

15 October 2014

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URS Project No. 43218448

To Matt

**RE: Local Planning Directions - Acid Sulfate Soils – 181 James Ruse Drive, Camellia.**

The purpose of this letter is to provide information in relation to the Local Planning Direction #4 Hazard and Risk for acid sulphate soils (ASS) under s117(2) of the Environmental Planning and Assessment Act 1979 (EPAA 1979).

An environmental investigation (URS, SSI Feb 2012)<sup>1</sup> undertaken at the property known as 181 James Ruse Drive, Camellia (the site) has confirmed that the site contains ASS. The environmental investigation provided the following findings at section 5.3.5 in relation to ASS:

*During Stage 1 works, 12 primary natural soil samples were analysed for the SPOCAS suite and were assessed against the recommended action levels for coarse texture sands, which offer the most conservative levels for assessment:*

- *Five samples met the Acid Trail Action Level (18 mol H<sup>+</sup>/ tonne), for Titratable Sulfidic Acidity (TSA), including samples SB2\_4.2-4.3, SB3\_3.0-3.1, SB9\_3.4-3.5, SB12\_3.5-3.6 and SB15\_1.6-1.7. Results were between a minimum of <0.02 and a maximum of 108 mole H<sup>+</sup>/ t (SB9\_3.4-3.5).*
- *Four samples met the Sulfur Trail Action Level, for Peroxide Oxidisable Sulfur (SPOS). Samples exceeding the action level were SB2\_4.2-4.3, SB6\_3.9-4.0, SB7\_4.5-4.6 and SB9\_3.4-3.5.*
- *Net acidity was between <10 and 116 mole H<sup>+</sup>/ tonne (SB9\_3.4-3.5).*
- *A liming rate was derived for six of the locations investigated, including SB2, SB3, SB6, SB9, SB12 and SB15. The liming rate recommended was between 2 kg CaCO<sub>3</sub> per tonne of soil (SB3, SB6 and SB15) and 9 kg CaCO<sub>3</sub> per tonne of soil (SB9)."*

The environmental investigation made the following conclusion at section 7 in relation to ASS:

*"The presence of ASS across the majority of the site in underlying natural soils has been confirmed. The revised RAP will address the requirements to manage ASS if natural soils are*

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<sup>1</sup> URS Australia, Supplementary Site Investigation - Camellia West – 181 James Ruse Drive, Camellia NSW, 6 February 2012.

*dewatered or exposed to the atmosphere through excavations, taking into consideration the SPOCAS test data presented in this SSL."*

Subsequent to the environmental investigation, a remediation action plan (RAP) (URS, RAP\_Rev C Sept 2013)<sup>2</sup> was prepared for the clean-up of the site in preparation for redevelopment. The RAP provided the following information on management of ASS at section 9.8:

*The presence of ASS at this site requires a specific management plan to detail the measures to be implemented for the protection of surface water, groundwater, ecology and the community during remediation and excavation works when the following occurs:*

- *Saturated zone natural soils are exposed to the atmosphere; and*
- *Groundwater levels are reduced to expose natural soils.*

*It is expected that the above scenarios are likely to occur at some locations. Due to the confirmed presence of localised ASS (Section 3.5), an ASS management plan (ASSMP) will be prepared to account for the presence of ASS at the site and specify measures to mitigate the generation of acidic drainage. The ASSMP must be prepared prior to the commencement of remediation works and in accordance with the NSW Acid Sulfate Soils Assessment Guidelines (ASSMAC, 1998).*

The RAP has been endorsed by a NSW Contaminated Land Site Auditor accredited by the NSW Environment Protection Authority (EPA) under the Contaminated Land Management Act 1997 (CLMA 1997). The Site Auditor furnished a Site Audit Statement (Attachment 1: SAS #187 dated 30 September 2013) concluding that the site can be made suitable for the proposed future land use if the RAP was implemented. The land use stated was "Retail and residential with minimal access to soils".

Upon review of the RAP and the SAS, the NSW EPA provided 'in principle' support for the remediation (Attachment 2: letter dated 28 October 2013) such that the remediation could be progressed subject to planning approvals from the regulating authority.

In conclusion, it has been confirmed that the site contains soils that can be classified as ASS and that management protocols outlined in the RAP, to mitigate any adverse environmental health impacts on the land from ASS during remediation or post redevelopment of the site, are supported by the Site Auditor and the NSW EPA.

Yours sincerely

**URS Australia Pty Ltd**



Adam Sullivan  
Principal Environmental Scientist

**Attachments:**

- 1 – Site Audit Statement #187.
- 2 – NSW EPA letter of support.

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<sup>2</sup> URS Australia, Remediation Action Plan Revision C, 181 James Ruse Drive, Camellia NSW, 5 September 2013.