

20 September 2012

Our Ref: AS121111

Lend Lease (Millers Point) Pty Ltd
Attn: Mark Burns
Level 4, 30 The Bond
Hickson Road
Millers Point NSW 2000

By email: Mark.Burns@lendlease.com

Dear Mark

Re: Residential Buildings R8 and R9

1 Introduction

As a NSW-EPA accredited Contaminated Sites Auditor, I am conducting a contamination audit in relation to the southern portion of the site known as "Barangaroo", at Millers Point, NSW on behalf of Lend Lease (Millers Point) Pty Ltd (Lend Lease). I prepared a Site Audit Report and accompanying Site Audit Statement dated 14 July 2011 regarding the Remediation Action Plan (RAP, dated 7 July 2011) for the Other Remediation Works (South) area (ORWS).

Lend Lease has provided me with details of residential buildings with ground level commercial uses to be constructed at Barangaroo South, known as Buildings R8 and R9. The following drawings were provided, issue date 10 September 2012:

- BB1_PA_R8R9_A000 - TITLE SHEET
- BB1_PA_R8R9_A001 - BASEMENT PLAN LEVEL B1
- BB1_PA_R8R9_A002 - BASEMENT PLAN LEVEL B2
- BB1_PA_R8R9_A010 - CROSS SECTION 1-1
- BB1_PA_R8R9_A020 - LONGITUDINAL SECTION 2-2

The buildings are to be built in the west of the ORWS in a position that straddles the basement perimeter retaining wall. A row of piles is to be constructed outside the basement perimeter retaining wall. This positioning is not consistent with the assumptions made in the RAP and associated Human Health and Environmental Risk Assessments (HHERAs) therefore the implications of the building design as well as controls for piling activities require consideration.

2 Consideration of RAP and HHERA Assumptions

The RAP defined four areas within ORWS based on land uses and material types. Area A was defined in the RAP as "material to remain in situ within the Public Domain (South), outside the retention wall system and potentially in hydraulic connection with Darling Harbour, where limited or no excavation will be required".

The retention wall system was considered to mark the boundary between the Public Domain (South) and the Development Area (South), located to the east. Recent advice from Lend Lease indicates, however, that the boundary of the Public Domain (South) is located 27m from the Darling Harbour shore line, some distance outside (to the west) of the retention wall system. The Development Area (South) has therefore extended beyond the retention wall system, to the west.

The following assumptions were made in the RAP and HHERAs (and hence the Site Audit Report and Site Audit Statement) regarding the proposed development within Public Domain (South):

- “Public Domain (South) usage will incorporate open space with community, mixed commercial and retail land use, and landscaping (planter boxes, paved areas and parkland). While shallow basement excavations are proposed along the eastern portion of the Public Domain (South), the existing concrete hardstand surfaces are proposed to be retained (and perforated to facilitate the drainage of water through them) within the Public Domain (South)
- The existing caisson walls associated with the historic wharf structures will be retained along the western (Darling Harbour) side of the Public Domain (South)
- The maximum height of any development within the Public Domain (South) will be limited to two storeys
- Material excavated for basement construction may be beneficially reused to build up the elevation of the Public Domain (South) by approximately 1m”.

The general land use scenario adopted for the audit was ‘parks, recreational, open space’ for Public Domain (South), noting that some buildings may also be constructed. Site specific remediation criteria were derived for Area A based on consideration of the following scenarios:

- Scenario 2 – upper-most basement car park level partially above water
- Scenario 4 – paved public domain
- Scenario 5 – commercial slab on ground – two storeys
- Scenario 6 – short term ground-intrusive maintenance
- Scenario 7 – residential above basement construction.

The proposed development is not consistent with that described in the RAP since the buildings are proposed to exceed two storeys and include residential development. While the proposed development does not exactly match the assumptions made, the above scenarios considered in deriving remediation criteria for Area A are adequately protective for the proposed usage of Building R8 and R9. That is, overall the modelled scenarios are more conservative than the proposed scenario of high density residential development above ground level commercial uses with no basement (slab on ground) and the remediation criteria adopted is adequately protective of the proposed development.

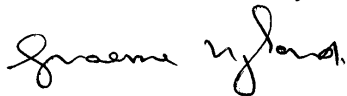
3 Consideration of Proposed Piling Works

The RAP allowed for limited excavation and possible shallow basements within Area A. The construction of piles is considered to be consistent with this definition. The RAP specifies controls for excavation works and materials management in Area A, including management of asbestos-containing materials if encountered. These controls would be applicable to the construction of piles within Area A.

4 Conclusion

I have reviewed the proposed Building R8 and R9 developments against the assumptions and procedures outlined in the RAP. The remediation criteria developed and control measures specified in the RAP are considered appropriate for the proposed development. It is therefore considered that my Site Audit Report and Site Audit Statement dated 14 July 2011 can be relied upon as being relevant to Building R8 and R9.

Yours faithfully
ENVIRON Australia Pty Ltd



Graeme Nyland
Accredited Auditor 9808