

16th August 2021

eHRW ref: 2095/KB rev A – 16.08.2021

Campbell Reith ref: 13398-86

Planning ref: 2021/0250/P

Graham Kite
Campbell Reith Consulting Engineers
15 Bermondsey Square
London
SE1 3UN

Dear Graham,

RE: 7 Greenaway Gardens, London, NW3 7DJ

Thank you for your comments on The Ground Investigation and Basement Impact Assessment for the proposed 7 Greenaway Gardens development.

Please see below our response to Campbell Reith Audit Report queries:

Query 1: Underground utility and infrastructure information should be provided.

Response: (contained in the email dated 14.06.2021). Please refer to Desktop Utility Search report attached. UKPN, Cadent Gas and BT have plant running within the adjacent footway of Greenaway Gardens. The GMA has however indicated movements of less than 5 mm and therefore buried services will not be impacted by the proposed basement.

Query 1 has been cleared as confirmed in Campbell Reith email dated 18.06.2021

Query 2: An outline construction programme should be provided.

Response: (contained in the email dated 14.06.2021). Please refer to the attached contractor's outline construction programme.

Query 2 has been cleared as confirmed in Campbell Reith email dated 18.06.2021

Query 3: Clarification is requested on the Screening response in regard to removal of trees, with the BIA text contradicting the Arboricultural report, and assessment of any resulting impacts provided.

Response: (contained in the email dated 14.06.2021). On review of the arboricultural report, three trees are to be removed in relatively close proximity of Nos 6 and 6A. In accordance with NHBC guidelines, the Yew tree and Bay tree are to be considered mature height for the purposes of determining the required foundation depth due to tree removal. The Cypress tree is less than 50% of the mature height and is therefore not the critical tree. The Bay tree is the most critical and is circa 6 m from the neighbouring property and the clay of the Claygate Member is of medium volume change potential. This requires a foundation depth of 1.30 m. However, from records acquired and included in the BIA, the nearest foundations to the trees to be removed are circa 2.50 m due to a partial basement. The removal of the trees will therefore not impact the stability of the neighbouring properties.

Query 3 has been cleared as confirmed in Campbell Reith email dated 18.06.2021

engineersHRW
Unit 10 Blue Lion Place, 237 Long Lane, London SE1 4PU
020 7407 9575
www.ehrw.co.uk

Directors: Stephen Haskins, Simon Robinson, Martin Waters, Adam Redgrove
Associates: Mark Kight, Brett Scott, Chris Stobbart
Consultants: Jane Wernick CBE, Kate Purver

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Query 4. Clarification is requested on the use of sheet piling and groundwater control measures and impacts to neighbouring structures should be assessed if applicable.

Response: (revised response to Campbell Reith query email dated 18.06.2021). As an alternative to the temporary contiguous bored piled wall along the tunnel section leading to the outbuilding, temporary trench sheathing has been proposed to support the excavation. Trench sheathing will be placed in sections while the excavations progresses, and they will not be driven into the ground. This is subject what is found when the pool is demolished as there may be previous temporary works in place. Trench sheathing will be fully propped over the full height of the excavation. The BIA and ground movement analysis has currently modelled the use of the bored pile wall, such that the movements predicted are greater than what would be expected from the use of trench sheathing such that the GMA is sufficiently conservative. There will be no vibrations as trench sheathing is being placed in sections and propped, rather than driven. There will be no impact from the use of trench sheathing on the neighbouring properties. Please refer to the attached sketch 2095-HRW-XX-XX-SK-S-001 P1 showing temporary trench sheathing installation sequencing.

Query 4 has been cleared as confirmed in Campbell Reith email dated 27.07.2021

Query 5. GMA to be further clarified as per clause 4.13 of the Basement Impact Assessment Audit.

Response: Ground Movement Assessment has been revised by GEA Ltd. Please refer to the attached response ref: J20269 BIA Audit Response Letter ML-01.

RevA – further Campbell Reith queries (email dated 10.08.2021):

'Wall 8J - The magnitude of movements predicted appear to be reasonable, in line with the expected range for this type of construction. As you state, you appear to have a geometry issue, in part generated by the software. To close this out I would suggest you adopt one of the generally accepted 'smoothing' techniques to more realistically model the movements / strain contours to demonstrate that damage can be reduced to Category 1.'

'Wall 6D - limiting horizontal movements to a maximum of 11mm (your basement wall) and maximum of 9mm (neighbouring wall) should be feasible. To demonstrate how the works will be controlled to do this I suggest section 7.3 of HRW's SMS is updated to provide some detail on the proposed monitoring methodologies / trigger values / action plan etc with an associated monitoring plan to be provided.'

Response: Please refer to the attached response letter ref: J20269 BIA Audit Response Letter ML-02 with regards to Ground Movement Assessment and to updated clause 7.3 of Structural Engineer's Construction Method Statement with regards to movement monitoring methodology.

Query in clause 5.6 of the audit report:

Response:

- a. in respect to mentioned sheet piling use – it is now clarified that fully propped trench sheathing to be used as noted in query 4 response.
- b. in respect to groundwater control - no major inflows are expected, although if seepages of groundwater are encountered, these will be suitably controlled using sump pumping, with screened pumping utilised to prevent the drawing in and loss of any fines associated with silt and sand lenses. Please refer to attached sketch 2095-HRW-XX-XX-SK-S-002 P1– showing local seepage dewatering proposal.

Query has been cleared as confirmed in Campbell Reith email dated 27.07.2021

Query on page 6 of the audit report: Does the geotechnical interpretation include information on retaining wall design?

Response: The BIA includes information on retaining walls. Retaining walls designed for parameters as per 8.1.2 of BIA in accordance with current standards.

Query has been cleared as confirmed in Campbell Reith email dated 18.06.2021

Should you have any further queries please do not hesitate to contact us.

Regards

Krzysztof Balcerowicz (Senior Structural Engineer)
for and on behalf of engineersHRW

Attachments:

- Desktop Utility Search Report
- Contractor's outline construction programme
- Sketch 2095-HRW-XX-XX-SK-S-001 P1 - temporary trench sheathing installation sequencing
- J20269 BIA Audit Response Letter ML-01
- Sketch 2095-HRW-XX-XX-SK-S-002 P1– local seepage dewatering proposal
- J20269 BIA Audit Response Letter ML-02
- Structural Engineer's Construction Method Statement rev A