

## Memorandum

<b>To</b>	Richard Crookes Constructions Pty Ltd	Cale Holmes	HolmesC@richardcrookes.com.au
<b>cc</b>			
<b>From</b>	Joel Huang	<b>Date</b>	04 Jun 2021
<b>Subject</b>	Geotechnical and Hydrogeological Review and Response to Development Consent Condition B32 (a), 13-23 Gibbons Street, Redfern	<b>Project No.</b>	86266.08

This statement confirms that Douglas Partners Pty Ltd (DP) has, from a geotechnical and hydrogeological perspective, reviewed the design in relation to the subsurface structures (ie. basement shoring walls and the associated temporary and permanent lateral supports to the walls) to be constructed at 13-23 Gibbons Street, Redfern.

### Subsurface Retention

It is understood that the proposed bulk excavation level for the proposed student accommodation development is about RL 21.5 m, relative to Australian Height Datum (AHD), which is approximately 600 mm below the existing basement slab level. The existing basement retaining walls along the site boundary to the south, west, and north will be retained and used for the new development and will be temporarily supported by internal struts during construction. The long-term lateral support for the basement retaining wall will be provided by the new basement floor slab and the ground floor slab.

DP has reviewed the following design documents:

- **Temporary Retention:** Temporary propping (strut) design certificate and the associated design documentations titled "Design Certificate – Temporary Propping of Perimeter Blockwork Retaining Wall and Secant Pile Wall" CERT REF:15.2.3425[01], prepared by E.A. @ Associates Consulting Engineers;
- **Permanent Retention:** Structural design drawings set titled "WEE HUR Student Housing, 13-23 Gibbons Street, Redfern NSW 2016", Job No. 18142 Rev C, prepared by Webber Design Structural Engineering.

DP has made comments and recommendations throughout the review process which we understand have been incorporated into the design by the designers.

DP confirms that, from a geotechnical and hydrogeological perspective, the above listed documents satisfy the relevant DA Consent Conditions (ref: SSD 9194) B32(a) in that:

- the current temporary and permanent retention wall design of the new basement is expected to provide appropriate support and retention to neighbouring properties and public infrastructure.
- No ground settlement or movement during excavation or after construction that is sufficient to cause a significant adverse impact to adjoining property or public infrastructure.

### Groundwater

Groundwater levels on the site has been measured during the previous DP geotechnical investigation (Report Ref: 86266.03.R.001.Rev0) at between RL 17.1 m and 18.7 m which is at least 2.5 m below the bulk excavation level for the proposed lowered basement. On this basis, with the consideration that the groundwater will fluctuate and may temporarily rise by 1-2 m following heavy and prolonged rainfall, it is expected the pre-developed groundwater table will not be intercepted by the proposed development, thus the constant or on-going treatment and drainage of groundwater should not be required. Ongoing monitoring of water levels will be required to check water levels and fluctuations.

The statement provided in this memorandum does not relieve designers and construction contractors of their contractual obligations to undertake the design in accordance with the various design briefs, specifications, Australian Standards and industry best-practice. The geotechnical monitoring requirements and hold points set out in the Geotechnical Monitoring Plan (GMP) prepared by DP (Ref: 86266.08.R.001.Rev1, dated 14 May 2021) should also be strictly followed.

**Douglas Partners Pty Ltd**

Reviewed by



**Joel Huang**  
Senior Associate



pp. **Scott Easton**  
Principal