristics.

The EPA acknowledges that noise impacts on surrounding residences (and the nearby Novotel Hotel) may be afforded noise attenuation and partial shielding by distance from the work site and intervening buildings respectively. However, EIS Appendix 12 does not appear to assess the impact on those aforementioned receivers and has does not appear to have:

(a) applied the 5 dbA adjustment recommended in ICNG section 4.5 (2nd para, p.16) to predicted 'construction noise levels;

(b) accounted for cumulative impact of several high noise impact activities occurring simultaneously; or

(c) accounted for the cumulative impact of concurrent projects in the same locality.

2.5.1 construction hours (general)

EIS Appendix 12 section 2.1 (p.3) propose that all demolition, site preparation, construction and construction-related works will be undertaken during day-time hours with no works on Sundays or public holidays.

However, EIS section 3.2.3 indicates that demolition, site preparation, construction and construction related work is proposed to be undertaken on Saturdays between the hours of 7.00 am to 3.00 pm instead of between the standard recommended hours of 8.00 am to 1.00 pm.

The EPA does not accept the justification advanced in EIS section 3.2.3 (p.33) that the recommended standard hours should not apply on Saturdays "… because the work site is in a non-residential precinct and the proposal may be classified as public infrastructure."

Similarly, the EPA does not consider work outside the standard hours to be justified on the grounds that the proponent has adopted those hours throughout the precinct. And, confirms that those adopted hours are contrary to –

- the guidance on construction hours provided to all public authorities by Table 1 to the ICNG, and
- recent advice concerning the Sydney International Convention, Exhibition and Entertainment Precinct.

Importantly, EPA experience with other projects involving barge mounted piling rigs indicates that the piling is only able to be undertaken during calm wind and sea conditions typical of night-time. The EPA is unclear why piling in Cockle Bay may be different from more exposed waters such as those north of the Pyrmont Bridge. And in that regard, remains concerned that the EIS may not include a comprehensive assessment of project construction phase noise impacts.

Recommendation

The proponent be required to undertake site preparation, bulk earthworks, demolition, construction and construction-related activities (likely to be audible at surrounding residences) during the recommended standard construction hours set out in Table 1 to the EPA's Interim Construction Noise Guideline, 2009.

Recommendation

The proponent be required to clarify whether pile installation will necessitate night work and if so to fully justify undertaking those works outside the recommended standard construction hours, including submission of a detailed noise impact assessment of any proposed night works for the purpose of further consideration.

2.5.1 construction hours (respite periods)

EIS section 2.1 proposes that "… noise generating work will be restricted to the following periods:

- 8.00 am to 1.00 pm (Monday to Saturday);
- 2.00 pm to 5.00 pm (Monday to Friday) …"

However, the same EIS section indicates that contrary to the foregoing there would be "… no noise generating work during lunchtimes (12.00 pm-2.00pm)

ICNG section 4.5 specifies construction activities that have proven to be particularly annoying and intrusive to nearby residents. The EPA anticipates that those activities generating noise with particularly annoying or intrusive characteristics would be subject to a regime of intra-day respite periods where –

(a) they are only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours, and.

(b) 'continuous' means any period during which there is less than an uninterrupted 60 minute respite between temporarily halting and recommencing any of the work referred to in ICNG section 4.5

Recommendation

The proponent be required to clarify during which periods high noise generating activities will be undertaken and scheduling those activities to ensure that those activities generating noise with particularly annoying or intrusive characteristics would be only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours.

2.5.3 reversing and movement alarms

The EPA has identified the noise from 'beeper' type plant movement alarms to be particularly intrusive and is aware of feasible and reasonable alternatives. Transport for NSW (nee Transport Construction Authority), Barangaroo Delivery Authority/Lend Lease and Leighton Contractors (M2 Upgrade project) have undertaken safety risk assessments of alternatives to the traditional 'beeper' alarms. Each determined that adoption of 'quacker' type movement/reversing alarms instead of traditional beepers on all plant and vehicles would not only maintain a safe workplace but also deliver improved outcomes of reduced noise impacts on surrounding residents.

Interim Construction Noise Guideline Appendix C provides additional background material on this issue.

The proponent should commit to undertaking a safety risk assessment of construction activities to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding noise sensitive receivers, without compromising safety.

2.6 chemical storage

The EPA anticipates that fuel, oil and chemicals are likely to be handled and stored at work sites, and on barges and vessels used in the course of the project.

The EPA is aware that many contractors now deploy purpose built portable chemical storage lockers and modified shipping containers with removable mesh floor over a floor well/bund lined with an impervious chemical resistant coating.

The proponent may also find the following link useful in regard to chemical storage, handling and spill management generally –

http://www.epa.nsw.gov.au/licensing/EnvComplChemicals.htm

Recommendation

The proponent be required to ensure fuel, oil and chemicals handled and stored at work sites, or on barges or other vessels used in the course of the project are –

- secured against unauthorised access,
- stored in lockers or the like with a built-in bund sufficient in design and capacity to prevent any stored substances leaking therefrom,
- stored in roofed over lockers or the like that would prevent rain entering stored containers and spilled or leaked substances, and
- located as far as practicable away from surrounding waters.

3. Operational phase

The EPA considers that operational environmental impacts anticipated in conjunction with the new berths have largely been averted as EIS section 8.10.1 indicates that:

(a) the new recreational boating berths are generally short stay with no facilities for sewage pump out or waste removal;

(b) the permanent berths for commercial vessels will be subject to licences with licensees "... required to make their own waste management arrangements ..."; and

(c) "... commercial vessels will be required to visit approved facilities for maintenance and pump-out".

The EPA would not favour vessel re-fuelling at the new berths for either recreational or commercial vessels. The proponent would be obliged to satisfy the relevant provisions of the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 should re-fuelling facilities be provided to service the new berths.

However, the EPA acknowledges that whilst the EIS is silent in regard to re-fuelling of vessels, the stated approach to berth use outlined in EIS section 8.10.1 appears likely to preclude any on water re-fuelling or provision of re-fuelling facilities of vessels at Cockle Bay.

Recommendation

The proponent be required to clarify whether it proposes to –

a) permit re-fuelling of vessels in Cockle Bay, or

b) provide re-fuelling facilities in conjunction with the new berths.

3.2 Water quality impacts

Cleaning and grounds maintenance contractors are known to favour leaf blowers, blower vacuums, self-propelled scrubbers and the like for cleaning wharves, pontoons, jetties, ramps and associated concourse areas and walkways.

The EPA considers that a number of feasible and reasonable controls and management measures can be adopted to avoid water quality impacts arising from cleaning and maintenance of the new wharves, pontoons, jetties, ramps, and associated concourse areas and walkways, including:

(a) installing appropriate pollution control measures and equipment to prevent spills and leaks into and onto harbour waters;

(b) adopting and implementing procedures to prevent spills and leaks into and onto harbour waters;

(c) adopting, testing and implementing appropriate contingency measures to minimise the impact of spills and leaks in the event they should occur; and

(d) training personnel involved in cleaning and maintenance concerning –

(i) prevention of pollution of waters,

(ii) reporting leaks and spills, and

(iii) containing and cleaning up in the event of leaks or spills

Recommendation

The proponent be required to adopt and implement all such measures as may be necessary to prevent pollution of waters associated with cleaning and maintenance of the new wharves, pontoons, jetties, ramps, and associated concourse areas and walkways.
