

Environmental Health Referral Response - acid sulfate soils

Application Number:	DA2022/1649
Date:	19/10/2022
Responsible Officer	Adam Susko
Land to be developed (Address):	Lot 12 DP 1119562 , 10 Namona Street NORTH NARRABEEN NSW 2101 Lot 3 DP 1018621 , 6 Namona Street NORTH NARRABEEN NSW 2101

Reasons for referral

This application seeks consent for one or more of the following:

- All development in class 1 land
- Any works below ground surface or will lower water table in area class 2 land
- Any works beyond 1 metre or lower water table by 1 metre in class 3 land
- Any works beyond 2 metres or lower water table by 2 metres in class 4 land
- Works on land below 10 metres AHD and within 500m of class 1, 2, 3 or 4 land which are likely to lower water table below 1 metre

And as such, Council's Environmental Investigations officers are required to consider the likely impacts.

Officer comments

General Comments

Previous investigations have identified acid sulfate soils (ASS) within the site (and hence the proposed works areas) as reported in DP (2020)2 and DP (2022). These investigations identified that potential acid sulfate soil (PASS) are unlikely to be at NNPS at depths less than 2.5 m below ground level (bgl) although are likely to be present in the deeper natural soils at NNPS, whilst PASS is expected to be encountered at depths of approximately 1.5 m bgl or greater on NSHS. Given that the proposed works require disturbance of soils below these depths (e.g., piling for new buildings) an ASSMP was recommended (i.e., this ASSMP).

The Acid Sulfate report requires further assessment prior to commencement of any works:

Further Assessment at NNPS

Given the potential to encounter ASS at depths below 2.5 m on NNPS (and generally increases in probability with depth) and that pile foundations may be in the order of 5 m (to be confirmed), additional ASS investigations are recommended to be undertaken to assess the need for ASS management of these disturbed soils.

The additional investigation is best undertaken post finalisation of design features which confirm the depths of soils disturbance below 2.5 m bgl (e.g., pile depth, excavation of deeper service trenches if required, etc.). Based on DP's understanding of the proposed works, it is anticipated that works below 2.5 m bgl will be within or adjacent to the proposed building footprints.

On this basis additional works are to comprise:

- Investigations to at least 0.5 m below the final depth of soil disturbance (i.e., pile depth, service trench excavation);
- A minimum of four boreholes are to be drilled in the footprint of the proposed buildings. Additional

locations may be required (e.g. ,along service trench alignment(s) outside the building footprints) if determined to be required by the environmental consultant:

- Collection of samples at regular intervals (i.e., approximately 0.5-1 m intervals);
- Screening of samples for indication on the potential presence of ASS;
- Laboratory analysis (e.g., SCr) of selected samples based on the screening results and to provide delineation through the subsurface profile (both vertically and laterally); and
- Assessment report which determines the presence / absence of ASS within the range to be disturbed by the works and if ASS management of disturbed soils is required.

Environmental Health supports the proposal subject to conditions

The proposal is therefore supported.

Note: Should you have any concerns with the referral comments above, please discuss these with the Responsible Officer.

Recommended Environmental Investigations Conditions:

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE

Further Acid Sulfate Assessment prior to Construction Certificate

Further Assessment and Management Plan review of Acid Sulfate Soils shall be carried out prior to the issue of a Construction Certificate.

Additional assessment is it include:

- A. Investigations to at least 0.5 m below the final depth of soil disturbance (i.e., pile depth, service trench excavation);
- B. A minimum of four boreholes are to be drilled in the footprint of the proposed buildings. Additional locations may be required (e.g. ,along service trench alignment(s) outside the building footprints) if determined to be required by the environmental consultant;
- C. Collection of samples at regular intervals (i.e., approximately 0.5-1 m intervals);
- D. Screening of samples for indication on the potential presence of ASS;
- E. Laboratory analysis (e.g., SCr) of selected samples based on the screening results and to provide delineation through the subsurface profile (both vertically and laterally); and
- F. Assessment report which determines the presence / absence of ASS within the range to be disturbed by the works and if ASS management of disturbed soils is required.

Any findings from the additional testing is to be incorporated into an updated acid sulfate management plan.

Reason: To manage acid sulfate soils and protect the environment

CONDITIONS TO BE COMPLIED WITH DURING DEMOLITION AND BUILDING WORK

Site Contamination – Acid Sulfate Soils

- A. Works to be carried out, as required in the assessment advice by Douglas Partners Project 86973.04 Acid Sulfate Soil Management Plan and subsequent additional assessment or findings required under the terms of this consent.
- B. All stockpiles of potentially contaminated soil must be stored in a secure area in a way that is not likely to cause pollution or be a public health risk.
- C. All contaminated soil removed from the site must be disposed of at a waste facility that can lawfully receive that waste and must be done in accordance with all relevant Acts, Regulations and Guidelines.
- D. Copies of all test results and disposal dockets must be retained by the property owner for at least 3

years and be made available to authorised Council officers on request.

Note: The following Acts and Guidelines applied at the time of determination:

- i) Protection of the Environment Operations Act 1997;
- ii) Environment Protection Authority, Waste Classification Guidelines (2014);
- iii) Water Quality Australia, National Acid Sulfate Soils Guidance (2018); and
- iv) Acid Sulfate Soil Advisory Committee, Acid Sulfate Soil Manual (1998).

Reason: To protect environment and public health.

CONDITIONS WHICH MUST BE COMPLIED WITH PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

Verification of Acid Sulfate Management prior to issue of an Occupation Certificate

The Principle Certifier shall certify that all works and actions, as required in the assessment advice by Douglas Partners Project 86973.04 Acid Sulfate Soil Management Plan and subsequent additional assessment/s, required under the terms of this consent have been carried out in a compliant manner and in accordance with the conditions of consent.

Reason: To protect the Environment and comply with Legislation