From: Michael Webber
Sent: 21 January 2025 08:57
To: Planning
Cc: CORDEIRO, Francesca (IMPERIAL COLLEGE HEALTHCARE NHS TRUST); John Beighton

Subject: Planning Application 2025/0226/T
Importance: High

Dear Sirs

1. We wish to formally oppose the planning application reference 2025/0226/T, listed on January 20th 2025 & notified to us this morning.

2. The proposed works on the trees in Chester Terrace Gardens are to enable the unnecessary use of a huge 21 tonne excavator (photo above) for the proposed minor works planned in Chester Terrace Gardens (the rebuilding of just 1/3 of the retaining wall).

3. Attached is the October 18th 2024 letter from Price & Myers, which provides a detailed explanation as to why the proposed tree works are unnecessary.

4. Attached also is a copy of the Price & Myers' May 24th 2024 letter.

5. Price & Myers is a highly reputable, expert & experienced consulting & structural engineering practise established in London in 1978, with a staff of circa 170 people. In their first 45 years they completed over 30,000 projects & won over 850 design awards.

6. The independent, tangible evidence shows that using a 21 Tonne excavator is totally unnecessary.

7. Attached also is a copy of the report by TZG, another structural engineer, which further corroborates the Price & Myers' analysis.

8. Price & Myers have confirmed that the foundation piles can readily be installed using hand-held equipment and in their letter of October 18th they set out, again, the detailed technical methodology & reasoning how it is possible to install the piles so as to avoid the use of a hugely damaging 21 tonne excavator.

9. The ramifications and impact of Price & Myers' clear-cut conclusions are substantive & material because it means that there is no justification for the needless cutting down & destruction of mature trees & mature shrubs in Chester Terrace Gardens.

10. Additionally Nick Bell's, Camden's own Tree & Landscape Officer, email on February 21st 2024, set out detailed reasons why the trees in Chester Terrace Gardens should be protected. Moreover, he cited Local Plan policy A3. point J. which states "the council will: resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation".

11. The Chester Terrace Residents Association & the Chester Terrace residents hope that, after careful consideration, Camden will now review the proposed tree destruction plans of the CEPC & put a stop to their actions which will irrevocably damage & destroy Chester Terrace Gardens.

We look forward to hearing from you in reply.

Yours sincerely

Francesca Cordeiro, Chair

John Beighton

Michael Webber

Chester Terrace Residents Association

PRICE & MYERS

Chester Terrace Residents' Association
Chester Terrace
London
NW1 4ND

18th October 2024

Our Ref: 31530 - Chester Terrace Gardens, NW1 4ND
Camden Planning Ref: 2023/0282/P
Hurst Peirce + Malcolm Ref: CEPC Chester Terrace – HPM Responses to Price & Myers Report – REV01 – 16.09.2024

Dear Sirs,

Chester Terrace Gardens - retaining wall repair and reconstruction proposals

I write on behalf of the Chester Terrace Residents Association (CTRA), who have asked Price & Myers to review the current proposals, submitted by the Crown Estates Paving Commission (CEPC) and their consultants, for the repair and reconstruction of the existing retaining walls and balustrade to the eastern side of Chester Terrace Gardens and give our expert opinion. This letter is further to our earlier letter of 24th May 2024 to Camden Council's Planning Department and is in response to Hurst Peirce + Malcolm's (HPM) response to that, dated 16th September 2024, and as referenced above.

The contents of HPM's response are noted. However, we still have concerns that such an intrusive and heavy-handed approach to both the installation of the piles generally and the detailing of the wall in the vicinity of mature trees will lead to the unnecessary loss of important natural habitat.

We note that the current proposal is only to replace 1/3 of the retaining wall as part of the first phase of work, however HPM have clarified that some or all of the remaining 2/3 of the retaining wall may be replaced in similar fashion as part of future phases of work. It is therefore important to establish a precedent of sensitivity with respect to the trees and other mature flora now.

HPM note that installing piles at greater (3m) centre spacings allows for "a more efficient design than having this type of piles at closer centres". This may be the case if the constraints on the site presented by the existing mature trees and flora are ignored, but adopting this approach to pile spacing necessarily means that the pile loads are higher and the use of a larger piece of machinery, for example the 21-tonne excavator noted by HPM, to install them becomes more likely. However, if pile centres were reduced, load requirements would reduce, and so piles installed using hand-held machinery become entirely feasible.

Consulting Engineers
37 Alfred Place
London WC1E 7DP

020 7631 5128
mail@pricemyers.com
www.pricemyers.com

P&M

HPM have not confirmed the specific loading requirements for the piles, so we again refer to the approximate analysis we carried out for the purposes of our last letter. This demonstrated that, in principle, piles installed by hand-held machinery could achieve the loads required, even in areas of locally increased loading, for example where a special detail is required to bypass a mature tree. We also reiterate the fact that installing a raking pile to the front edge of the toe of the retaining wall will deal with the relatively high horizontal shear loads that will be generated far more effectively than a vertical pile, and so a smaller pile installed using a smaller piece of machinery could work.

We spoke to the following screw/helical pile subcontractors for their initial advice and all confirmed that either hand-held machinery or at least far smaller excavators than the 21-tonne one proposed (such as a 1.5 tonne mini-digger), should in principle be able to install piles of a sufficient capacity:

- Target Fixings/Structural - https://targetfixings.co.uk/
- ABC Anchors - https://www.abcanchors.co.uk/
- Screw Piles Ltd - https://www.screwpilesltd.co.uk/

We therefore recommend that HPM consult these alternative piling specialists who will confirm our position.

Regarding trees T214 and T217, we note that "the intention is not to remove these trees unless necessary", which offers some reassurance. However, their fate will ultimately be decided by the Arborist once excavations locally have been carried out. In order to give the best chance of these two mature trees being retained, it is essential to come up with a retaining wall detail local to them that reduces the size of, or entirely removes, the toe of the retaining wall, as we proposed in outline principle in our previous letter.

We are living through a climate emergency, and the ecological and environmental benefits that mature trees and similar offer are clear and well documented. Trees offer shade to help reduce ground level temperatures, help absorb carbon dioxide and air-borne chemicals, help with attenuation of surface water flows, provide a vital habitat for wildlife including insects and birds, and offer other benefits to wellbeing to local residents and passers-by. This is especially so in an urban setting, such as at Chester Terrace. As such, it is incumbent those responsible for maintaining the built environment to preserve natural features like mature trees wherever reasonably possible. We therefore politely suggest that CEPC/HPM's current proposals are reconsidered and that a more sensitive approach is adopted where possible.

Yours sincerely,
for Price & Myers

Jamie Beeson, MA, MEng, CEng, MIStructE
Partner

PRICE & MYERS

Edward Hodgson
Senior Planning Officer
Camden Council Planning Department
Camden Town Hall Extension
Argyle Street
London
WC1H 8EQ

24th May 2024

Our Ref: 31530 - Chester Terrace Gardens, NW1 4ND
Camden Planning Ref: 2023/0282/P

Dear Mr Hodgson,

Chester Terrace Gardens - retaining wall repair and reconstruction proposals

I write on behalf of the Chester Terrace Residents Association (CTRA), who have asked Price & Myers to review the current proposals, submitted by the Crown Estates Paving Commission (CEPC), for the repair and reconstruction of the existing retaining walls and balustrade to the eastern side of Chester Terrace Gardens and give our expert opinion, as consulting structural engineers with over 45 years' experience of working in Central London, on the extent of proposed work generally and also the proposed construction methodology.

We have reviewed the relevant documents submitted on Camden's Planning portal (reference above) along with Hurst Peirce + Malcolm's (HPM) drawing reference 24509-1000 rev T1, dated 19th April 2024 and as sent via email to CTRA on 26th April. Furthermore, I visited site on 20th May and met Michael Webber and John Beighton of CTRA to walk the length of the wall both at pavement level and from within the gardens.

Our commentary is as follows and covers several aspects of the proposed work.

The HPM plan drawing 24509-1000 rev 1 that has recently been provided to CTRA by CEPC shows that only three of the seven sections of wall, namely "Walls 2 to 4" inclusive, are proposed to be entirely rebuilt, as noted by the statement "new piled retaining wall, new balustrade over". The other four sections of wall have the following works noted: "Existing balustrade and foundation works to have cosmetic remedial works". This is different to the documentation on the Planning portal, which suggest that the wall in its entirety will be rebuilt.

Consulting Engineers
37 Alfred Place
London WC1E 7DP

020 7631 5128
mail@pricemyers.com
www.pricemyers.com

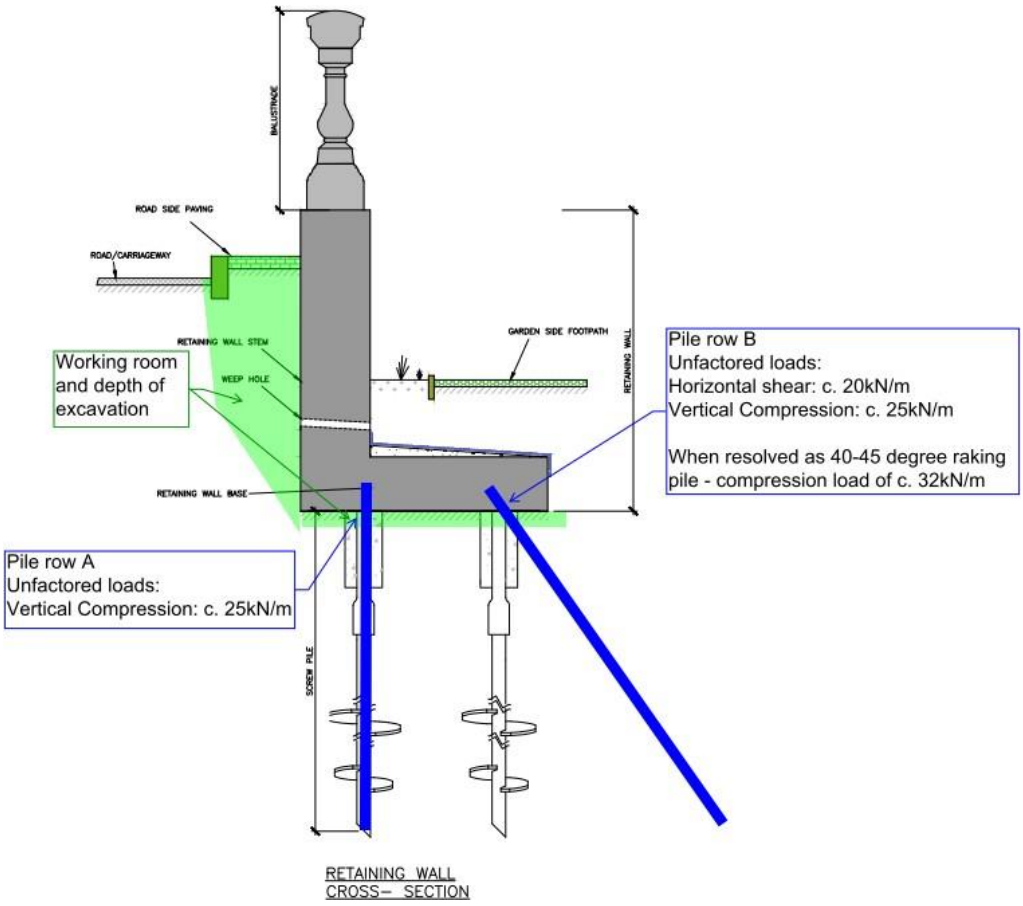
P&M

The nature of the "cosmetic remedial works" to the foundation (ie. retaining wall) and balustrade should be clarified for the avoidance of doubt. However, it appears that the wall and balustrade is generally in a reasonable state of repair for its age, and we assume that repairs to the balustrade will address general wear and tear and, for example, include localised repair of bottles and handrails where concrete has spalled off and exposed small areas reinforcement. It does not appear necessary or proportionate to replace larger sections of the balustrade. Furthermore, given that where the necessary repair works to wall and balustrade are only cosmetic in nature, it is not clear why "Heras" style fencing remains in place adjacent to it.

Given that HPM drawing 24509-1000 rev 1 is the far more recent document, it therefore more accurately reflects the current proposals. As such, we assume that no major items of plant of machinery will need to go near to the four sections of wall that are to have only cosmetic remedial works. Therefore, with the possible exception of some smaller or less mature elements of vegetation being removed for access, the existing flora, including all trees and mature bushes, in these areas can remain intact.

Where the three sections of wall are still noted as being replaced, we assume that the methodology shown in the HPM method statement and drawing 24509-201 rev P1 still applies, albeit for a reduced length of the wall. These sections of wall have come to the end of their useful life and will be replaced with a more robust form of construction, using more modern construction techniques. The balustrades that sit on top of these sections of retaining wall have suffered damage as a direct result of the historic movement of the wall and in any case need to be replaced because it is not practical to reconstruct the wall with the balustrade remaining in place.

Notably, the method statement suggests that a "21 tonne excavator" is required to install the steel screw piles that will support the new L-shaped reinforced concrete (RC) retaining wall. This would presumably necessitate the destruction of all the mature trees and shrubs in the vicinity. HPM's drawings do not note the required capacities for the piles, however our own calculations show that (all loads here are unfactored) vertical compression loads of around 25kN/m, to each of the two rows of piles, and horizontal shear loads of around 20kN/m, to the outer pile row, are needed to resist the applied forces. If the outer pile row is installed at a 40-45 degree rake from vertical, resolving the forces removes the shear load and it puts the pile essentially in pure compression (and so leaves a far more structurally efficient arrangement), with a load capacity of around 32kN/m required. This arrangement is as shown in the sketch below, with proposed pile rows shown in blue.

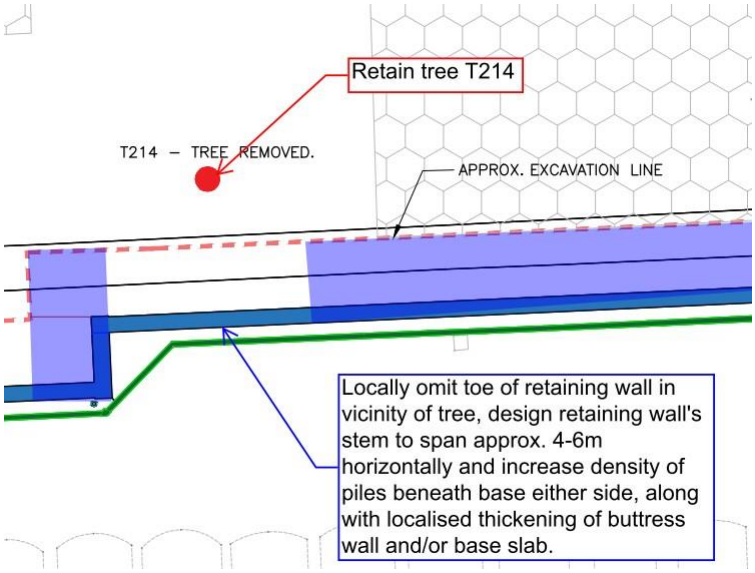


Proposed alternative piling arrangement, with approximate piles loads

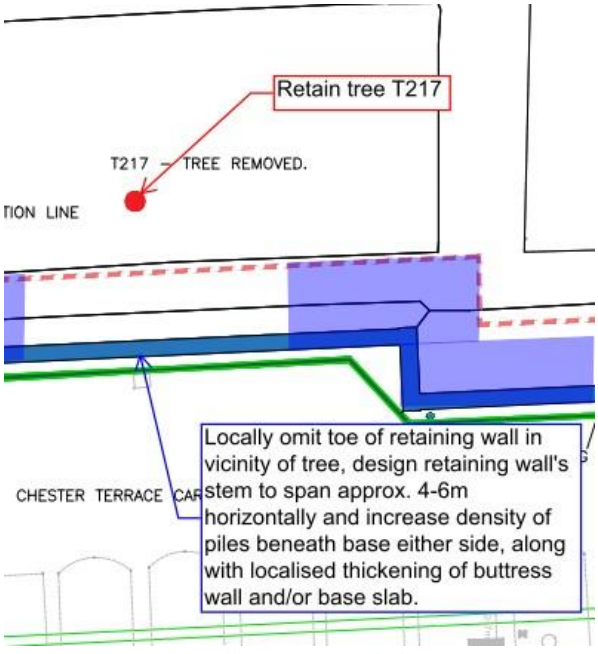
Given that screw piles can typically be installed at approximately 500mm centre spacing before adverse group action needs to be considered, it is certainly not unreasonable to assume that screw piles could be installed at 1m centre spacing along each row. This would result in piles needing to take unfactored compression loads in the order of 25-35kN. Having spoken to some screw pile specialists, including Target Fixings (website: https://targetfixings.co.uk/products/heli-pile/) it is clear that piles achieving such loads in the London Clay assumed to exist on the site can readily be installed using hand held equipment, for example a 63kg pneumatic driver, and at the 45 degree rake indicated in the sketch above given the available working room. Even if the piles needed to be installed using a 1.5 tonne mini-excavator to get the required torque to reach the necessary capacity, this would still likely be possible with minimal destruction of the local mature flora. The currently proposed use of a 21 tonne excavator to install the piles therefore seems needlessly excessive, destructive, and expensive, for such modest loads that are only, after all, generated from supporting what is a relatively low level retaining wall.

Whilst it is acknowledged that any flora immediately adjacent to where the sections of wall will be replaced will need to be removed, it does appear that an alternative structural arrangement could be pursued local to trees marked T214 and T217 and so not require their removal. Please refer to the two sketches below, which are mark ups of HPM drawing 24509-82 rev P1, showing

the basic principle. The sketches show the toe/base of the retaining wall locally being left out for a 4-6m length of wall in the vicinity of the trees, therefore meaning that the tree roots would remain relatively undisturbed. The new 450mm thick RC retaining wall stem appears to already be thick enough to span this distance horizontally, but it, or the buttressing wall and/or base at either end, could be increased in size if necessary. The density of piles beneath the toe of the retaining wall would also need to be increased at either end, but a detailed analysis of the arrangement and refinement of loads should prove it feasible.



Tree T214 - near Wall 2 - proposed alternative retaining wall arrangement



Tree T214 - near Wall 2 - proposed alternative retaining wall arrangement

P&M

In summary, it appears that a far less intrusive approach to the replacement of the three sections of retaining wall can be taken, that would result in the preservation of the vast majority of the existing trees and mature shrubs in the gardens.

Yours sincerely,
for Price & Myers

Jamie Beeson, MA, MEng, CEng, MIStructE
Partner

TZG PARTNERSHIP
ENGINEERING CONSULTANTS
TZG House 149 Oval Road
Croydon Surrey CR0 6BS
T: +44 (0)20 8681 2137
F: +44 (0)20 8667 1328
E: admin@tzgpartnership.com
W: www.tzgpartnership.com

Chester Terrace Residents Association

Review of various reports regarding

balustrade and retaining wall at

Chester Terrace

Contract: 7613

Brief

We have been instructed by Alice Forterre on behalf of Chester Terrace Residents Association (CTRA) to review various reports on the condition and repair of balustrade and retaining wall between Chester Terrace and the lower ornamental gardens.

Marek Glowinski

I am a chartered structural engineer. I graduated in 1980 and became a member of the Institute of Structural Engineers in 1986. I am a founding partner of TZG Partnership which was formed in 1988.

In the intervening years I have been involved in numerous projects to listed buildings in the London area. These include parapets, balustrades and masonry retaining walls similar in nature to Chester Terrace.

I confirm that, as instructed, I have not contacted any of the authors of the reports I have reviewed.

Background

Due to a number of visible defects, the Crown Estate Paving Commission (CEPC) commissioned a series of reports in order to understand the cause of the defects and to identify possible remedial measures. The conclusion of this process is that the wall and balustrade should be removed and replaced with a reinforced concrete retaining structure supported on piles. The cost of these proposed works is projected to be of the order of £2.7M and is reported as requiring the removal of a large number of mature trees.

Review

Due to the limited time available this review is necessarily brief. I have, however, visited and inspected the site and read reports prepared by:-

Hurst Pierce and Malcolm
Ramboll
BNP Paribas Real Estate
Alan Baxter Associates
Listers Geo
Tim Moya Associates.

The structural reports all uniformly identify various defects. However, there is a wide difference in conclusions for recommended remedial works.

The earliest report (BNP's one of 11.7.17) provides various options for works to the balustrade but does not identify any need for remedial works to the retaining wall. Alan Baxter Associates' review (22.7.21) has similar recommendations to BNP with regard the balustrade. It does also state that movement to the retaining wall is likely to continue and

probably adversely affect the balustrade. ABA do point out that the retaining wall "…*might be manageable within the ongoing maintenance cycle*" which could thus "…*avoid heavy and costly solutions*…". They go on to note that "…*we have found that similar structures have responded well to this approach in the past*."

HPM and Ramboll both identify the possibility of such a low intervention approach, but HPM appear to take the view that this 200 year old structure should be expected to conform to modern design standards.

HMP and Ramboll cite BS6180:2011 which provides guidance for barriers "…*in and around buildings*." BS6180 considers the requirements for barriers that prevent falls into lower areas. The code suggest that barriers should be provided when there is a drop of 380mm or more. I noted during my visit that the drop between the road over the majority of the wall is less than 380mm and for significant lengths, less than 150mm. It is only in the localised indented areas that the drop is of the order of 800mm: the wall is barely a retaining wall at all.

Both BNP and ABA appear to recognise that there is nothing inherently unsatisfactory with a wall that moves a little. From my inspection and my review of the photographs I consider that, considering the age of the wall, the amount of distortion is very slight indeed and not significant enough to warrant its wholesale replacement and removal of trees. Certainly, there are areas that could do with repair but not to the extent that necessitates a new completely rigid structure. Replacement, on the face of it, is not an approach that might be considered sustainable.

I would point out that when the wall was first constructed it is likely that the notion of a garden wall that didn't move would not have even existed.

HPM and Ramboll both consider keeping the wall as one of their various options. HPM appear not to favour this approach mainly due to the wall not complying with BS6180. I do not consider this requirement to be strictly applicable – certainly for the major part of the wall. Ramboll do not put forward a strict requirement for the existing wall to comply with BS6180 but do state that "*cosmetic repairs*" could "…*allow wall failure if left unchecked*". Considering that the wall, over the vast majority of its length, has deflected 40/50 millimetres in two hundred years it seems unlikely that wholesale failure is likely in the foreseeable future. Ramboll, in fact, recommend that a "…*targeted, tailored approach is adopted for the wall*." They state (correctly, in my opinion) that replacement would result in "*loss of authenticity of wall – not aligned with principles of conservation*".

Conclusion on the Recommendations

It would appear that BNP, ABA, HPM and Ramboll all consider (to varying degrees) that the existing wall could be kept. This is in keeping with the Institute of Structural Engineers Code of conduct, Guidance Note 7 that states: "…*members should consider the effects of their design and the impact of that design on the environment by considering the whole life cycle of the building through design, construction, use, re-use and demolition such that it reduces unnecessary consumption of resources and minimises waste*."

The final choice of the proposed scheme is at odds with the above statement.

Review of Final Proposed Scheme

On the basis that the retaining wall is to be replaced, I would concur that its design should conform to BS6180 and that foundations should extend down to the London Clay

stratum. In that case the concept of a piled reinforced concrete retaining would appear to be the best option. However, HPM's drawings and Method Statement show that numerous trees need to be removed (Tim Moya Associates' Arboricultural Report states: "*1.4 The Proposed Development requires the removal of 20 No. trees*…"). From this I take it that these trees could be retained should one of the other options be implemented.

HPM`s Method Statement shows a 21 Tonne Excavator being required to install the piles. For reference (see Image 1) which shows a typical 21 Tonne Excavator. I do not consider such a machine is necessary to install piles or excavate the foundation. Piles may be installed using much smaller machinery – some proprietary piling systems can be installed by hand (see Image 2). Using much smaller hand-installed systems would enable the piles to be installed around trees and their roots.

Marek Glowinski BSc CEng MIStructE FConsE

Fig 1 – Top (21 Tonne Excavator)

Fig 2 – Bottom (Grundomat piles installation)