



JBS&G (43179 - 60607)

William Lam
Fraser's Property Australia
Via email: William.lam@frasersproperty.com.au

**Review of Potential for Dewatering and Acid Sulfate Soil Management Requirements
Block 4N Central Park, Broadway, Chippendale**

Dear William,

JBS&G Australia Pty Ltd (JBS&G) was engaged by Fraser's Broadway Pty Ltd (Fraser's, the client) to provide specialist advice in relation to management of site contamination and acid sulfate soil conditions during redevelopment of the former Carlton United Breweries (CUB) site at 62 – 120 Broadway, Chippendale, also known as the Central Park site.

Development Block 4N is currently the subject of proposals to the NSW Department of Planning in relation to Modification of the Concept Plan MP06_0171 (Mod 10) and a State Significant Development Application SSD 14_6673 relating to a mixed use development. City of Sydney Council (CoS 2014¹) correspondence regarding the proposals has requested further information in relation to consideration of acid sulfate soil and dewatering requirements for the proposed development. This advice documents a review of site conditions and provides specific advice in response to the CoS (2014) request for information.

Acid Sulfate Soil (ASS) Conditions

The Central Park site has previously been the subject of various site assessment activities that resulted in the documentation of an Acid Sulfate Soil Management Plan (ASSMP, JBS 2009²) applicable during site development activities. The ASSMP was prepared in accordance with the requirements of ASSMAC (1998³).

In summary, the ASSMP documented the following:

- Characterisation of site soil conditions in relation to the known extent of ASS conditions at the site and areas requiring further evaluation should ground disturbance activities occur;
- A methodology for the on-site treatment and management of ASS materials and associated potential leachate during the proposed works, including validation requirements to demonstrate the success of management protocols;
- A monitoring framework to be applied during development activities that may result in the disturbance of ASS; and
- A contingency framework in the event that additional ASS conditions are encountered beyond the known/suspected extent, monitoring indicates disturbance of off-site acid sulfate soils and/or the proposed treatment strategy failed to adequately acid generation conditions.

¹ Re: Modification to Concept Plan MP06_0171 (Mod 10) and State Significant Development Application SSD 14_6673 for Block 4N, Central Park. City of Sydney Council, 29 December 2014 (CoS 2014)

² Acid Sulfate Soil Management Plan, Former Carlton & United Breweries Site, 26 – 100 Broadway, Chippendale, NSW. JBS Environmental Pty Ltd, July 2009, rev 1 (JBS 2009).

³ Acid Sulfate Soil Manual, incorporating the Acid Sulfate Soil Assessment Guidelines. Acid Sulfate Soils Management Advisory Committee, 1998 (ASSMAC 1998)

Provision of this existing document will satisfy Council information request.

Further, it is noted that the ASSMP (JBS 2009) identified the presence of a minor area within the Block 4N site footprint that required further consideration of potential for occurrence of ASS during excavation works. This occurred as a result of inconclusive analytical results during early URS assessment of the site.

Site conditions reported during remediation of the site as documented in the validation report prepared for the Block 4N site (JBS&G 2015⁴) confirmed this area was underlain by residual clay soils and shallow sandstone bedrock. On this basis, no specific ASS management was required during the completed excavation works within the basement envelopment. It is also anticipated that the limited additional soil disturbance/excavation works required to the west of the basement will encounter similar residual conditions, inconsistent with material requiring ASS management.

Potential for Dewatering

As documented in the recent Block 4N basement validation report (JBS&G 2014), the extent of the basement footprint has been excavated to bulk excavation levels of approximately 0.77 m AHD in the western and eastern extents of the basement; to 2 m AHD in the central portion of the basement and 5.3 m AHD in the south-west extent.

To achieve these excavation levels, secant pile shoring was installed at the lateral extent of the basement into the bedrock prior to excavation of the basement void. As a result of the residual conditions and installation of the basement retention, significant seepage was not encountered during excavation works and no dewatering activities were required to be implemented during the excavation works.

Given the requirements for further ground disturbance are related for installation of minor additional foundation piles, there will not be any requirement for implementation of dewatering activities either temporary or permanent during the proposed development works that would require the approval of the NSW Office of Water.

Should you have any queries, please feel free to contact the undersigned on 8245 0300 or via jrosner@jbsg.com.au.

Yours sincerely:



Joanne Rosner
Principal Contaminated Land
JBS&G Australia Pty Ltd

Attachments:

- 1) Limitations

⁴ Development Block 4N and 1 Validation Report. Frasers Broadway Redevelopment Site, 26-100 Broadway, Chippendale, NSW. JBS&G Australia Pty Ltd, 6 January 2015 (JBS&G 2015)

Attachment 1 – Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquires.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.