



Town and Country Planning Act 1990

Application by the Secretary of State for Housing, Communities and Local Government

Proposed UK Holocaust Memorial and Learning Centre, Victoria Tower Gardens, Millbank, London SW1P 3YB

Supplemental proof of evidence

of

Mark Mackworth-Praed

in respect of arboriculture

on behalf of

Westminster City Council

Planning Inspectorate reference: APP/X5990/V/19/3240661

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1. Introduction

1.1 Scope of supplemental evidence

- 1.1.1 My name is Mark Mackworth-Praed, and I have previously produced a proof of evidence (CD8.39) in relation to the arboricultural issues in this Public Inquiry, on behalf of Westminster City Council ('WCC').
- 1.1.2 Shortly before, and following the submission of my proof of evidence, the Applicant has served on the City Council various documents which I have been asked to consider. To assist the inquiry, I have set out my response in this supplemental proof. I have confined this supplementary proof to documents which the applicant has confirmed, thus far, it will be relying on and which are before the inquiry. The City Council has asked for confirmation as to whether reliance will be placed on other documents which the Applicant has sent. No response has thus far been received. Plainly, if further documents are to be introduced formally I may need to respond to them.
- 1.1.3 I also set out relevant matters which I observed when, during a recent site visit to VTG on 22 September 2020, an excavation was in the process of being undertaken on Millbank. The evidence that I have prepared in this supplemental proof of evidence is true, and I confirm that the opinions expressed are my true and professional opinions.
- 1.1.4 In particular, this supplemental proof of evidence therefore presents the following:
 -) Updated information on recent inspections and tree management undertaken by the Royal Parks;
 -) Observations and evidence arising from a site visit on Tuesday the 22nd September 2020;
 -) Commentary on a draft arboricultural method statement ('AMS') prepared by Bartlett Consulting, dated the 1st September 2020, relating to the proposed relocation of the Spicer Memorial, and to the proposed resurfacing of the existing network of paths within Victoria Tower Gardens ('VTG'), and served on the City Council on the 2nd September 2020.

2. Recent management by the Royal Parks

2.1 Recent inspections and actions

- 2.1.1 In paragraph 1.7.3 of my main proof of evidence, I noted that a further inspection of the London Planes in VTG by the Royal Parks was scheduled to take place during the week beginning the 8th June 2010.
- 2.1.2 Based on an email from the Royal Parks' Arboricultural Manager to Barbara Milne of the 23rd September, I understand that an inspection of VTG (the second in 2020) was undertaken on the 11th June, and six trees were identified with branches infected with Massaria disease. A works order to remove the relevant branches was issued, and the works were subsequently completed.
- 2.1.3 I am informed that a third walkthrough inspection was undertaken on the 1st September, when 12 trees were identified with branches affected by Massaria. A works order for these was issued, but I understand that at the time of writing the works have not quite been completed.
- 2.1.4 In the same email, the Royal Parks' Arboricultural Manager states: "*TRP carries out at least three inspections a year across its London Plane population, these identify branches affected by Massaria which are then removed within three months if within our designated high occupancy areas which includes VTG.*"
- 2.1.5 This update clarifies that branches affected by Massaria are only removed when the presence of the disease is identified by visual inspection, and that instances of the condition have been identified, and dealt with, on the London Planes in VTG during the course of this year.

3. Site visit of 22nd September 2020.

3.1 Works within footway and carriageway of Millbank

- 3.1.1 At the date of my recent site visit, I saw that highway works were in progress within Millbank, just to the north of its junction with Great Peter Street. I understand that the works relate to the installation of security gates, as part of the Westminster Ceremonial Streetscape Project to create a ceremonial cordon for events around Westminster, an initiative driven by the Metropolitan Police Service and the Centre for the Protection of National Infrastructure. I also understand that the works are classed as permitted development. The presence of these ongoing works was notified to the Applicant for information, in an email from Barbara Milne to Donncha O'Shea on the 23rd September 2020.

3.1.2 As part of these works, I saw that a section of the pedestrian footway on the east side of Millbank had been taken up by the removal of the paving slabs over a distance of approximately 20-25m, from a point slightly north of the position of the trunk of tree 71009, up to a point close to tree 71007. The kerb edgings along the edge of the Millbank carriageway had also been removed. Within this section, towards the southern end, a rectangular excavation had been dug to a depth of approximately 800mm, of around 5m in length, and across the full width of the footway, exposing the face of a stonework foundation to the plinth supporting the metal railing boundary fence of VTG. Within this excavation, a fabricated steel base had been set, levelled on supporting low brick piers, and surmounted by reinforcing caging (*Photo 1*).



Photo 1. Works in footway of Millbank adjacent to VTG, general view.

3.1.3 Examination of the side of the excavation along the VTG boundary showed the construction of the stonework foundation extending to the full depth of the excavation, and projecting outwards from the line of the plinth and metal railing fence above (*Photo 2*). The sub-base beneath the removed paving slabs also extended to the full depth of the excavation, comprising compacted layers of stone, clay and cement rubble and hardcore. Despite the proximity of the excavation to the trunks of trees 71009 and 71008 (being roughly halfway between them), no roots were seen to be growing through the stonework foundation wall, and minimal root growth (two roots of c.3mm diameter) was seen within the compacted sub-base layers of the pavement in the southern face of the pit (*Photo 3*).



Photo 2. Excavation in Millbank footway, showing stonework foundation below VTG fence.



Photo 3. Excavation in Millbank footway, detail.

- 3.1.4 At the base of tree 71008, I saw one root had grown through into the area of the footway between the top of the stonework foundation wall and the above ground plinth, of approximately 50mm diameter at its point of emergence from the wall

and of around 1.5-2m in length, tapering to less than 25mm diameter at its severed end, and running northwards closely along the line of the capping course (*Photo 4*). This was the only root of any significant size I observed.



Photo 4. Single root from tree 71008 between plinth and stonework foundation.

- 3.1.5 *Photo 5*, taken from directly opposite tree 71008, shows bowing and uplift of the plinth and stonework foundation wall centred on the position of the tree's trunk, but no corresponding uplift of the carriageway of Millbank itself.



Photo 5. View showing uplift of plinth & foundation at base of tree 71008.

- 3.1.6 Two further excavations had been undertaken in the centre of the carriageway of Millbank itself, also to approximately 800mm. The southern pit was rectangular, estimated to be around 5m by 2.5m, with the northern pit being smaller and square, at around 2m by 2m (*Photo 6*). Similar steel foundation structures and reinforcement caging had been installed within them. Examination of the side faces of these pits reveals the sub-base of the roadway (the full depth of which had not been achieved by the excavations) to comprise a more homogeneous and densely compacted composition of layers of stone, concrete and other hardcore to the full depth of the excavations. I saw no root growth within these layers, nor projecting from the excavation edges into the pits, and no evidence of any severed root ends (*Photo 7*).



Photo 6. Excavations in Millbank carriageway, general view.



Photo 7. Excavation in Millbank carriageway, detail.

- 3.1.7 A further excavation had taken place within the footway on the opposite side of Millbank, approximately 3m northward of a street tree on the corner of Millbank and Great Peter Street. This also exhibited a composition and density of underlying

sub-base similar to that within the footway on the VTG side, with minimal root presence evident within 700mm of the footway surface.



Photo 8. Excavation on opposite Millbank footway from VTG

- 3.1.8 Only one broken root of around 20mm diameter was evident, to the left of the two pipes emerging from the brickwork inspection chamber in *Photo 8*. Several other service routes were also present in this excavation.
- 3.1.9 The foreman and operatives on site stated that other than those described above, they had encountered and severed no roots during the course of any of these excavations.
- 3.1.10 These observations of the depth and composition of the sub-bases of the footways, and in particular that of the carriageway of Millbank, confirm the hostility of these environments to the development of extensive networks of finer feeding roots, when compared with the open soft landscaped beds and lawn surfaces of VTG. In the case of the street trees planted on the opposite side of Millbank, it can be surmised that their roots are predominantly growing beneath the footways, for the reasons suggested in my earlier proof, and consistently with research findings.
- 3.1.11 However, there is no evidence to suggest either that root growth or density of the Planes in VTG which are present beneath the footway or, less likely, the carriageway of Millbank, would be sufficient to maintain their viability in the context of the sudden reduction of rootable soil volume within VTG, or other adverse consequences of the proposed development. Nor does the observed

rooting environment in the footways and carriageway of Millbank suggest conditions are favourable for current or future growth, or that root activity or density would be increasing in these conditions to the same extent as they would do in the more favourable rooting environment of VTG.

4. Comments on Bartlett Consulting's recent documents

4.1 Draft arboricultural method statement (AMS)

- 4.1.1 As noted in my main proof (at para. 2.8.8, page 29), on the 2nd September 2020 a draft arboricultural method statement (AMS) by Bartlett Consulting was provided by the applicant. Appendix 1 to this document comprises five Tree Protection Plans ('TPPs') (numbered 01 to 05).
- 4.1.2 The draft AMS covers the proposed relocation of the Spicer Memorial, and the proposed improvements to the existing footpath network. It does not address any other aspects of the proposed UKHMLC, nor its associated construction operations. The document is written from the hypothetical standpoint that planning permission has been granted for the UKHMLC, and that the AMS is to be submitted to discharge a pre-commencement condition attached to the planning permission.
- 4.1.3 The document sets out a series of measures relating to each of the two aspects of the proposed development which it covers, but acknowledges, at para. 5.3 under the heading "Sequence of Events", which presents a table of the relevant operations identified and discussed, that "*It is understood that once a project contractor has been appointed, a site-wide build programme and sequence of events will supersede – but be informed by – the below table*". This undermines confidence in whether the measures specified within the document, and the areas designated for differing types of protection on the accompanying tree protection plans, will in fact be capable of being implemented in practice, when considered in the context of the whole development project.
- 4.1.4 The timing of the two principal matters considered in the AMS is also somewhat unclear. Logically, it would seem that the dismantling of the Spicer Memorial from its existing location would be necessary at the outset of the project, in order to make way for the main construction of the UKHMLC itself. However, the timing of its reconstruction in its new location, in relation to other site operations, is not indicated, and it is not clear how this would relate to the operations required for the reconfiguration of the Horseferry Playground.
- 4.1.5 It is also not clear how the process of relocation of the Spicer Memorial would integrate with the excavation and provision of the main service route from the southern end of VTG to serve the HMLC, which is shown on the applicant's

submitted drawings (and reproduced on our tree impacts plans 01 and 02 at Appendix 3 to my main proof) to traverse both the existing and the proposed sites of the Spicer Memorial. This would presumably have implications for the question of whether the Memorial's existing foundations could be left in situ and undisturbed, which is advocated as the "*preferred option 1*" in para. 3.3.1 on page 13, and in AMS 4 on page 37 of the document; and also for the design and construction of the new foundation in the relocated position (described on page 13 and shown in cross-section in Figure 4, and further described on pages 39-40 in AMS 4).

- 4.1.6 Generally, the arrangement of the document, whereby the detailed operational provisions are separated into a series of separate method statements covering specific aspects, renders it hard to follow, and results in it containing some overlapping or conflicting provisions. One particular example, in relation to the proposed replacement of the footpath network with pathways constructed in more permeable surfacing, utilizing a cellular confinement system in order to minimize the need for excavations and allow percolation of moisture and air to underlying roots, is that the cross-section detail of the new proposed surfacing construction shown in Figure 5 on page 15 of the document specifies the use of Type 3 aggregate, topped with a layer of 6-10mm limestone aggregate. Type 3 is not a "no-fines" material, and thus would not normally be considered the appropriate material for use in conjunction with a cellular confinement system; and the cross-section detail doesn't show any indication of a cellular confinement material being used. This is in contrast to the specification set out in AMS 5 (pages 45-47), which specifies the use of Type 4/20mm clean angular stone to fill the cells of the cellular confinement material, which is more suitable (and is normally specified) for the purposes of this type of system. I note, however, that the depth of the cellular confinement system is not specified, which seems a curious omission, and no detail is shown as to how finished levels will relate to surrounding ground levels.
- 4.1.7 Another example of conflicting provisions in the document relates to the use of temporary ground protection in connection with the footpath replacement. At 5.4.2 on page 21, it is stated that "*There will be no requirement for additional ground protection measures as part of the removal and reinstatement of the footpath network itself*". It is stated that this is because the works can be undertaken either from the existing surfacing, or from the new cellular confinement system as it is laid, both of which are said to be sufficiently load-bearing to prevent further sub-soil compaction (although no evidence is provided to support this statement). However, at para. 3A of the text of AMS 5 on page 45, it is stated that ground protection will be required alongside the footpaths for the vehicle trailer and air-compressor, and this is shown on the accompanying TPP 03. It is stated that the ground protection can be "*leapfrogged*" as work progresses,

but it is not explained what this means, nor how it would be arranged or controlled in practice.

- 4.1.8 In respect of the provisions for the Spicer Memorial, at para 3.2.1 (page 11) the document states that details of the existing foundation “*are unknown*”, but information from trial pit TP103 in the Ground Engineering investigation report of August 2019 gives a description of its construction in brickwork and concrete down to 0.79m, although it possibly extends deeper (the trial pit was terminated at 0.8m). By contrast, para. 3.2.2 takes the findings of trial pit TP6 from the same investigation report, this trial pit having been dug adjacent to the Thames river wall, and appears to assume that all the footpaths within VTG are of the same underlying construction. This may not be the case, and it would seem necessary for further investigation to be done in other places on the existing footpath network, in order to assist in the design of the replacement surfacing and in the specification of how it should be installed.
- 4.1.9 At para. 5.2 on page 19 of the document, a specification for facilitation pruning is set out, detailing crown lifting to the trees either side of the proposed access points. Notably, this differs from the original proposed facilitation pruning works schedule set out in the Bartlett December 2018 AIA (CD6.5), in that it envisages the possible removal of primary branches “*only if necessary*”, which was not previously proposed, and also specifies two new trees for pruning (71022 and 71023), which were not previously included.
- 4.1.10 The tree protection plans accompanying the AMS also exhibit inconsistencies, and it is not consistently made clear (either in the text or on each drawing itself) to which phase or stage of operations each one relates. It is not clear, for example, to what stage of the works TPP 04 and 05 relate. These show the RPAs of trees along the east side of VTG entirely enclosed (apart from the footpaths) by protective barriers, but this appears to conflict with TPP 03, which allows for temporary ground protection alongside the footpaths on this side of VTG for the purposes of their replacement. Moreover, TPPs 04 and 05 show a storage area roughly centrally within the park, north of the path leading to the Buxton Memorial, entirely enclosed by protective fencing, so it is not clear what this would be used for, nor how it would be accessed. This, and the other storage area shown on the same drawings, are not labelled or identified as requiring any temporary ground protection around or beneath them, despite them being wholly within, or partially within, RPAs of trees on the west side of VTG.
- 4.1.11 On TPP 01, the area shown for ‘Type 2’ ground protection, i.e. for loadings of over 2 tonnes, is of inadequate extent to allow for the turning and manoeuvring space for heavy vehicles, the need for which is clearly recognized in the text relating to the Spicer Memorial relocation (specifically, flatbed lorries for the removal/transport of

the Portland stone blocks of the memorial, and a concrete mixer lorry for the pouring of the new foundations).

- 4.1.12 Generally, none of the TPPs show or denote the extents of the trees' RPAs, so it is not clear how these relate to the various protective arrangements shown. References in the text to "*designated routes*" for vehicle movements are not reflected on the TPPs to show where these would be.
- 4.1.13 Overall, therefore, I consider that the draft AMS does not set matters out in a satisfactorily clear and logical sequence to enable a construction manager on site to understand confidently what actions he would need to take at each successive stage of the operations it is intended to cover, or how these would integrate with other aspects of the UKHMLC scheme. To read the document requires continual back-referencing and cross-referencing between different sections, and general provisions (supervision arrangements, contingency procedures) are interspersed with specific provisions in a way that renders it rather confusing and unclear. For these reasons, I do not consider that it provides a satisfactory or acceptable level of assurance that damage to trees, arising from those aspects of the development which it covers, could not or would not occur.

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