

16 August 2023

Timothy Wainwright
Price & Myers LLP
37 Alfred Place
London
WC1E 7DP

Your ref: Kentish Town Car Wash

Our ref: CG/28407C

Please reply to: Charles Hooper; Will
Newton; Adam Cadman

Dear Mr Wainwright,

Kentish Town Car Wash – Basement Footprint Changes Impact for Planning – Revision 2

Card Geotechnics Limited (CGL) has previously completed ground investigation works and a Basement Impact Assessment (BIA)¹ for the proposed redevelopment of 369-377 Kentish Town Road, Camden, London, NW5 2TJ. It is understood that following this assessment, the proposed scheme has been redesigned, with the footprint of the proposed basement reduced.

CGL has been instructed by Price and Myers LLP, on behalf of KTR Carwash Project Limited (the Client), to produce this addendum letter, to be submitted along with the existing BIA to the local Planning Authority, to comment on the validity of the BIA findings in relation to the new basement design.

Site Description & Proposed Development

The site is triangular in shape, occupying an area of approximately 370m². The site is bound by a four-storey end-of-terrace building to the west (379 Kentish Town Road), Kentish Town Road to the north, and a railway to the south, which forms part of the Midland Main Line. A retaining wall is present along the southern site boundary, approximately 6m in height (above the railway level). Two London Underground Limited (LUL) Northern Line tunnels are located beneath Kentish Town Road, approximately 6m north of the site boundary; with the tunnel crowns located between approximately 18m and 22m below ground level. Three Thames Water assets are also present beneath the highway, located between 1.7m and 10m northeast of the site, with invert levels between approximately 0.5m and 14m below ground level.

The site is currently occupied by a number of single storey buildings and concrete/tarmac hardstanding and is understood to be currently in use as a car wash. It is proposed to demolish the existing structures and construct a new mixed-use building across the majority of the site footprint. The new building will comprise seven storeys above ground, and a single level basement.

The Basement Impact Assessment report produced by CGL in June 2019 was undertaken using the original design scheme (Planning Application No. 2019/0910/P)², which included a single level basement across the entire footprint of the proposed building (see Plate 1). It is understood that the scheme has been redesigned, with the extent of the basement reduced such that it does not extend into the southern section of the site (see Plate 2).

¹ CGL (June 2019). Kentish Town Car Wash - *Basement Impact Assessment*. Revision 1. Reference: CG/28407.

² [Planning Application Search \(camden.gov.uk\)](https://www.camden.gov.uk/planning-application-search) [Accessed April 2023].



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Plate 1. Extent of proposed basement (2019 scheme design).

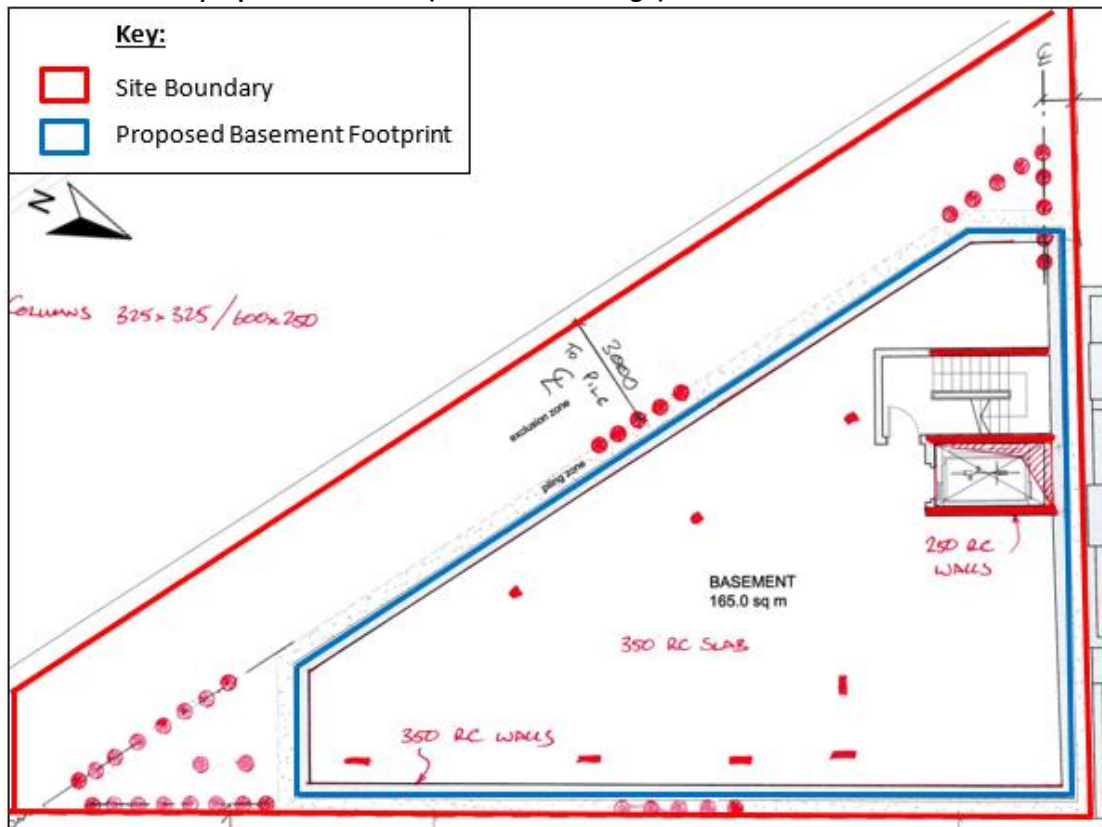
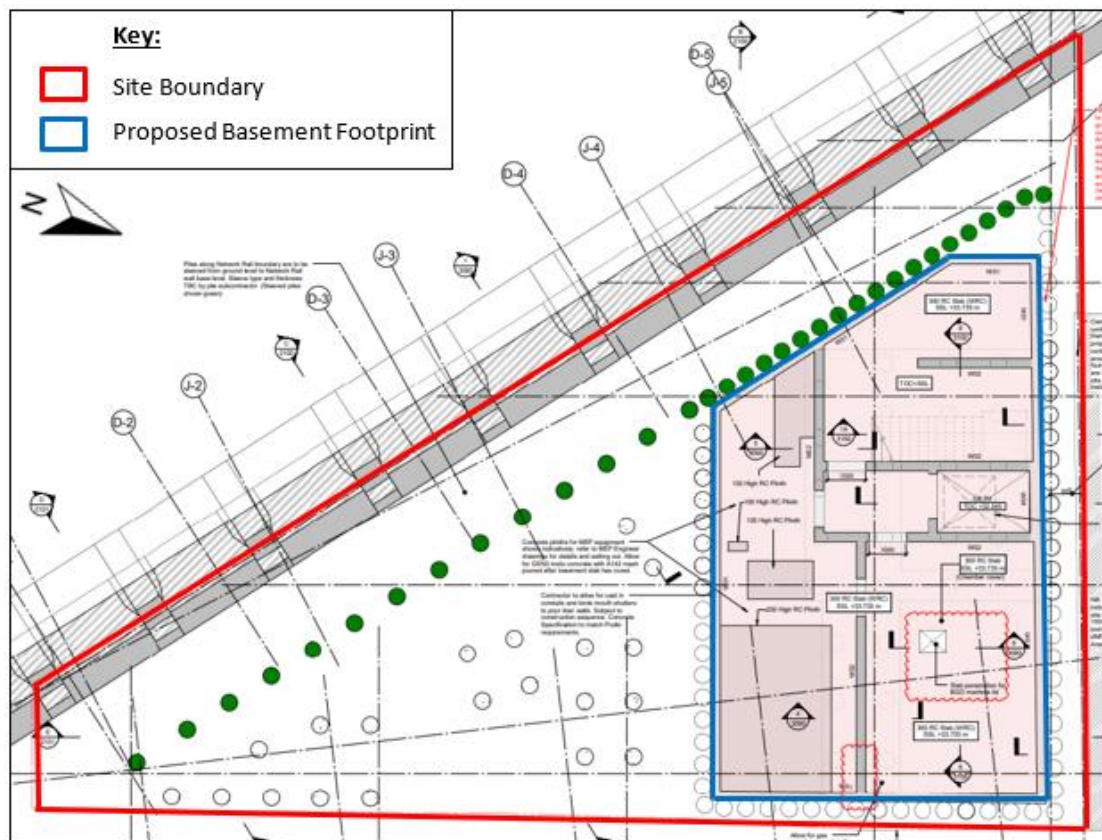


Plate 2. Extent of proposed basement (2023 revised scheme design).



Discussion

The CGL Basement Impact Assessment report¹ was produced to consider the effects of the proposed development, including the basement construction, on:

1. 379 Kentish Town Road;
2. Kentish Town Road pavements;
3. The Network Rail retaining wall and railway tracks;
4. The LUL Northern Line tunnels; and,
5. The Thames Water assets beneath Kentish Town Road.

The predicted ground movements at each of these features resulting from the originally proposed development scheme (including single level basement across the entire footprint of the proposed building), as calculated by the CGL Impact Assessment reports, are summarised in the following sections. The implications of the new design scheme (including reduced basement footprint) on the anticipated ground movements at each feature have then been discussed.

1. 379 Kentish Town Road

379 Kentish Town Road is a four-storey terraced building which borders the western perimeter of the site. The ground movement assessment¹ predicted that the total vertical movements at the foundations of the property would be approximately 21mm of settlement. The subsequent building damage assessment calculated a maximum building damage category of Category 1 for 379 Kentish Town Road, corresponding to 'very slight' damage including fine cracks that can easily be repaired during normal decoration.

The 21mm of settlement predicted is due to enabling works (~4mm), and foundation loading (~19mm), marginally reduced by ~2mm of heave movement following basement excavation. The new, reduced basement excavation will not change the settlement predicted from the enabling works and foundation loading, but the heave will be reduced slightly, increasing total settlement. However, given the low magnitude of the heave movements previously, the settlement will not increase to the extent required to raise the building damage assessment category.

2. Kentish Town Road Pavements

The ground movement assessment predicted maximum lateral movement of 6mm and maximum settlement of 8mm at the nearest edge of the footway of Kentish Town Road, with this magnitude of ground movement not considered to pose a significant risk to the pavements or any services within the pavements.

The ground movements along the footway would predominantly occur due to relaxation/deflection of the basement wall during basement excavation. Decreasing the basement footprint will reduce the linear length of the basement wall adjacent to the footway. As such, corner effects will influence a greater portion of the piles wall length adjacent to the pavement, increasing wall stiffness and thus reduce ground movements at the pavement.

3. Network Rail Retaining Wall and Railway Tracks

The Network Rail retaining wall which forms the southern boundary of the site is a masonry gravity wall retaining approximately 5.75m of ground behind the wall. The proposed piled retaining wall to support the southern side of the basement excavation will be off-set by 3m from the parapet at the top of the Network Rail wall, and the piles will be sleeved to prevent loading the back of the wall.

The CGL BIA predicted a maximum cumulative vertical movement along the foundation of the retaining wall of <3mm. The surcharging during enabling works (including pile mat installation and plant live loads) were assessed, and indicated a minimal increase in lateral pressure of the back of the Network Rail retaining wall. An exclusion zone is to be implemented during the redevelopment works, to ensure that no piling rig/plant or stockpiling takes place within 3m of the retaining wall, limiting the potential for lateral deflection in the short term. Potential long term lateral deflections were considered to be negligible, as the basement excavation would cause lateral movements towards the basement.

However, assuming the 3m exclusion zone is implemented, and the piles of the basement wall are sleeved to the base of the Network Rail wall, the changes in predicted ground movement around the retaining wall as a result of the reduced basement excavation are considered to be negligible.

The maximum heave anticipated at the Network Railway tracks during basement unloading was <2mm, with the cumulative settlement following foundation loading anticipated to be <2mm, and as such the risk to the tracks was considered to be low. Reduction of the basement excavation would reduce heave movement, marginally increasing cumulative settlement following foundation loading. However, given the low magnitude of the heave movements previously predicted, the risk to the tracks is still considered to be low.

4. LUL Northern Line Tunnels

The LUL Northern Line tunnels are located north-east of the site. The shallower of the tunnels is approximately 8.5m away from the north-eastern basement wall, at a depth of 17.7m below ground level. The deeper tunnel is approximately 7.1m away from the north-eastern basements wall, at a depth of 22.2m below ground level.

The maximum cumulative vertical movements at the tunnel crowns were calculated to be less than 1mm. Given the minimal movement predicted for the full basement, the changes in predicted movement for the reduced basement extent would be negligible.

5. Thames Water Assets

Two Thames Water sewers were identified to the northeast of the site, including:

- A 1219mm diameter storm relief sewer 5.5m from the proposed north-east pile wall, with an approximate invert level of 24.04mOD (13.86mbgl).
- A 1549 x 991mm trunk sewer 11.5m from the proposed pile wall, with an approximate invert level of 30.56mOD (7.34mbgl).

The storm relief sewer is relatively close to the shallower Northern Line tunnel, and therefore ground movements were considered likely to be similar to those anticipated for this tunnel. The trunk sewer was predicted to be outside of the load influence profile of the north-east pile wall, and at a sufficient distance such that lateral movements from the deflection of the wall would be negligible.

Given the low impacts predicted on these assets for the full basement, the changes in predicted movement for the proposed reduced basement extent would be negligible.

The predicted cumulative ground movements were used to assess the curvature, strains, joint rotation, and joint pull-out generation at 1m intervals along each pipe. The results were then compared to pre-defined Thames Water assessment criteria. This screening indicated that the predicted movements were well within the Thames Water tolerances.

Conclusion

The anticipated changes in impact to each of the assets discussed in this letter, resulting from the reduced footprint of the proposed basement, would be negligible. As a result the conclusions, methodologies and recommendations of CGL Basement Impact Assessment Revision 1, dated June 2019¹, remain valid in respect of the proposed reduced basement scheme.

Yours sincerely

A handwritten signature in black ink, appearing to read "W. Newton", written in a cursive style.

Will Newton, Senior Engineer
Card Geotechnics Limited

A handwritten signature in black ink, appearing to read "Adam Cadman", written in a cursive style.

Adam Cadman, Associate Director
Card Geotechnics Limited