

REFERRAL RESPONSE - ENVIRONMENTAL HEALTH

FILE NO: Development Applications/ 223/2020/1
ADDRESS: Vaocluse Road VAUCLUSE 2030
PROPOSAL: Demolition of existing seawall and promenade at Shark Beach/Nielsen Park, their reconstruction, together with associated landscape works
FROM: Louie Salvatore
TO: Mr D Booth

1. ISSUES

- *Acid Sulfate Soils – WLEP 2014.*
- *Soil Contamination – SEPP 55 Remediation of Land.*
- *Acoustics – Construction Noise.*

2. DOCUMENTATION

I refer to the following documents received for this report:

- Statement of Environment Effects: prepared by Helen Mulcahy Urban Planning June 2020.
- Preliminary Contamination & Acid Sulfate Soils Screening Report: prepared by JK Environments. Document Reference No. E29837BrptRev1. Dated 25 June 2020.
- Acoustic Report: prepared by Renzo Tonin & Associates. Document Reference No. TL502-01F02.

3. RESEARCH

The following research was undertaken in the preparation of this assessment:

- A site inspection was carried out on the following date:

4. SUMMARY OF PROPOSAL

Existing

The existing concrete seawall is approximately 155m long and steps down to the north to the gently sloping sandy beach. Beyond the western and eastern ends of the concrete seawall are sandstone masonry sea walls. The sandstone masonry sea walls extend to the vertical sandstone bedrock cliff faces (orientated approximately north-

west to south-east which define the western and eastern ends of the gully within which the Park is located.

The concrete seawall includes an approximately 4 metre wide walkway at roughly mid-height with several 'bleachers' (large steps) below and up to two bleachers above. The seawall achieves a maximum height of 3.9 metres above the surface level of the beach, although this varies.

The upper portion of the seawall (the upper bleachers) includes a grass surfaced planter bed (between approx. 3 and 4 metres wide) which is interspersed with small to medium sized trees. The planter bed lines the seaward margin of a concrete surfaced promenade (also about 4 metres wide).

A ramp from the promenade to the beach is located at the eastern end of the concrete seawall. Steps provide pedestrian access at the western end. At the central portion of the concrete seawall is a set of radial steps providing further pedestrian access to the beach.

Proposed

The proposed development involves the demolition of the existing seawall and its replacement with a new concrete bleacher seawall structure, typically approximately 7m wide in section (widening to approx. 15 metres at the central stairs) and approximately 190 metres long, which will be supported on three rows of piles aligned in an east-west configuration.

- ☐ Demolition of the existing seawall and promenade;
- ☐ Removal of 12 existing trees;
- ☐ Construction of a new seawall, incorporating concrete bleachers, new central stairs and promenade;
- ☐ Reconstruction of the vehicular ramp at the eastern end of the seawall;
- ☐ Construction of a new DDA-compliant pedestrian ramp incorporating terraced retaining walls, paved areas and planter beds at the eastern end of the foreshore;
- ☐ Landscape treatment including planting of 17 new trees, ground covers, grasses and shrubs; and
- ☐ Associated stormwater works, including the installation of a new wastewater pipe at the eastern end of the proposed seawall.

5. ASSESSMENT

Comments have been prepared on the following. **Where Approval is recommended, Conditions of Consent follow at the end of the comments.**

a) Acoustics

Review of Acoustic Report: prepared by Renzo Tonin & Associates. Document Reference No. TL502-01F02.

A noise impact assessment for the demolition and construction phase of the works and will be conducted in accordance with the EPA's *Interim Construction Noise*

Guideline' (ICNG). The construction works will be undertaken in one stage and will consist of demolition of the existing concrete bleacher structure in full, crushing of concrete on site (to then be re-used as backfill), piling works down to bedrock on the beach, and the new concrete sea wall will be constructed using insitu concrete. The construction period is expected to be approximately *8 months, commencing on 1st March 2021 and completed by 30th November 2021.*

Assessment – Construction Noise

The noise sensitive receivers Residential) were identified from site visits and aerial photography of the area to be the nearest affected receiver locations. Refer to Table 2.1 of the report. The proposed construction hours are as follows:

- 7:00am to 5:00pm – Monday to Friday
- 7:00am to 12:00pm – Saturday
- No work on Sunday & Public Holidays

To quantify the existing ambient noise environment, long-term (unattended) noise monitoring was conducted at Location L1 between Tuesday 2nd June and Tuesday 9th June 2020. The noise monitor was installed at Greycliff House away from the building façade. Existing background and ambient noise levels are presented in Table 3.2 of the report. The noise monitor was positioned outdoors in the 'free-field' (ie. away from building facades). Construction noise from the site is assessed in the free-field at the potentially most affected receiver boundaries and therefore, the representative noise levels are listed in Table 3.2 of the report.

The NSW '*Interim Construction Noise Guideline*' (ICNG, 2009) provides guidelines for assessing noise generated during the construction phase of developments. As stated in the ICNG, a noise mitigation measure is feasible if it is capable of being put into practice and is practical to build given the project constraints. The ICNG provides two methods for assessment of construction noise, being either a quantitative or a qualitative assessment. A quantitative assessment is recommended for major construction projects of significant duration, and involves the measurement and prediction of noise levels, and assessment against set criteria. Given the length of the construction works proposed, a quantitative assessment is carried out herein, consistent with the ICNG requirements.

Refer to Table 4.2 – Construction Noise Management Levels (NML) at Residential Receivers, dB(A) & Table 4.3 – Noise management levels at other noise sensitive land uses of the report. Table 4.4 of the report lists typical plant and equipment likely to be used by the contractor to carry out the necessary construction works for the project and their corresponding sound power levels.

A noise modelling computer program was used to predict the noise sources, receiver locations, topographical features of the intervening area, and possible noise control treatments. Table 4.4 of the report presents construction noise levels likely to be experienced at the nearby affected receivers based on the construction activities and plant and equipment associated with the subject site.

Based on the construction noise levels presented in the table above, the construction management levels at all receivers would typically be exceeded when the construction works are conducted at the closest proximity to the receivers. Furthermore, construction noise levels for receivers R4 and R6 are predicted to be greater than the highly noise affected level of 75dB(A) for operation of the noisier plant and equipment items and when the three noisiest plant and equipment items are used concurrently and at the closest point to the relevant receiver location.

Conclusion

Environmental Health Services Section is in agreement with the in-principle recommendations that are provided in Section 4.4 of the report to limit the potential impact of noise generated by construction activities to acceptable levels. Construction traffic noise impacts on the surrounding road network have been reviewed and were determined to comply with the relevant traffic noise criteria and not contribute to the existing traffic noise levels experienced by the affected residences.

e) Acid Sulphate Soils

Review of Preliminary Contamination & Acid Sulfate Soils Screening Report: prepared by JK Environments. Document Reference No. E29837BrptRev1. Dated 25 June 2020.

A review of the ASS risk map prepared by Department of Land and Water Conservation (1997) indicated that the site is not located within a risk area, though is near an area classed as having a 'low risk' of ASS occurrence between 1m and 3m below ground level (mBGL). A review of the Woollahra Municipal Council LEP indicates that the site is located in an area mapped as ASS risk Class 5, and is within 100m of land mapped as ASS risk Class 3 (refer to appendices for further details on each risk class).

Soil data for the ASS assessment were compared to the action criteria for presented in the *National Acid Sulfate Soil Guidance: National acid sulfate soils sampling and identification methods manual* (2018) as summarised in Table 4-2 of the report.

Environmental Health – Comments

The results of the field tests and other laboratory results identified acidic conditions greater than the action criteria. However, these results are considered to be indicative of acid soils associated with organic/humic material rather than ASS materials as significant concentrations of oxidisable sulfur, demonstrated by the low SCR% results, were not encountered in the samples.

As such, and considering the information reviewed for this assessment (risk maps, subsurface conditions etc), Potential ASS (PASS) or Actual ASS conditions that would be expected to pose a risk to the environment if disturbed during the proposed development works described in Section 1.1 of the screening report have not been identified. *On this basis an Acid Sulfate Soils Management Plan is not required for the proposed development.*

f) Land Contamination (SEPP 55)

**Review of Preliminary Contamination & Acid Sulfate Soils Screening Report:
prepared by JK Environments. Document Reference No. E29837BrptRev1.
Dated 25 June 2020.**

The scope of work included:

- Review of desktop information in relation to regional geology and ASS risk;
- Soil sampling from six boreholes shown on Figure 2 attached in the appendices;
- Analysis of the samples for a range of potential contaminants and ASS characteristics;
- Review and interpretation of the results against relevant criteria, including human health and ecological criteria presented in National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)², waste classification criteria presented in NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014)³, and the action criteria for ASS presented in the Acid Sulfate Soil Manual (1998)

Field work for this screening was undertaken on 5 June 2020. Soil samples were obtained from six boreholes (BH201 – B206) in accordance with the standard sampling procedure (SSP)

The analytical schedule included a range of contaminants that are commonly considered in the assessment of contaminated sites. The contaminants included:

- Heavy metals including: arsenic, cadmium, chromium (total), copper, lead, mercury, nickel and zinc;
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons including benzene, toluene, ethylbenzene and xylene (BTEX);
- Organochlorine pesticides (OCPs);
- Organophosphate pesticides (OPPs);
- Polychlorinated biphenyls (PCBs); and
- Asbestos.

Health Investigation Levels (HILs) for a ‘residential with accessible soils’ exposure scenario (HIL-A); Health Screening Levels (HSLs) for a ‘low-high density residential’ exposure scenario (HSL-A & HSL-B). HSLs were calculated based on the soil type and the most conservative depth interval of 0m to 1m;

Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for an ‘urban residential and public open space’ (URPOS) exposure scenario. These have only been applied to the top 2m of soil as outlined in NEPM (2013).

The soil laboratory results are compared to the relevant SAC in the attached report tables. A summary of the results assessed against the SAC are presented in 5-1 of the report and Waste Classification assessment results are presented in Table 5-2 of the report.

Environmental Health – Comments

The results of the soil contamination screening did not record concentrations of contaminants above the respective SAC adopted for this screening. Considering these results and the observations made during the site inspection, JKE are of the opinion that there is low potential for site contamination.

Based on the results of the screening and at the time of reporting, the fill material is assigned a preliminary classification of General Solid Waste (non-putrescible). This classification should be confirmed by additional sampling, analysis and waste classification assessment prior to off-site disposal. The anticipated waste quantities should also be confirmed at that time and documented in the report.

Based on the results of the preliminary screening, JKE are of the opinion that the natural soil at the site is likely to meet the definition of VENM for off-site disposal or re-use purposes. This classification should be confirmed by additional sampling, analysis and waste classification assessment prior to off-site disposal.

6. RECOMMENDATION

Council's Environmental Health Officer has determined that the proposal is satisfactory, subject to the following conditions:

A. General Conditions

A.1 Approved Plans and supporting documents

Those with the benefit of this consent must carry out all work and maintain the use and works in accordance with the plans and supporting documents listed below as submitted by the Applicant and to which is affixed a Council stamp "Approved DA Plans" unless modified by any following condition. Where the plans relate to alterations or additions only those works shown in colour or highlighted are approved.

| Reference | Description | Author/Drawn | Date(s) |
|------------------|--|--------------------------|----------------|
| E29837BrptRev1 | Preliminary Contamination & ASS Screening Report | JK Environments | 25 June 2020 |
| TL502-01F02 | Acoustic Report | Renzo Tonin & Associates | 23 June 2020 |
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Note: Warning to Accredited Certifiers – You should always insist on sighting the original Council stamped approved plans. You should not rely solely upon the plan reference numbers in this condition. Should the applicant not be able to provide you with the original copy Council will provide you with access to its files so you may review our original copy of the approved plan.

Note: These plans and supporting documentation may be subject to conditions imposed under section 80A(1)(g) of the *Act* modifying or amending the development (refer to conditions which must be satisfied prior to the issue of any *Construction Certificate*.)

Standard Condition: A5

- B. Conditions which must be satisfied prior to the demolition of any building or construction**
- C. Conditions which must be satisfied prior to the issue of any construction certificate**
- D. Conditions which must be satisfied prior to the commencement of any development work**
- E. Conditions which must be satisfied during any development work**

E.1 Hours of Work –Amenity of the neighbourhood

- a) No *work* must take place on any Sunday or public holiday,
- b) No *work* must take place before 7am or after 5pm any weekday,
- c) No *work* must take place before 7am or after 1pm any Saturday,
- d) The following *work* **must not** take place before 9am or after 4pm any weekday, or before 9am or after 1pm any Saturday or at any time on a Sunday or public holiday;
 - (i) Piling;
 - (ii) Piering;
 - (iii) Rock or concrete cutting, boring or drilling;
 - (iv) Rock breaking;
 - (v) Rock sawing;
 - (vi) Jack hammering; or
 - (vii) Machine excavation,
- e) No loading or unloading of material or equipment associated with the activities listed in part d) above must take place before 9am or after 4pm any weekday, or before 9am or after 1pm any Saturday or at any time on a Sunday or public holiday.
- f) No operation of any equipment associated with the activities listed in part d) above must take place before 9am or after 4pm any weekday, or before 9am or after 1pm any Saturday or at any time on a Sunday or public holiday
- g) No rock excavation being cutting, boring, drilling, breaking, sawing , jack hammering or bulk excavation of rock, must occur without a 15 minute break every hour.

This condition has been imposed to mitigate the impact of work upon the amenity of the neighbourhood. Impact of work includes, but is not limited to, noise, vibration, dust, odour, traffic and parking impacts.

Note: The use of noise and vibration generating plant and equipment and vehicular traffic, including trucks in particular, significantly degrade the amenity of neighbourhoods and more onerous restrictions apply to these activities. This more invasive work generally occurs during the foundation and bulk excavation stages of development. If you are in doubt as to whether or not a particular activity is considered to be subject to the more

onerous requirement (9am to 4pm weekdays and 9am to 1pm Saturdays) please consult with Council.

Note: Each and every breach of this condition by any person may be subject to separate penalty infringement notice or prosecution.

Note: The delivery and removal of plant, equipment and machinery associated with wide loads subject to RTA and Police restrictions on their movement out side the approved hours of work will be considered on a case by case basis.

Note: Compliance with these hours of work does not affect the rights of any person to seek a remedy to offensive noise as defined by the *Protection of the Environment Operations Act 1997*, the *Protection of the Environment Operations (Noise Control) Regulation 2000*.

Note: EPA Guidelines can be down loaded from

<http://www.epa.nsw.gov.au/noise/nglg.htm> .

Note: see http://www.epa.nsw.gov.au/resources/ci_build_sheet7.pdf
Standard Condition: E6

E.2 Dust Mitigation

Dust mitigation must be implemented in accordance with “*Dust Control - Do it right on site*” published by the Southern Sydney Regional Organisation of Councils.

This generally requires:

- a) Dust screens to all hoardings and site fences.
- b) All stockpiles or loose materials to be covered when not being used.
- c) All equipment, where capable, being fitted with dust catchers.
- d) All loose materials being placed bags before placing into waste or skip bins.
- e) All waste and skip bins being kept covered when not being filled or emptied.
- f) The surface of excavation work being kept wet to minimise dust.
- g) Landscaping incorporating trees, dense shrubs and grass being implemented as soon as practically possible to minimise dust.

Note: “*Dust Control - Do it right on site*” can be down loaded free of charge from Council’s web site www.woollahra.nsw.gov.au or obtained from Council’s office.

Note: Special precautions must be taken when removing asbestos or lead materials from development sites. Additional information can be obtained from www.workcover.nsw.gov.au and www.epa.nsw.gov.au . Other specific condition and advice may apply.

Note: Demolition and construction activities may affect local air quality and contribute to urban air pollution. The causes are dust, smoke and fumes coming from equipment or activities, and airborne chemicals when spraying for pest management. Precautions must be taken to prevent air pollution.

Standard Condition: E23

E.3 Noise Control – Construction Works

The Construction Noise Mitigation and Management Measures detailed in Section 4.4 of the *Acoustic Report prepared by Renzo Tonin & Associates, Document Reference No. TL502-01F02 dated 23 June 2020* to limit the potential impact of noise generated by construction activities to acceptable levels shall be fully implemented during all construction works.

E.4 Waste Classification – Removal of Soils

All fill material that was assigned a preliminary classification of General Solid Waste (non-putrescible) in the *Preliminary Contamination & Acid Sulfate Soils Screening Report: prepared by JK Environments. Document Reference No. E29837BrptRev1. Dated 25 June 2020* shall be confirmed by additional sampling, analysis and waste classification assessment prior to off-site disposal. The anticipated waste quantities should also be confirmed at that time and documented in the report.

All natural soil at the site is likely to meet the definition of VENM for off-site disposal or re-use purposes. The classification of VENM should be confirmed by additional sampling, analysis and waste classification assessment prior to off-site disposal. The anticipated waste quantities should also be confirmed at that time and documented in the report.

F. Conditions which must be satisfied prior to any occupation or use of the building (Part 4A of the Act and Part 8 Division 3 of the Regulation)

G. Conditions which must be satisfied prior to the issue of any Subdivision Certificate

Nil.

H. Conditions which must be satisfied prior to the issue of a Final Occupation Certificate (s109C(1)(c))

Nil.

I. Conditions which must be satisfied during the ongoing use of the development

J. Miscellaneous Conditions

Nil.

K. Advisings

Nil

Louie Salvatore
Environmental Health Officer

Date: 16/07/2020