

The Waterhouse, Millfield Lane, Highgate

Technical Note on Submitted Construction Management Plan

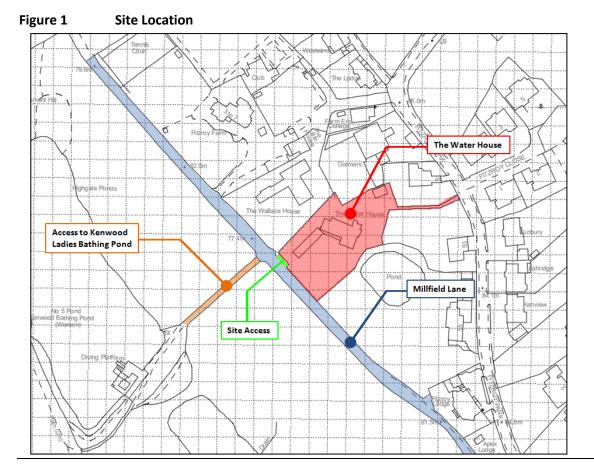
prepared on behalf of City of London Corporation

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Introduction

The purpose of this technical note is to provide an independent review of the revised Construction Management Plan (CMP), for the proposed residential development of a single dwelling at The Water House, Millfield Lane, Highgate. The location of the site is illustrated in Figure 1.

The revised CMP (Revision I, November 2014) has been subject to review and this note identifies the key points the CMP should still consider in light of the original review by Milestone Transport Planning (February 2015) prepared in reference to the originally submitted CMP (Revision H, March 2014). This Technical Note relates to issues that remain outstanding in the CMP (Revision I) and should be read in conjunction with the original Milestone Transport Planning review (Feb 2015).





Local Context

Millfield Lane comprises a narrow single lane two-way highway with no footways or street lighting. The Lane is bounded by private frontage to the northeast comprising boundary features and unmade, vegetated verge and an unmade, vegetated strip to the southwest making a boundary with Hampstead Heath which is in the ownership of the Heath / City of London.

The Lane varies in width through its length between the application site access and the junction with Fitzroy Park / Merton Lane (public highway) to the south east which is illustrated in the topographical survey included as Appendix 2 of the Feb 2015 CMP review by Milestone Transport Planning. The useable width of the Lane is between approximately 4m and 2.7 through its length to the application site which significantly conflicts with the details set out in Table 2 of the CMP (Revision I) which has assumes the use of the full width of the Lane between boundary features.

Millfield Lane exhibits a range of surface conditions but generally comprises a worn, unbound surface with a run of concrete through much of the length under which runs drainage infrastructure with a number of utility chamber covers present on the Lane. There is evidence of wear, rutting and ponding on the Lane with the surface appearing susceptible to degradation in respect to environmental conditions. A photographic inventory illustrating the general nature of the Lane and its surface condition is attached at plan 112/001 of the Feb 2015 CMP review.

Millfield Lane provides vehicle, pedestrian and cycle access to Wallace House, the Water House and No. 55 Fitzroy Park in addition to Kenwood Ladies Bath Pond. The Lane also provides pedestrian and cycle access to the wider Heath via a gated access which allows for emergency and maintenance vehicle access to the Heath as well as pedestrian and cycle access.

Evidence shows the Lane is locally used in respect of access to the properties named above and very well used for access to the Heath and associated facilities by pedestrian, cyclists and dog walkers. It is evident that the Lane experiences a high flow of pedestrian and cycle movement related to general access to the Heath and associated facilities and would exhibit particular seasonal peaks in use.

Millfield Lane is understood to be co-owned by local residents (to the centre line on their frontage) and the City of London Corporation (to the centre line on Hampstead Heath side). It is understood that the rights of access to the application site do not extend beyond the site's north-western boundary.

Structure of Millfield Lane

As detailed above and in the Milestone Transport Planning CMP Review (Feb 2015), the Lane has a very worn, unbound surface with notable areas of rutting, ponding and wear. However, it is noted that the CMP states a California Bearings Ratio (CBR) value for the Lane of 30%.

Given the observations of the Lane this CBR value appears very high and this was raised in the Feb 2015 CMP review. The Revision I CMP (November 2014) provides some supporting information in



respect to the CBR testing but it is considered that this is limited and may not be representative of conditions along the length of the Lane.

The provided CBR test identifies two co-located readings which appear to detail the value for the surface structure of the Lane adjacent to the site boundary. However, given the likely extent of laden HGV movements on the length of the un-made / worn Lane between the site and the public highway, further CBR tests at regular intervals should be undertaken to detail the condition of the highway at other representative locations including those where tree roots are likely to pass under the surface where the soil / carriageway substructure may be weaker.

Additionally, it is noted that the CBR values are only taken at the surface of the Lane and do not consider the sub-structure of the Lane which may be susceptible to longer term compaction given the likely extent of laden HGV movements associated with the proposals. It is this compaction which may be of concern in relation to surface / structural integrity, root compaction and water flow.

The Highway Authority should review the details of the CBR testing (methodology, number of test sites, test site locations and results) and confirm whether further tests / details should be provided by the applicant to demonstrate the integrity of the Lane and surface and substructure at regular intervals through its length from the site to the public highway.

The Revision I CMP (November 2014) does not consider the implications of surface / structure compaction on the adjacent trees (particularly the Veteran trees within the adjacent Heath) and also on the hydrology of the Lane in relation to water passage through the structure of the Lane and over the surface of the Lane (this would need to be in conjunction with Arboriculture and Hydrological advice). Consideration of any changes in surface water run-off should also consider the impact of any vehicle contamination resulting from vehicle / wheel-washing facilities within the site.

Construction Vehicle Movements

The revised CMP includes a construction programme which indicates the anticipated number of HGV movements over a 100 week construction period. Further clarity is required as to how these movements are classified in Table 3 of the CMP. It remains unclear whether the movements listed in the table are based on single one-way movements or on two-way movements. Clarification of this aspect has significant implications in respect to the impact on the normal operation and environment of the Lane.

Revision I of the CMP (November 2014) makes changes to reflect general Health and Safety requirements of construction vehicles at Chapter 3.2, an inclusion which is welcome but would not necessarily overcome the key health and safety concerns relating to the proposed HGV movements and their interaction with usual users of the Lane.

Clarification is still required in respect to HGV numbers given that Table 3 suggests a total of up to 900 HGV movements during the construction period yet if the peak daily movements were used as a guide the total number of HGV movements could be significantly higher than those suggested in Table 3.



Revision I of the CMP (November 2014) revises the anticipated scheduling and frequency of HGV movements at Chapter 3.2 stating HGV's will be scheduled so as to avoid more than one movement (assumed to comprise one arrival and one departure) in every 60 minute period. The previous CMP (Revision H) suggested one movement every 30 minutes. This is a welcome change however, in light of the change consideration should be given to the details in Table 3 relating to the HGV movements and anticipated daily peaks in HGV movement.

Chapter 3.3 states that construction vehicle movements will be scheduled between the hours of 0800 to 1400 and 1600 to 1800 - a period of 8 working hours. Table 3 identifies combined work phases of up to 24 weeks during which there may be a peak of 12 HGV movements (assumed to comprise 12 arrivals and 12 departures) per day. On this basis, does the construction programmed need revising to reflect the proposed limit of one HGV movement per 60 minute period.

No detail is provided in relation to the volume of crushed and excavated material required to be stored on or removed from the site. This still needs to be detailed together with identification of the areas on site to be set out for the storage of the material during construction. In addition, the volume of material to be removed from the site needs to be detailed in respect to related HGV movements and the periods over which these activities take place and the level of HGV activity along the Lane, particularly during more intensive periods of activity.

The figures in Table 3 still consider only the level of HGV movement associated with the site and do not include any associated ight goods vehicle or car trips (small delivery vehicles / trade vehicles / tradesmen for example) and therefore the level of traffic travelling to and from the site could be significantly greater than that set out in the CMP. This level of activity needs to be considered together with means for managing its impact on the usual users of the Lane. The application of Travel Planning measures / Draft Travel Plan and their monitoring / effectiveness referred to in the Revision I CMP (November 2014) should be reviewed and agreed with Highway Officers.

More detail needs to be provided in relation to the extent and frequency of light good vehicles travelling to and from the site and how / where they will be accommodated in respect to movement and parking. Consideration still needs to be given to the principles and practicalities of contractors not being able to bring trade vehicles to site as suggested in the CMP.

Detail should be provided to consider the extent of impact of construction vehicle movement on the safe movement of vulnerable Lane users (walkers, dog walkers and cyclists for example) and to include revised assessments of the width requirements for the safe and convenient movement of these users past HGV's and the actual useable width of the Lane.

Any such considerations should include an account of the likely extent of any interruption to the safe passage of users and how HGV movements could be managed so as to minimise any considerable interruption to usual users of the Lane and how safe passage can be provided.



Construction Vehicle Size

The CMP sets out the range of HGV's and construction vehicles which are anticipated to be required during construction which vary in size and relative manoeuvrability. However, within the Revision I CMP (November 2014) there is still only one vehicle considered through the CMP tracking plots in the form of a 8.7m length 4 wheel, two axle lorry.

While the CMP suggests this is the most onerous vehicle to be used on site, there is a need to consider the tracking requirements of other vehicles in order to demonstrate these can pass through the useable width of the lane and, crucially, turn into and out of the site as vehicles will have differing turning radii to the vehicle already tested. Given the constraints of the site access in relation to the width of the Lane, third party land and location of a telegraph pole / BT chamber opposite the site access, it is necessary to test a wider range of vehicles to demonstrate they can safely access the site within the sites right of access and wider constraints.

An assessment also needs to be made of the vertical impact of vehicle movements through the Lane in respect to the height of specific vehicles and the extent to which any overhanging vegetation and veteran tress along the Lane may need to be managed to provide safe access for any high sided vehicles and ownership of any vegetation which may require management.

Consideration needs to be given to the movement of laden vehicles and how this will impact on the lane's surface structure, particularly on bends where additional loading of the vehicle wheels on the surface takes place. The proposed volume and compound weight of HGV movement will need to be fully assessed in relation to the volumes of material and the physical impact of this movement.

Construction Vehicle Manoeuvrability

There remain significant concerns in relation to the horizontal requirements of the vehicles and the useable width of the Lane. The tracking plots contained within the CMP have assumed the use of the full width of the Lane from boundary feature to boundary feature with the vehicle running as close to the southern boundary as possible.

The CMP has assumed the use of the full width of the Lane between boundary features and does not appear to reflect the actual, useable width of the Lane which is significantly more constrained.

It is considered that in practice an HGV would manoeuvre with a greater buffer and would result in less refuge / passing space for pedestrians / cyclists on the northern part of the Lane than is suggested in the CMP particularly when considered within the actual usable width of the Lane. This raises significant health and safety implications for the users of the Lane and therefore further detail is required in relation to the safe access and use of construction vehicles on Millfield Lane together with the safe passage of typical users of the lane.

Demonstrating the safe and convenient passage of users of the Lane is critical given the high volume of pedestrians, cyclists and dog walkers using the Lane on a daily basis.



The submitted tracking plots of the CMP show that in several areas the tracking overruns areas beyond the useable width of the lane over rough ground or vegetated areas which, it is understood, are outside the control of the applicant to clear or amend the surface. It is likely that such overrunning would lead to impacts on the structure of the Lane and therefore the drawings should be reviewed in line with the extent of the Lane under which the applicants can demonstrate / agree a right to pass over / alter.

It is noted that no tracking plots have been submitted illustrating how HGV's would safely enter, turn and exit the site, this must be considered.

There are significant outstanding health and safety concerns which need to be addressed if an HGV could not safely enter the site, turn and exit in a forward gear and would potentially be required to reverse the length of the Lane. This must be addressed to the satisfaction of Highway Officers.

The CMP should include details regarding the layout of the construction site and relevant phases of construction to demonstrate the site can safely accommodate construction traffic accessing and turning within the site. This should demonstrate safe turning in addition to areas for the storage of materials, welfare facilities and any site excavation / scaffold / lifting equipment buffers and root protection areas of trees within the site.

Without the ability to turn construction vehicles within the site, this would require vehicles to travel beyond the north-western boundary of the Waterhouse Lane frontage and reverse out of the site onto the Lane and potentially reverse down the length of the Lane to the public highway.

Vehicles would not have right of access over this part of the Lane in addition to reversing out of the site raises significant safety concerns given the very high levels of pedestrian and cycle movement.



Summary

The submitted Construction Management Plan (Revision I, November 2014) should be further revised to address significant omissions and details regarding the following areas:

- Further details on the implication of vehicles passage on soil compaction and surface structure including considerations of root compaction on protected trees, hydrology and surface water run-off and associated vehicle cleaning / contamination of water.
- Further details and clarification regarding the level of construction vehicle movements in addition to the level of light-goods, trade and delivery vehicles and further consideration of requirements for trades-people to have access to tools / vehicles given the proposed Travel Planning measures.
- Further details and assessment of the volume of excavated and crushed material able to be stored on site and subsequent assessments of the level of material required to be removed from the site.
- Further details regarding the range of construction, delivery and lifting / excavating vehicles which would require access to the site, demonstration that these vehicles can safely access the site within the useable width of the lane and that these vehicles can safely operate within the site.
- Review the extent of these construction vehicles access through the Lane in reflection of the actual useable width of the Lane and whether safe passage / passing of other Lane users, particularly vulnerable users can be achieved within this area.
- Further assessment of the range of construction vehicle movement into and out of the site access in a forward gear and demonstrate safe turning within the site in relation to the constraints of the wider construction site layout and requirements.
- Demonstration that construction vehicles would not be required to reverse the length of Millfield Lane on exiting the site.

It is recommended that Planning Permission is not granted until the details set out above have been addressed to the satisfaction of both the Highway and Planning Authorities for reasons principally relating to highway safety implications for typical users of the Lane in reflection of the ability for HGV's to pass and re-pass without unduly impacting on pedestrian and cycle safety and the lack of information demonstrating the required construction vehicles can safely access, enter and exit the site in a forward gear and would not be required to reverse the length of Millfield Lane.