Construction Management Plan

pro forma v2.2

Camden

Contents

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
28.06.18	First issue.	Justin Willison (Kier Construction).
03.07.18	Rev A.	Justin Willison (Kier Construction). Air quality update.
25.10.18	Rev B.	Justin Willison (Kier Construction). Consultation update.
25.01.19	Rev C.	Justin Willison (Kier Construction). Post Camden review.
20.06.19	Rev D.	Justin Willison (Kier Construction). Post Camden review.

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Please note – the review process will be quicker if these are submitted as Word documents or searchable PDFs.

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Introduction

The purpose of the **Construction Management Plan (CMP)** is to help developers to minimise construction impacts, and relates to both on site activity and the transport arrangements for vehicles servicing the site.

It is intended to be a live document whereby different stages will be completed and submitted for application as the development progresses. Kier has confirmed against point 14 of Camden's further requests contained within Appendix S that this document will remain live and should the surrounding environment change following development implementation, or the agreed measures through trial are not working, then in conjunction with Camden, the developer will review and agree reasonable measures to maintain harmony throughout the project. This addresses point 14 of Camden's further requests contained within Appendix S.

The completed and signed CMP must address the way in which any impacts associated with the proposed works, and any **cumulative impacts of other nearby construction sites**, will be mitigated and managed. The level of detail required in a CMP will depend on the scale and kind of development. Further policy guidance is set out in Camden Planning Guidance **(CPG)** 6: Amenity and **(CPG)** 8: Planning Obligations.

This CMP follows the best practice guidelines as described in Transport for London's (TfL's Standard for Construction Logistics and Community Safety (**CLOCS**) scheme) and Camden's Minimum Requirements for Building Construction **(CMRBC)**.

The approved contents of this CMP must be complied with unless otherwise agreed with the Council in writing. The project manager shall work with the Council to review this CMP if problems arise in relation to the construction of the development. Any future revised plan must also be approved by the Council and complied with thereafter.

It should be noted that any agreed CMP does not prejudice or override the need to obtain any separate consents or approvals such as for road closures or hoarding licences.

If your scheme involves any demolition, you need to make an application to the Council's Building Control Service. Please complete the "**Demolition Notice.**"

Please complete the questions below with additional sheets, drawings and plans as required. The boxes will expand to accommodate the information provided, so please

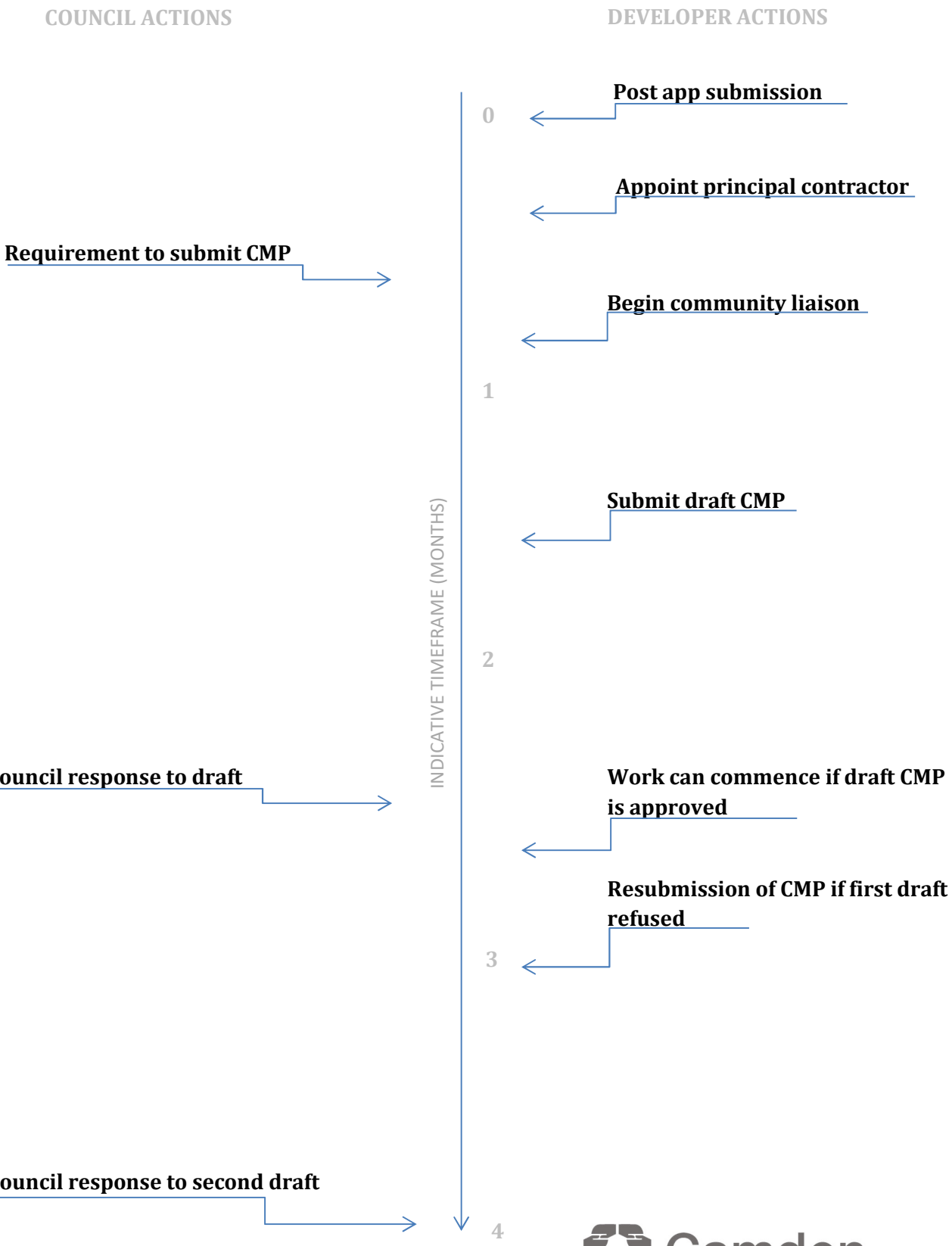
provide as much information as is necessary. **It is preferable if this document, and all additional documents, are completed electronically and submitted as Word files to allow comments to be easily documented. These should be clearly referenced/linked to from the CMP.**

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately **3 months from completion.**

(Note the term 'vehicles' used in this document refers to all vehicles associated with the implementation of the development, e.g. demolition, site clearance, delivery of plant & materials, construction, etc.)

Revisions to this document may take place periodically.

Timeframe


COUNCIL ACTIONS
DEVELOPER ACTIONS
Post app submission
0
Appoint principal contractor
Requirement to submit CMP
Begin community liaison
1
Submit draft CMP
INDICATIVE TIMEFRAME (MONTHS)
2
Council response to draft
Work can commence if draft CMP is approved
Resubmission of CMP if first draft refused
3
Council response to second draft
4

Contact

1. Please provide the full postal address of the site and the planning reference relating to the construction works.

Address:

London School of Hygiene and Tropical Medicine

15 – 17 Tavistock Place

London

WC1H 9SH

Planning reference number to which the CMP applies:

2017/5914/P

2. Please provide contact details for the person responsible for submitting the CMP.

Name:	Justin Willison
Address:	Kier Construction
	2 Langston Road
	Loughton
	Essex. IG10 3SD
Email:	justin.willison@kier.co.uk
Phone:	07767 310654

3. Please provide full contact details of the site project manager responsible for day-to-day management of the works and dealing with any complaints from local residents and businesses.

Name:	Justin Willison
Address:	Kier Construction
	2 Langston Road
	Loughton
	Essex. IG10 3SD
Email:	justin.willison@kier.co.uk
Phone:	07767 310654

4. Please provide full contact details of the person responsible for community liaison and dealing with any complaints from local residents and businesses if different from question 3. In the case of Community Investment Programme (CIP), please provide contact details of the Camden officer responsible.

Name:	Justin Willison
Address:	Kier Construction
	2 Langston Road
	Loughton
	Essex. IG10 3SD
Email:	justin.willison@kier.co.uk
Phone:	07767 310654

5. Please provide full contact details including the address where the main contractor accepts receipt of legal documents for the person responsible for the implementation of the CMP.

Name:	Justin Willison
Address:	Kier Construction
	2 Langston Road
	Loughton
	Essex. IG10 3SD
Email:	justin.willison@kier.co.uk
Phone:	0208 5085622

Site

6. Please provide a site location plan and a brief description of the site, surrounding area and development proposals for which the CMP applies.

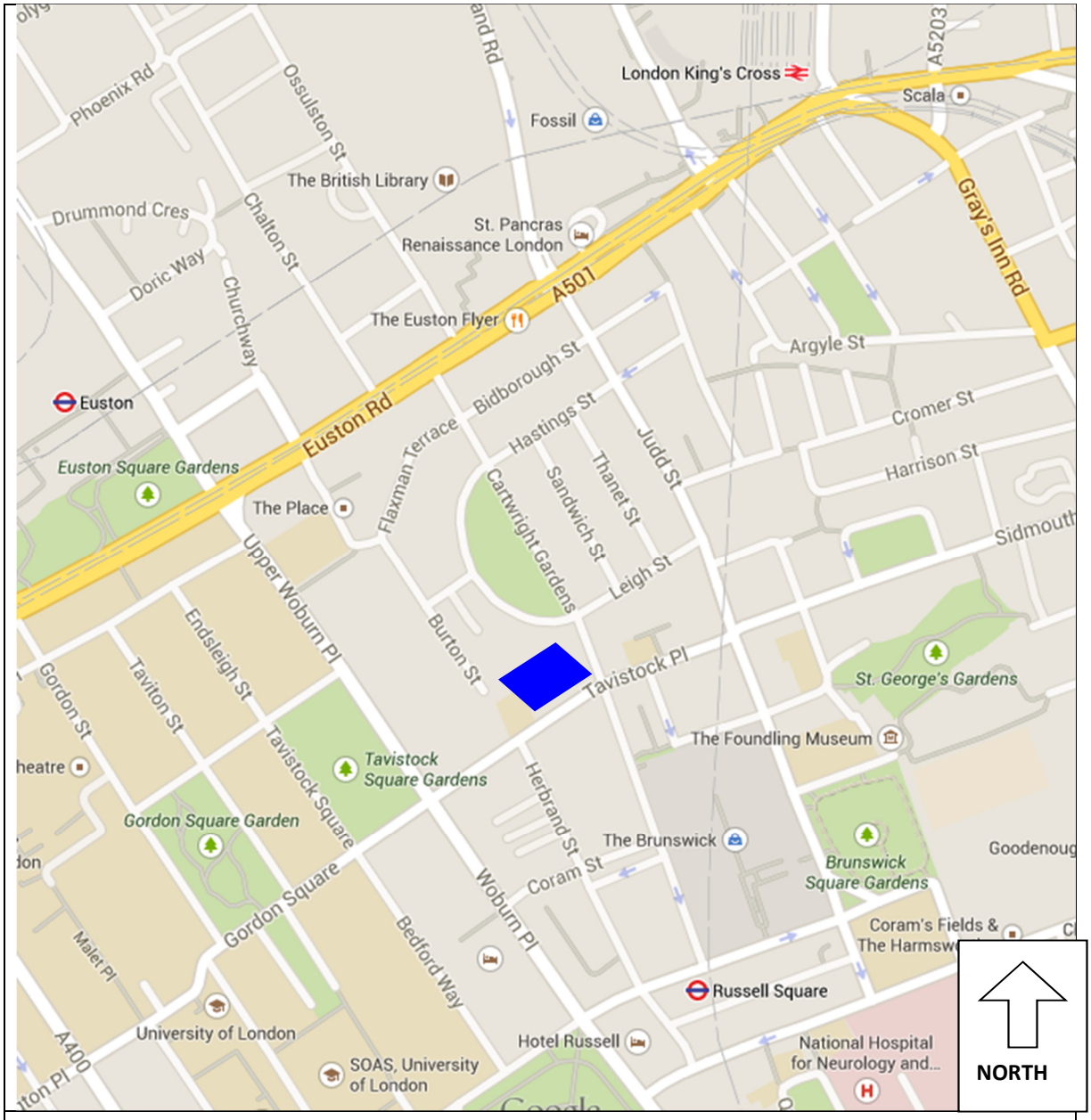


Figure 1 Location Plan

Location of Site

The site of the proposed development, known as 15 – 17 Tavistock Place, is located in the King's Cross Ward of the London Borough of Camden.

The subject site is located in the Bloomsbury area of Central London, within postcode area WC1. The location of the site is shown in Figure 1 above.

The site is located on the northern side of Tavistock Place, approximately 150m to the north east of Tavistock Square (the easterly side of which, Woburn Place, is designated as part of the A4200) and approximately 300m south of the Euston Road, A501.

With an area of some 0.303 hectares, the site is broadly rectangular in shape, with a single highway frontage, to Tavistock Place, which runs along its southern boundary. The main building on the site, having four-storeys plus basement, is located on this southerly boundary, for all practical purposes contiguous with the highway. The proposals envisage a development towards the rear of the site.

The existing main vehicular and pedestrian access to the site is from Tavistock Place. This is located towards the westerly end of the site frontage. Given the developed form of the site, the vehicular access passes through the principal building via a gated passageway that provides access to the internal courtyard. The main pedestrian entrance to the building is accessed from the covered passageway.

A short distance to the east of the site and separated from it by a largely retail frontage, is Marchmont Street, which runs in a generally north-south direction leading to the Euston Road to the north and to the B502 Bernard Street to the south.

Leading from the westerly side of Marchmont Street, South Crescent Mews passes through the developed frontage, to the side of the Lord John Russell public house. The cul-de-sac end of the mews provides a gated access to the School's Tavistock Place site.

Directly to the west of the site are two residential blocks and a Chinese Community Centre, catering for elderly needs. Across Tavistock Place from the site are hotels and residential staff accommodation and a large block of residential dwellings. Directly to the rear of the site are a number of housing association dwellings.

The main building dates from the early twentieth century and is laid out in a 'U' shape, with the main elevation to Tavistock Place and with two rear wings, one on each side boundary. Towards the rear boundary of the site is the former depot structure, now D1 use.

The site is within the Bloomsbury Conservation Area. The building itself is not listed.

7. Please provide a very brief description of the construction works including the size and nature of the development and details of the main issues and challenges (e.g. narrow streets, close proximity to residential dwellings etc).

The project involves the demolition of the structure located at the rear of the site including the portal shed which is part supported on steel columns and part supported off the perimeter walls. There are also some 2 storey out buildings that are central to the site foot print that are also to be demolished.

The scheme for which planning permission is now sought is of reduced scale compared with an earlier scheme approved in January 2017 and would comprise a single basement level of 492m2 (Gross Internal Floor Area), a ground floor level of 1,107m2 (with atrium void above), a first floor level of 970m2, a second floor level of 738m2, a third floor level of 300m2, and roof level provision for plant and equipment (140m2). The basement would accommodate a plant room, generator room, showers and lockers, whilst the ground and upper storeys would each accommodate dry laboratory, research and write-up spaces. Together, the extension would have a total area of 3,747m2, whilst the floors that would accommodate dry laboratory, research and write-up spaces would have a combined area of 3,115m2. The currently proposed extension, at 3,747m2 is almost a third smaller (31.5%) than the approved extension of 5,474 m2. Overall, including the retained School building, there would be a reduction of 17% in floor area relative to the approved scheme.

The project is in close proximity to residential properties on the west elevation with gardens and accessible roof terrace, hotels on the north side, commercial and residential properties on the east elevation and our Clients existing School building on the south elevation.

8. Please identify the nearest potential receptors (dwellings, business, etc.) likely to be affected by the activities on site (i.e. noise, vibration, dust, fumes, lighting etc.).

The surrounding area is characterised by residential accommodation, hotels, and commercial properties, the latter extending along Marchmont Street from Cartwright Gardens to the Brunswick Shopping Centre and Bernard Street. To the east of the School's building are the properties that front Marchmont Street, which are generally four storeys in height, with retail and commercial activity at ground floor level and residential accommodation above. To the west of the site is a part three, part six storey residential mansion block which is divided from the application site by an access way. The mansion block contains a number of habitable room windows on the flank elevation that face onto the School's building along with a private garden separating the two properties. Residential properties to 13 Tavistock Place also have windows that overlook the development. On the opposite side of Tavistock Place is a row of terrace properties of four storeys with basement accommodation. These buildings are predominantly in use as hotels. To the rear of the site there are residential properties, especially on Burton Street, and hotel accommodation on Cartwright Gardens.

9. Please provide a scaled plan detailing the local highway network layout in the vicinity of the site. This should include details of on-street parking bay locations, cycle lanes, footway extents and proposed site access locations.

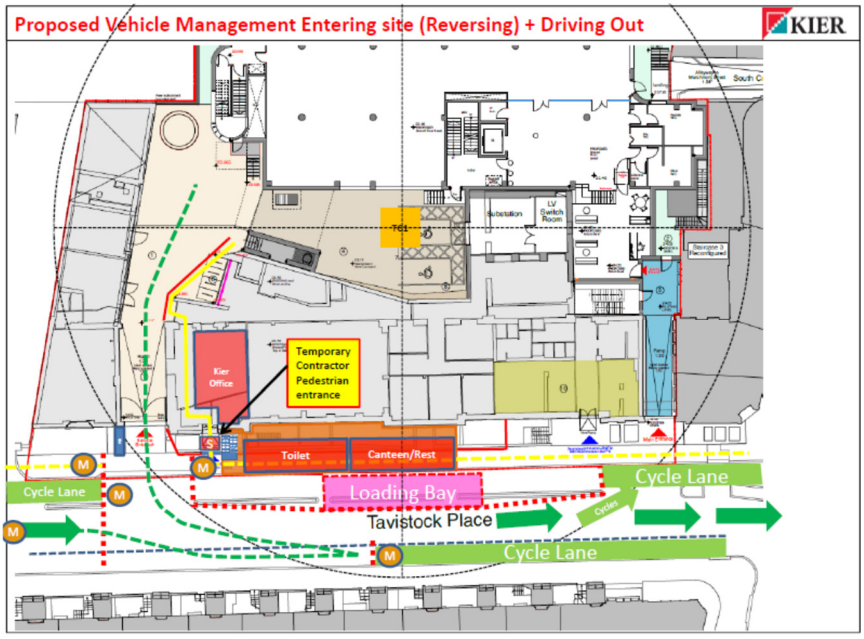


Figure 2 - Local highway to site.

The site is located off Tavistock Place with an existing vehicular entrance to the South Westerly side of site. It is proposed to lower the ground level within the existing passageway leading to the rear courtyard where the demolition and construction works are to take place to enable this to be used by construction vehicles during the demolition and construction works. This is shown by the tracked dotted green line on the location plan figure 2 above. Tavistock Place is a one-way road with a two-way cycle route either side with pavements on both sides of the road. A more detailed explanation as to how the traffic management will work and the measures to be put into place is covered in the Transport section of this CMP.

It is noted that there is a proposed change to the direction of flow of vehicular traffic on Tavistock Place changing the flow from east bound to west bound. This CMP is based on the direction of traffic flow as it currently stands (east bound), as it is understood that if the vehicular traffic flow on Tavistock Place is to be changed to west bound, then there would be other significant infrastructure changes needed elsewhere first to support this and as such the resultant routing of construction traffic from and back to the Tfl road network would need to be reviewed once the full extent of the change is established and posted to the public domain. Please refer to TTHC's additional information document in Appendix L.

10. Please provide the proposed start and end dates for each phase of construction as well as an overall programme timescale. (A Gantt chart with key tasks, durations and milestones would be ideal).

Please refer to Preliminary Summary Construction Programme appended to this document. (Appendix A)

	Duration (weeks)	Planned Start Date
Archaeology investigations	3 weeks	Complete
Site set up and establishment (incl. hoardings)	6 weeks	19.03.19
Enabling works incl. demolition	30 weeks	02.05.19
Works associated with existing UKPN Substation being relocated	30 weeks	19.03.19
Refurbishment works within existing building	46 weeks	19.03.19
Ground Works & Foundations (incl. piling)	29 weeks	04.12.19
Tower Crane Installation	2 days	13.03.19
Superstructure	17 weeks	25.06.20
External Envelope	30 weeks	20.08.20
Tower Crane Removal	2 days	18.02.21
Internal Fit Out and Finishes	39 weeks	06.08.20
External Landscaping	10 weeks	18.02.21
Commissioning and Handover	16 weeks	23.03.21
Final Completion	-	21.06.21

The anticipated vehicle movements for these planned works are identified in section 21a of this CMP document.

11. Please confirm the standard working hours for the site, noting that the standard working hours for construction sites in Camden are as follows:

- 8.00am to 6pm on Monday to Friday
- 8.00am to 1.00pm on Saturdays
- No working on Sundays or Public Holidays

Site working hours will be as above with work on Saturday only being used as a last resort in order to avoid disruption to adjacent commercial premises that would be caused if the work item was carried out during the week. No works will be planned to take place outside of these times however should something outside of our control occur (such as the break-down of plant, e.g. the tower crane or concrete pumps), requiring the site to work beyond the stipulated times, then we would speak to the local Environmental Health Officer in order to

get their guidance on how best to approach the out of hours working. To mitigate the risk of such occurrences, although the site hours as dictated by the Planning Consent allow working up to 18:00 hours, all works are planned to finish at 17:00, allowing an hour contingency period at the end of the day.

As a matter of course we always notify neighbours who will be directly affected or potentially inconvenienced by our works in order to minimise the impact we have on them and to ensure that they are fully informed at all times. These communications will be undertaken via our community email group.

It is anticipated that site resources levels will peak at 90 No. A resource levelling exercise has been carried out on the programme to demonstrate the resource levels throughout the construction period. This is contained within Appendix M.

12. Please indicate if any changes to services are proposed to be carried out that would be linked to the site during the works (i.e. connections to public utilities and/or statutory undertakers' plant). Larger developments may require new utility services. If so, a strategy and programme for coordinating the connection of services will be required. If new utility services are required, please confirm which utility companies have been contacted (e.g. Thames Water, National Grid, EDF Energy, BT etc.) You must explore options for the utility companies to share the same excavations and traffic management proposals. Please supply details of your discussions.

Initial discussions with Statutory Undertakers have been carried out to understand the requirement for new supplies as per the appended Utilities Tracker document. Similarly, full desktop Searches have been completed with reports also appended. (Appendix B).

Electrical, gas and water supplies are due to be brought into site via the existing vehicular entrance off Tavistock Place as outline in the text below per service. To ensure access for construction vehicles is maintained throughout the life of the development, service ducts will be laid to the site boundary beneath the proposed construction vehicle access ramp as part of the access ramp works. During the Utility connection period, localised excavation will be necessary within the public footway and vehicle cross over to the site boundary to pick up the ends of service ducts, but this will be for a limited period and site deliveries will be managed to avoid this short period.

Electrical

Our Client has already made payment to UKPN for the works associated with the new substation and HV supply. UKPN has provided the job reference of 8500066808 and has assigned a Field Engineer. The programme and strategy for these works has been provided to UKPN and they have confirmed that they do not see any issue with being able to deliver the new substation and supply to these time scales. The works included under this job reference are:

An existing UKPN substation exists within the site demise that is to be decommissioned, the location of which is identified on the site plan below in figure 3.

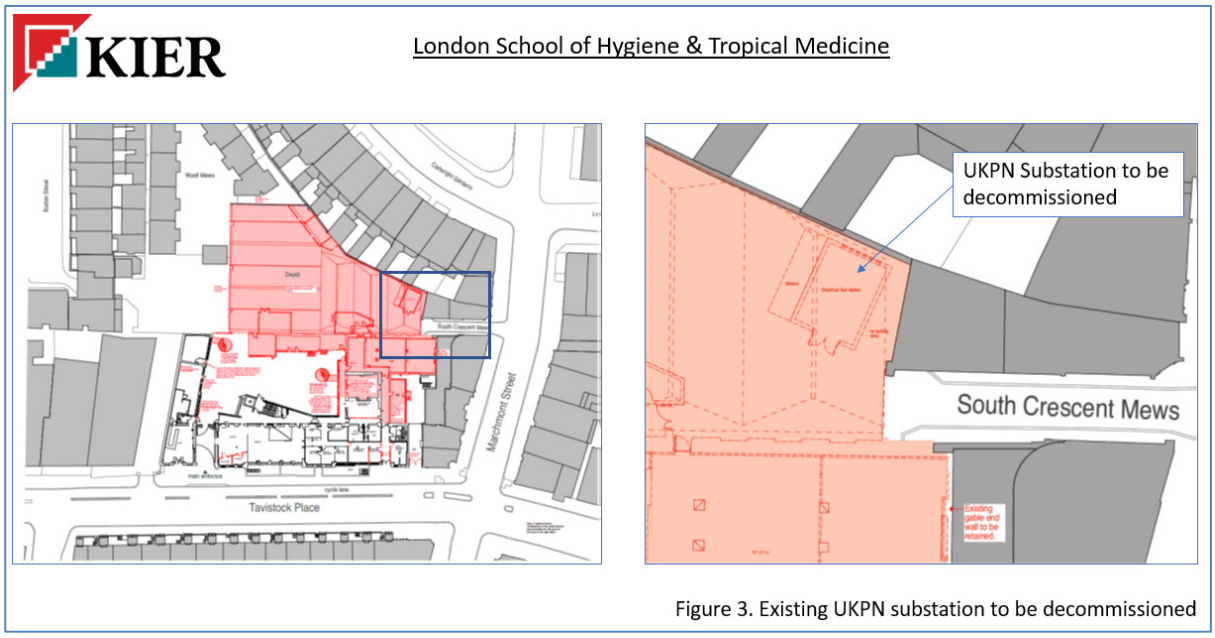


Figure 3. Existing UKPN substation to be decommissioned

Prior to this substation being decommissioned, a new substation is to be built within the existing School buildings as identified on the site plan below in figure 4.

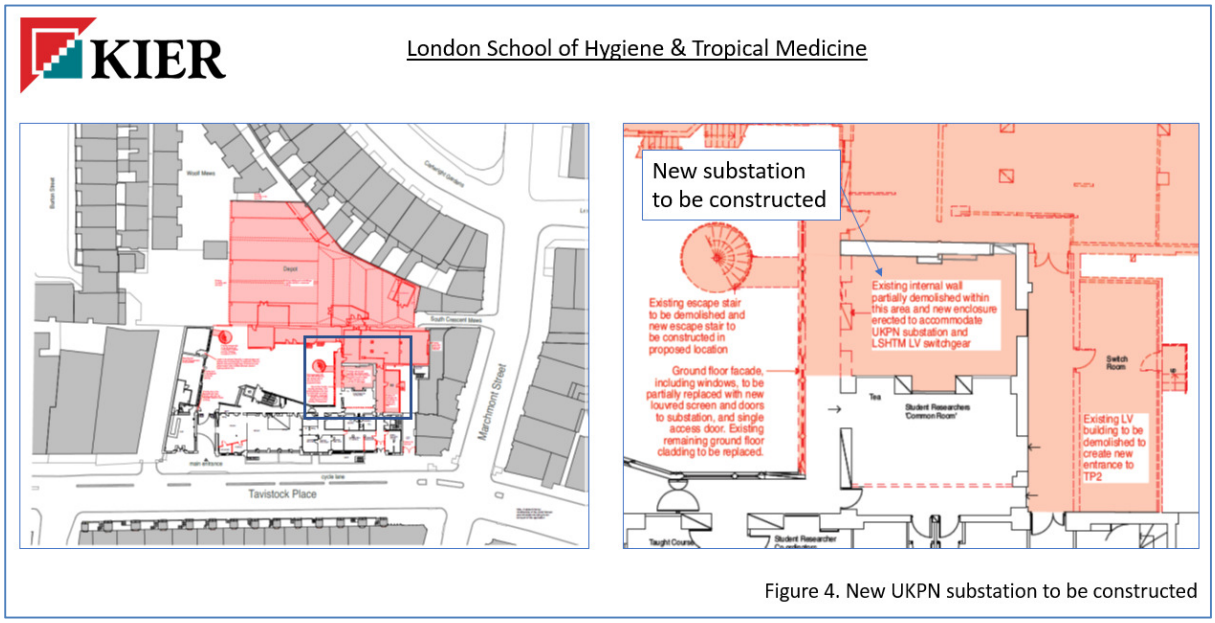


Figure 4. New UKPN substation to be constructed

The HV supply for the new substation will come from Tavistock Place via new service ducts laid within the development from the site boundary abutting Tavistock Place, via the new courtyard and up to the new substation. UKPN will locate the HV service within Tavistock Place and make the necessary connections. A UKPN asset plan of the relevant area is shown below in figure 5.

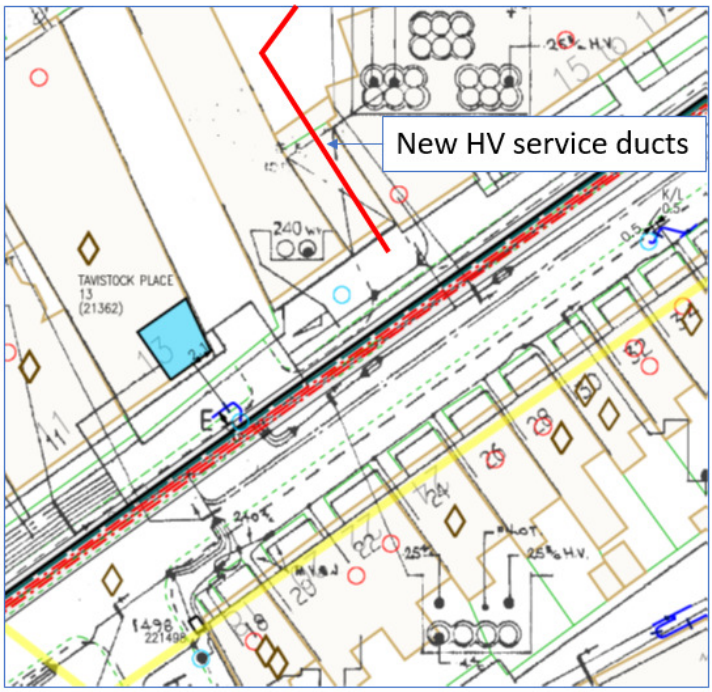


Figure 5. New HV service ducts

Gas

A new gas service maybe required. This service would come from the existing National Grid gas main on Tavistock Place (See figure 6 below). There is however an existing gas service serving the existing building. Initial investigations suggest that this service maybe big enough to serve the new development as well as the existing building. If this is the case then there will not be a requirement to bring in a new gas service. Contact with National Grid is to be made once the service size is established by the designers.

KIER

London School of Hygiene & Tropical Medicine

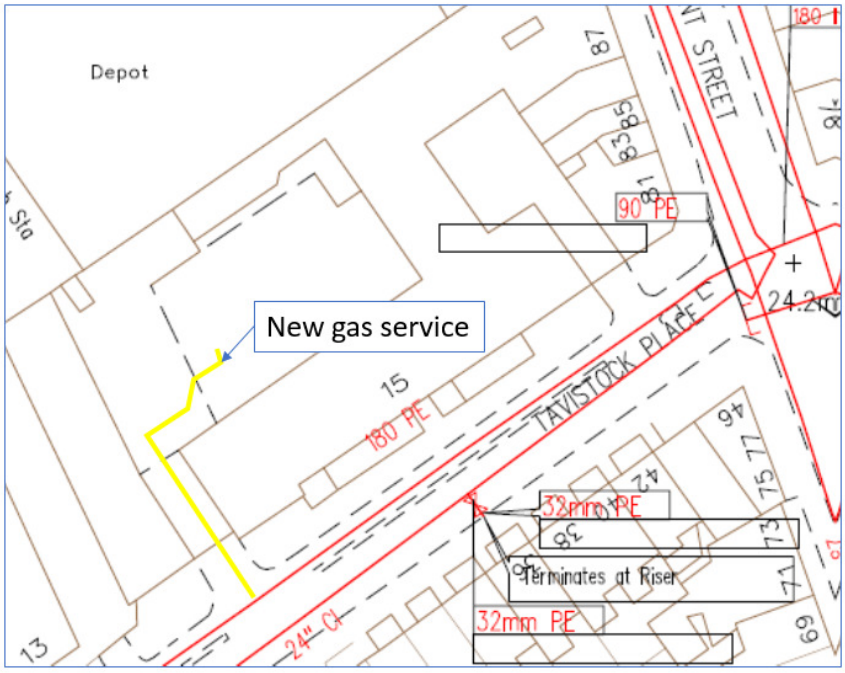


Figure 6. Gas asset plan

Water

A new water supply will be required. This service would come from the existing Thames Water main on Tavistock Place (See figure 7 below). Contact with Thames Water is to be made once the service size is established by the designers.

Camden

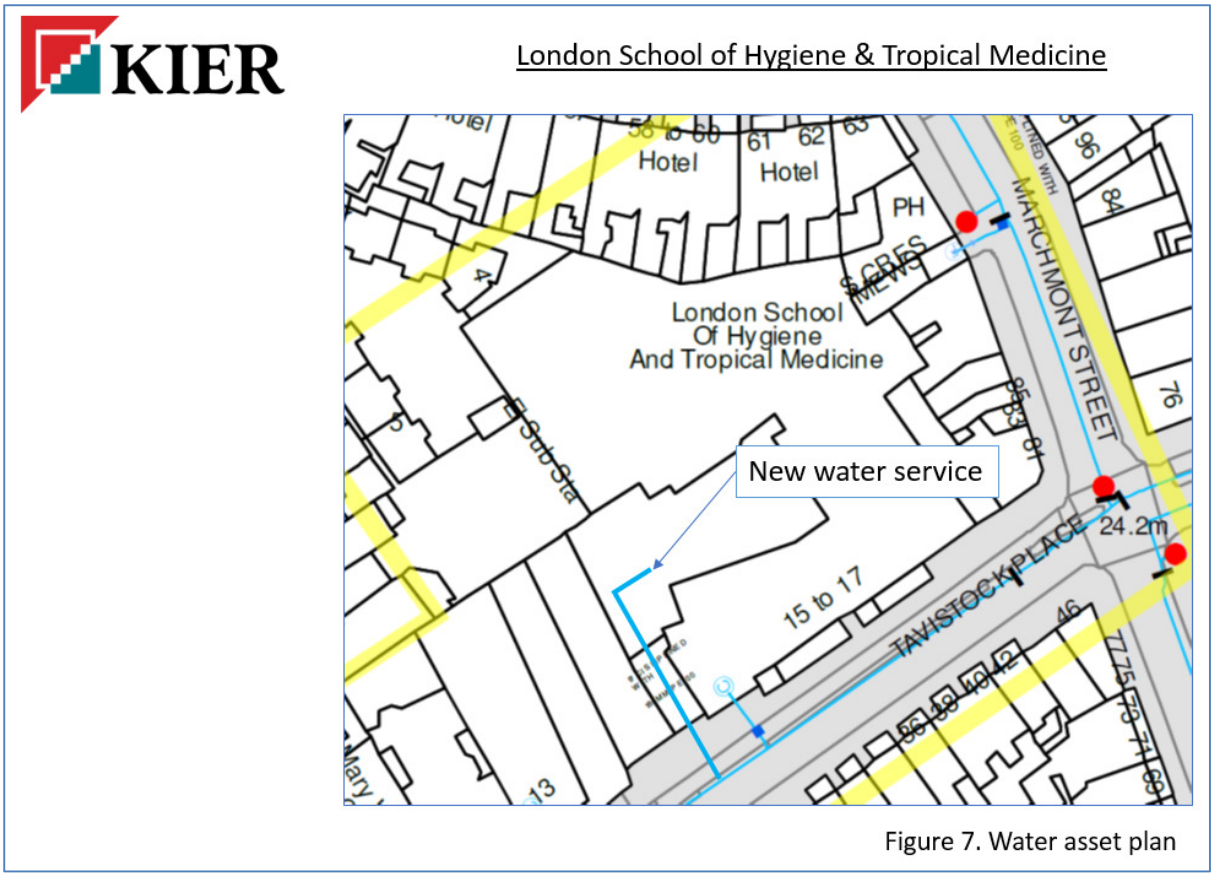


Figure 7. Water asset plan

Sewerage

The new development will require 3 connections to the existing Thames Water combined sewer running along Tavistock Place and Marchmont Street (See figure 8 below). Generally, the new connections will be made within the development boundary, although the one on South Crescent Mews is just outside the development boundary. South Crescent Mews is currently a gated dead end leading into the London School of Hygiene & Tropical Medicine's yard. It is shared usage by The London School of Hygiene (Client) and UKPN. Once the existing substation is decommissioned, an early part of this development, UKPN will no longer require access via South Crescent Mews, with access for their new substation being via the Tavistock Place entrance. This drainage connection would be made post decommissioning of the existing substation in order that UKPN have 24Seven access to their asset within the London School of Hygiene &Tropical Medicine yard.

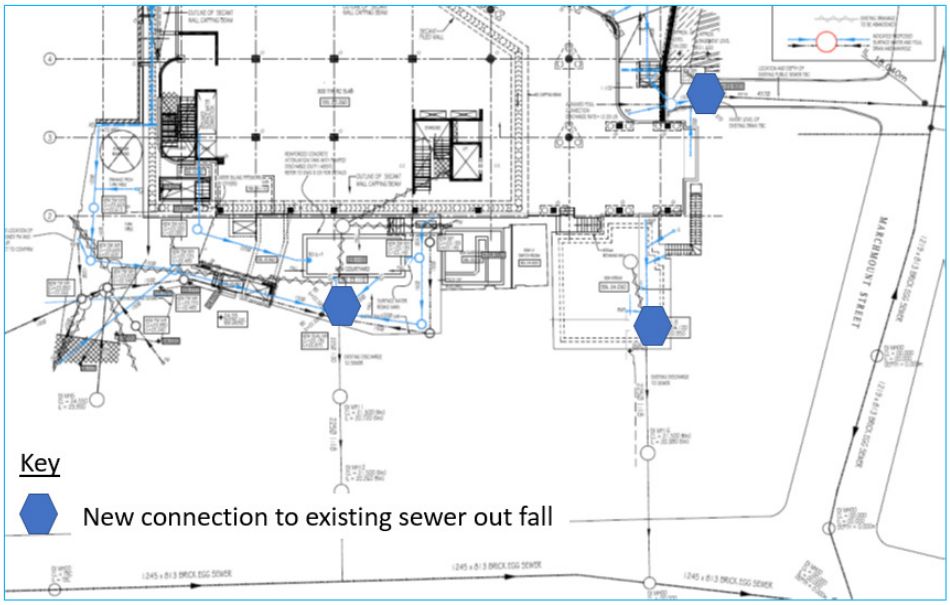


Figure 8. Sewer connection points

Community Liaison

A neighbourhood consultation process must have been undertaken prior to submission of the CMP first draft. This consultation must relate to construction impacts, and should take place following the granting of planning permission in the lead up to the submission of the CMP. A consultation process specifically relating to construction impacts must take place regardless of any prior consultations relating to planning matters. This consultation must include all of those individuals that stand to be affected by the proposed construction works. These individuals should be provided with a copy of the draft CMP, or a link to an online document. They should be given adequate time with which to respond to the draft CMP, and any subsequent amended drafts. Contact details which include a phone number and email address of the site manager should also be provided.

Significant time savings can be made by running an effective neighbourhood consultation process. This must be undertaken in the spirit of cooperation rather than one that is dictatorial and unsympathetic to the wellbeing of local residents and businesses.

These are most effective when initiated as early as possible and conducted in a manner that involves the local community. Involving locals in the discussion and decision making process helps with their understanding of what is being proposed in terms of the development process. **The consultation and discussion process should have already started, with the results incorporated into the CMP first draft submitted to the Council for discussion and sign off.** This communication should then be ongoing during the works, with neighbours and any community liaison groups being regularly updated with programmed works and any changes that may occur due to unforeseen circumstances through newsletters, emails and meetings.

Please note that for larger sites, details of a construction working group may be required as a separate S106 obligation. If this is necessary, it will be set out in the S106 Agreement as a separate requirement on the developer.

Cumulative impact

Sites located within high concentrations of construction activity that will attract large numbers of vehicle movements and/or generate significant sustained noise levels should consider establishing contact with other sites in the vicinity in order to manage these impacts.

The Council can advise on this if necessary.

13. Consultation

The Council expects meaningful consultation. For large sites, this may mean two or more meetings with local residents **prior to submission of the first draft CMP**.

Evidence of who was consulted, how the consultation was conducted and a summary of the comments received in response to the consultation should be included. Details of meetings including minutes, lists of attendees etc. should be appended.

In response to the comments received, the CMP should then be amended where appropriate and, where not appropriate, a reason given. The revised CMP should also include a list of all the comments received. Developers are advised to check proposed approaches to consultation with the Council before carrying them out. If your site is on the boundary between boroughs then we would recommend contacting the relevant neighbouring planning authority.

Please provide details of consultation of draft CMP with local residents, businesses, local groups (e.g. residents/tenants and business associations) and Ward Councillors.

A larger scale project on the site was given planning consent against planning reference 2015/3406/P. The scheme has now been scaled down significantly with a much smaller basement with internal space now only for dry laboratory offices and write up purposes. This scheme was consented against a Section 73 application with planning reference 2017/5914/P on the 27th June 2018. Consultation has taken place and a Community Liaison Group set up who will manage with the development team the live Construction Management Plan throughout the project. The original Community Liaison Group Terms of Reference initiated as a result of the original consultation with neighbours and community representatives is appended to this document along with the Statement of Community Involvement (Appendix C).

Following the consent against the Section 73 Planning application, further community consultation has taken place. The draft CMP with appendices was issued to the CLG on the 24th July 2018 (Refer to email within Appendix C). Due to this falling within the holiday period, the response period was extended to 27th August 2018 (Refer to email within Appendix C). Responses from the CLG were received and placed on the Consultation Schedule for ease of tracking all responses provided (See Consultation Schedule Final within Appendix C).

The first CLG meeting took place on the 5th September 2018 where matters raised and included on the Consultation Schedule were discussed (See minutes from CLG meeting 1 within Appendix C). It was agreed at this venture to take away actions requiring further review and response and to convene at a second CLG meeting.

A separate meeting was held with Deirdre Gribbin of 16 Tavistock Place on the 11th September 2018 to discuss in a more personal forum the potential impact on her disabled son during the construction period (See minutes from the meeting with Deirdre Gribbin within Appendix C)

A second CLG meeting took place on the 10th October 2018 to close out remaining matters following the 1st CLG meeting. The Consultation Schedule was up-dated and further particulars provided to the CLG ahead of this meeting. (See minutes from CLG meeting 2 within Appendix C)

A separate meeting was held with Diana Scarrott representing the Bloomsbury Residents Action Group (BRAG) on the 22nd January 2019 to talk through specifically the use of the tower crane. Matters covered included:

- The erection and dismantle of the tower crane.
- Zoning of the tower crane to ensure no over sail of adjacent properties.
- Lifting operations and lifting team including Appointed Person, Crane Operator, Crane Supervisor & Slinger / Signallers.
- Unloading from Tavistock Place.
- Preliminary programme and duration of crane erection and dismantle.

BRAG have confirmed that they do not see any issues with the use of a tower crane on the project. Please refer to Appendix C for confirmation dated 25.01.19.

A meeting took place on the 29th January 2019 to discuss the development with the London Taxi Driver Association (LTDA). Confirmation was received from Richard Massett of the LTDA as well as Toby North (Newington Communications) confirming that they had no issues with the proposed development at the site . Included in Appendix C.

A third CLG meeting took place on the 19th February 2019 as an update following a meeting with Camden Council. Minutes of this meeting are contained within Appendix C.

Kier and Engage Involve (LSHTM Community Liaison Consultant) attended a meeting with Lendlease following a lead provided by Debbie Radcliffe who represents BRAG on both our and Lendleases CLG's. Lendlease are the Principle Contractor of the Camden Town Hall development just off Judd Street. Minutes from this meeting are contained within Appendix C for reference. More details on the Camden Town Hall development can be seen within Section 16 of this CMP.

Engage Involve (LSHTM Community Liaison Consultant) has sought to make contact with the London Ambulance Service depot on Herbrand Street. To date the LAS depot on Herbrand Street has not made contact following our engagement with their press office who had passed on our enquiry to them. The email chain last dated 30th May 2019 is contained within Appendix C.

14. Construction Working Group

Please provide details of community liaison proposals including any Construction Working Group that will be set up, addressing the concerns of the community affected by the works, the way in which the contact details of the person responsible for community liaison will be advertised to the local community, and how the community will be updated on the upcoming works i.e. in the form of a newsletter/letter drop, or weekly drop in sessions for residents.

The London School of Hygiene & Tropical Medicine has appointed a Community Engagement Consultant 'Engage Involve'. As noted under point 13 above, a Community Liaison Group (CLG) has been set up. The membership of this group is as follows:

Organisation	Named representative	Deputies
London School of Hygiene & Tropical Medicine	John Starmer	Harry Brayshaw
Engage Involve[1]	Vicky Ratcliffe	n/a
Kier Construction Limited	Justin Willison	Chris Lilley
Camden Cyclists	John Chamberlain	John Hartley
London Living Streets	John Hartley	tbc
Tamar House RTM Co Ltd	Lou Stein	Deirdre Gribbin
13 Tavistock Place Limited	Paul Cockle	Roger Cline Luke Dodimead Kate Owen
Bloomsbury Residents Action Group (BRAG)	Diana Scarrott	Debbie Radcliffe Bob McIntyre
Gerald Eve[2]	Elizabeth Mellalieu	
The Marchmont Association	Ricci de Freitas	
Cartwright Gardens hotels	Philip Moore	
Resident - individual	Christopher Donovan	Mika Southall
The Lord John Russell Pub	Charles Scully	Dave Scully
Genesis Housing Association	Alex Hughes	Muhibar Rahman

[1] Community Engagement Contractor representing London School of Hygiene & Tropical Medicine
[2] Managing Agents for The Skinners Company – deed holders to Cartwright Gardens
Note, John Hartley will be leaving the group at the end of October 2018.

Kier Construction has joined the CLG as Principal Contractor and along with Victoria Ratcliffe of Engage Involve will engage with the CLG throughout the development.

Monthly meetings with the CLG will commence in advance of works starting on site which currently are forecast to start in August 2019 with the Advanced works subject to CMP approval.

The objective of these meetings would be to:

- Review the works carried out in the period and discuss any issues or concerns.
- Explain the forthcoming works, particularly any major deliveries, noisy or out-of-hours works, temporary road closures, access alterations etc.
- Discuss and agree any changes to the Construction Management Plan.
- We would also aim to provide site tours to the Group at appropriate stages of the construction works to help them understand how we are managing the works. In the past we have found this to be very effective in gaining their appreciation of the complexities of the works and logistics.

Outside of these monthly meetings the intention would be to form an open and effective working relationship whereby any of the stakeholders affected by the works feels comfortable to either come into the site offices or phone the site manager to discuss any immediate issues or concerns and resolve these immediately at local level. We have successfully implemented this culture on recent projects in densely populated residential and commercial environments.

We would also provide regular progress updates via information boards on the site hoardings, along with an email distribution list of all stakeholders who wish to receive information in this format.

Site contact details and out of hours emergency contact details will be prominently displayed on the site hoardings.

We will maintain a complaints register throughout the life of the project and comments / incidents added to the register are reviewed and discussed with the aim of closing out all complaints to the satisfaction of the individual concerned. The complements and complaints register will be available for review on site by the CLG.

In order to maintain a regular review of the CMP, and as per the appended CLG Terms of Reference (point 7 – "Liaison with the planning authority"), a schedule of complaints, issues raised and solutions sought and implemented will be maintained by the contractor and shared, along with minutes of meetings, with the relevant Council officers (James Renwick – Section 106 Manager, Allen Gillespie –

Planning Enforcement Officer (CMPs), Elizabeth Beaumont – Appeals and Enforcement Manager and Steve Cardno – Public Realm & Planning Team Manager). Officers will also be invited to meetings as and when agreed by the CLG membership.

15. Schemes

Please provide details of your 'Considerate Constructors Scheme' registration, and details of any other similar relevant schemes as appropriate. Contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

Kier Construction are a Partner of the Considerate Constructors Scheme and as such all our site are registered under the scheme. The development will be registered and audited by the Considerate Constructors Scheme under which Kier pride themselves on achieving high levels of compliance and best practice. Evidence of registration will be provided and subsequent audits will be made available to the Community Liaison Group and Local Authority.

Once Kier are appointed for the main works and works are due to commence, Kier will issue a news letter to local residents that will provide contact details for the Project Manager for the scheme. We also advise that as part of Kiers standard procedures, we have a complaints and complements procedure which runs in tandem with our obligations under the Considerate Constructors Scheme (CCS). We will also post CCS notices around the site hoarding with contact details for the CCS along with the Project Managers contact details.

16. Neighbouring sites

Please provide a plan of existing or anticipated construction sites in the local area and please state how your CMP takes into consideration and mitigates the cumulative impacts of construction in the vicinity of the site. The council can advise on this if necessary.

Refurbishment works of 19 – 29 Woburn Place are now complete.

A new site is proposed at the old Camden Town Hall on the corner of the Euston Road and Judd Street where the works involve the refurbishment of the existing building. These works are to be carried out by Lendlease who are currently in the process of getting their CMP approved with community engagement underway. Debbie Radcliffe of BRAG sits on the Community Liaison Group for both this and our site and put Lendlease in contact with us. As per Section 13 of this document an initial meeting between Kier and lendlease has taken place of which our Community Liaision Consultant Engage Involve attended. Engage Involve then also attended a Community Meeting with Lendlease. Discussions at this meeting were mainly focused on the delivery route in and away from site. Lendleases original plan was to come via the Euston Road, Woburn Place, Tavistock Place and then Judd Street. Since the Community Working Group, Lendlease have reviewed an alternative strategy to avoid Tavistock Place. This can be seen on the document 'Camden Town Hall – Slides 14.05.19 contained within Appendix C.

The development at 15 – 17 Tavistock Place will operate a strict one vehicle in, one vehicle out policy to avoid site vehicles waiting unnecessarily in Tavistock Place. An online delivery booking system will be used along with the advanced positioning of site Traffic Marshalls at the existing entrance to The London School of Hygiene & Tropical Medicine central courtyard to turn away any site delivery not pre-booked or that arrives at the incorrect time. Further detail as to how site traffic will be controlled and the role of the site Traffic Marshalls can be found in the Transport section of this CMP.

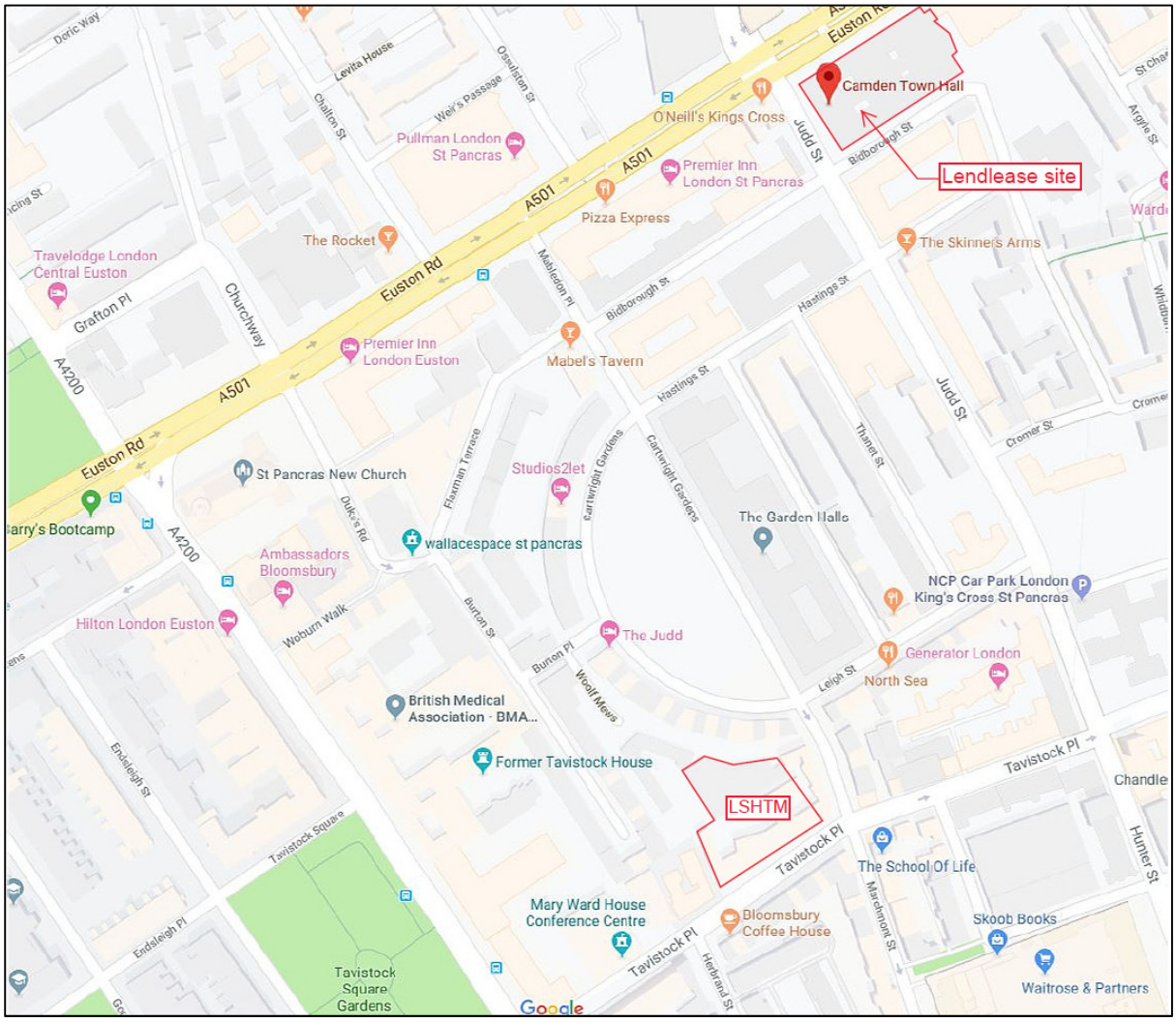


Figure 9. Location of development at Camden Town Hall in relation to LSHTM development.

Photo 1. Lendlease Development at old Camden Town Hall on the corner of Euston Road / Judd Street.

Transport

This section must be completed in conjunction with your principal contractor. If one is not yet assigned, please leave the relevant sections blank until such time when one has been appointed.

Camden is a CLOCS Champion, and is committed to maximising road safety for Vulnerable Road Users (VRUs) as well as minimising negative environmental impacts created by motorised road traffic. As such, all vehicles and their drivers servicing construction sites within the borough are bound by the conditions laid out in the CLOCS Standard.

This section requires details of the way in which you intend to manage traffic servicing your site, including your road safety obligations with regard to VRU safety. It is your responsibility to ensure that your principal contractor is fully compliant with the terms laid out in the CLOCS Standard. It is your principal contractor's responsibility to ensure that all contractors and sub-contractors attending site are compliant with the terms laid out in the CLOCS Standard.

Checks of the proposed measures will be carried out by the council to ensure compliance. Please refer to the CLOCS Standard when completing this section. Guidance material which details CLOCS requirements can be accessed here, details of the monitoring process are available here.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Please refer to the CLOCS Overview and Monitoring Overview documents referenced above which give a breakdown of requirements.

CLOCS Contractual Considerations

17. Name of Principal contractor:

Kier Construction Ltd.

18. Please submit the proposed method for checking operational, vehicle and driver compliance with the CLOCS Standard throughout the duration of the contract (please refer to our CLOCS Overview document and Q18 example response).

Ensuring compliance with the CLOCS Standard by the development, commences with the inclusion of specific clauses for compliance within the sub-contracts and inclusion of the following CLOCS Standards and Toolkits within enquiry documents and contracts sent to sub-contractors for pricing of the scheme:

CLOCS Standard for Construction Logistics: Managing Work Related Road Risk
CLOCS Toolkit: Managing Collision Reporting and Analysis
CLOCS Guide: Vehicle Safety Equipment
CLOCS Guide: Managing Driver Training and Licensing

In the first instance, we have used Kier Constructions established supply chain partners who are experienced in working to and meeting these requirements. Evidence of compliance (FORS accreditation, vehicle safety features & driver training) will be required prior to sub-contractor selection where the WRRR terms apply and will be made a mandatory deliverable on the sub-contractor or supplier in executing an order. The CLOCS supplier self-certification will be used for this purpose and will also equally apply to sub-suppliers. Kier will also make it incumbent upon any potential sub-contractor to register with CLOCS in order that they stay up to date with the latest information.

Once on site, Kier Construction will provide training to its Site Management and Traffic Marshalls as to how to undertake spot checks on vehicle compliance and driver competency, as well as report non-conformances. Utilising the Datascope online Delivery Management System (overview document appended in Appendix J), all deliveries will be pre-booked. The system is designed such that the insertion of FORS accreditation details for the specific company making the delivery is mandatory. Failure to provide this information will by default not permit the delivery to be booked on the system. Furthermore, this information is automatically made available on a tablet held by the Traffic Marshall situated at the site entrance on Tavistock Place where checks will be carried out at a frequency defined by the following risk-based analysis of potential deliveries that will service the site.

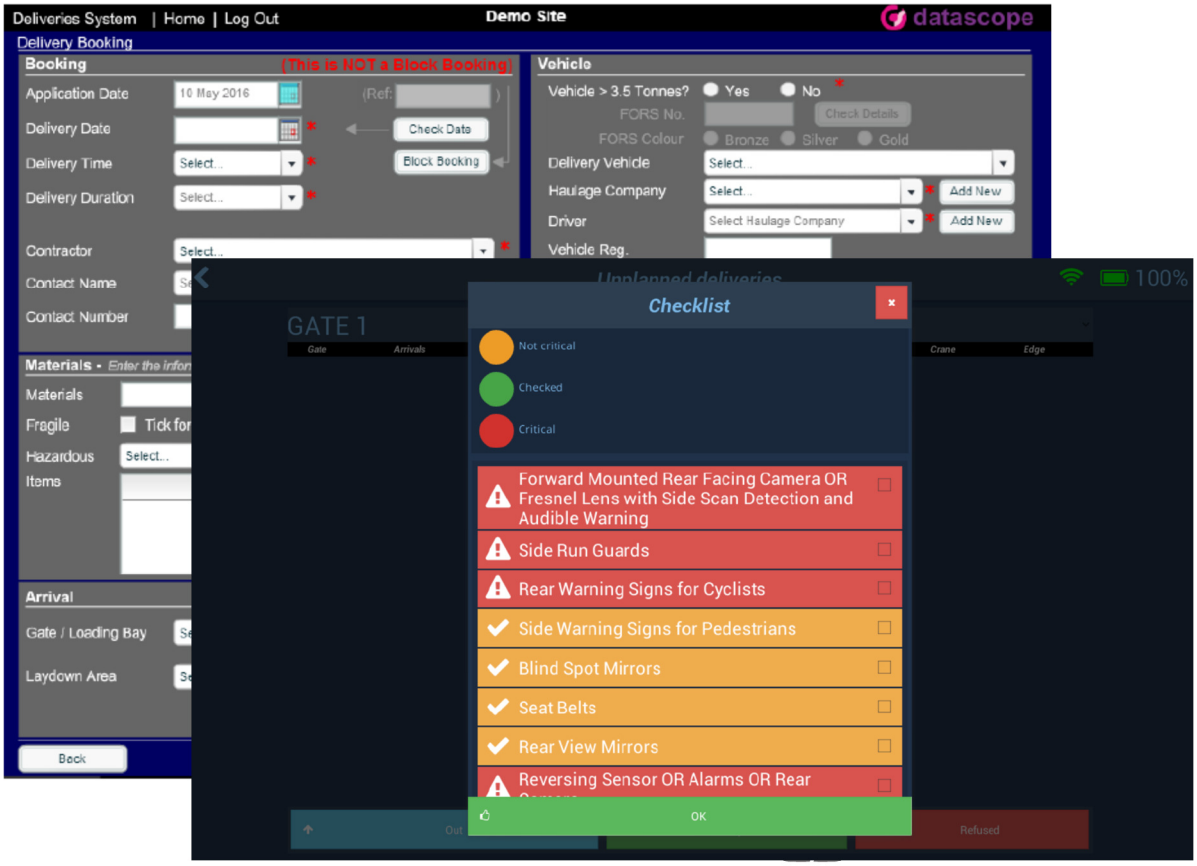
Criteria	Low (1 Point)	Medium (2 Points)	High (3 Points)
Vehicle Profile		Mixed (2)	
Distance of site from main arterial routes (A501)			Within 3 miles (3)
Supplier Profile	Known (1)		
Proximity to cycle routes			On a cycle route (3)
Incident rates related to the site	Low (1)		
Current Incident trends linked to type of movements to site		Some trend (2)	
Number of deliveries per 24hr cycle		6-15 (2)	

Overall total and Risk Level = 14 points = Medium Risk

As a result, Kier Construction will carry out the following level and frequency of checks:

Desktop compliance check: 3 months
On-site compliance check: 50%
Operator Depot Audit: 6 months

The screenshots below show what can be verified on the spot checks and a report is produced that will be used as evidence for compliance audits. The Datascope system enables complete customisation and Kier Construction will utilise the checklist set out by the standard CLOCS On-site Compliance Check and Non-conformance Report. A log of timings will also be maintained to measure the 2 minute in and 1 minute out of deliveries entering and exiting site. A dash board will be provided to Allen Gillespie on a bio weekly basis. This addresses point 3 and 4 raised by Camden and included within Appendix S.



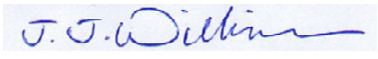
Kier Construction will adopt the same penalties and action levels as defined by the CLOCS Standard with escalation ultimately leading to suspension of works or termination of contract for serious repeat non-compliances. This escalation process is summarised below:

Trigger	Level of non-compliance	Action to be taken	Result
First non-conformance	Level 1	Kier to notify supplier / sub-contractor by issue of a non-conformance report. Close out to be received within five working days.	Satisfactory – Stop Unsatisfactory – Level 2
Second non-conformance Consistent failure to meet required requirement Safety Condition Infringements	Level 2	Kier to notify supplier / sub-contractor as per action level 1 but with copy to company director.	Satisfactory – Stop Unsatisfactory – Level 3
Third non-conformance	Level 3	Kier to notify supplier / sub-contractor as per action level 2. Sub-contractor / supplier to attend meeting with Kier to discuss on –going issues and develop improvement plan.	Satisfactory – Stop Unsatisfactory – Level 4
Forth non-conformance	Level 4	If further non-conformances are experienced, Kier will take formal contractual action (i.e. termination of contract).	Formal Contractual Action

19. Please confirm that you as the client/developer and your principal contractor have read and understood the CLOCS Standard and included it in your contracts. Please sign-up to join the CLOCS Community to receive up to date information on the standard by expressing an interest online.

I confirm that I have included the requirement to abide by the CLOCS Standard in my contracts to my contractors and suppliers:

Kier Construction Ltd are a CLOCS Champion.



Justin Willison

For & on behalf of Kier Construction Ltd.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Site Traffic

Sections below shown in blue directly reference the CLOCS Standard requirements. The CLOCS Standard should be read in conjunction with this section.

20. Traffic routing: ***"Clients shall ensure that a suitable, risk assessed vehicle route to the site is specified and that the route is communicated to all contractors and drivers. Clients shall make contractors and any other service suppliers aware that they are to use these routes at all times unless unavoidable diversions occur."*** **(P19, 3.4.5)**

Routes should be carefully considered and risk assessed, taking into account the need to avoid where possible any major cycle routes and trip generators such as schools, offices, public buildings, museums etc. Where appropriate, on routes that use high risk junctions (i.e. those that attract high volumes of cycling traffic) installing Trixi mirrors to aid driver visibility should be considered.

Consideration should also be given to weight restrictions, low bridges and cumulative impacts of construction (including neighbouring construction sites) on the public highway network. The route(s) to and from the site should be suitable for the size of vehicles that are to be used.

a. **Please indicate routes on a drawing or diagram showing the public highway network in the vicinity of the site including details of how vehicles will be routed to the Transport for London Road Network (TLRN) on approach and departure from the site.**

The location and suggested designated access routes are shown in Figures 10 & 11 below. They show vehicles routed to and from Euston Road, A501, part of the TfL Road Network. It is proposed that construction vehicles would access Upper Woburn Place A4200 and then turn left onto Tavistock Place to access the site. Leaving the site, vehicles would have to turn left, in accordance with the one-way system, proceeding via Tavistock Place to Judd Street, where they would turn left to follow Judd Street northwards to Euston Road. One constraint on a direct route to Euston Road for all vehicles, including construction vehicles, leaving the site, is that the Judd Street junction with Euston Road has been recently closed. With this in mind, vehicles wishing to turn right onto Euston Road will proceed via Bidborough Street and Mabledon Place and then turn right onto the Euston Road. This route is further explained in the TTHC additional information document dated January 2019 contained within appendix L.

An alternative route between Tavistock Place and Euston Road via Hunter Street and Guilford Street is available and again this route is demonstrated in more detail within the

TTHC Construction Vehicle Movement analysis document dated October 2018 contained within Appendix L. Although Kier Construction plan to use the Judd Street, Bidborough Street and Mabledon place route as first option, Kier Construction has also prepared a swept path analysis using the alternative route proposed by John Chamberlain and John Hartley. (See TTHC Construction Vehicle Movement Analysis Report in Appendix L). Kier Construction would like to discuss further with Camden Highways the proposed route and agree the most suited route for construction vehicles.

Kier Construction has engaged a Traffic Consultant TTHC to prepare a vehicle movement analysis report which shows the number of construction vehicles throughout the construction period. (See TTHC Construction Vehicle Movement Analysis Report in Appendix L).

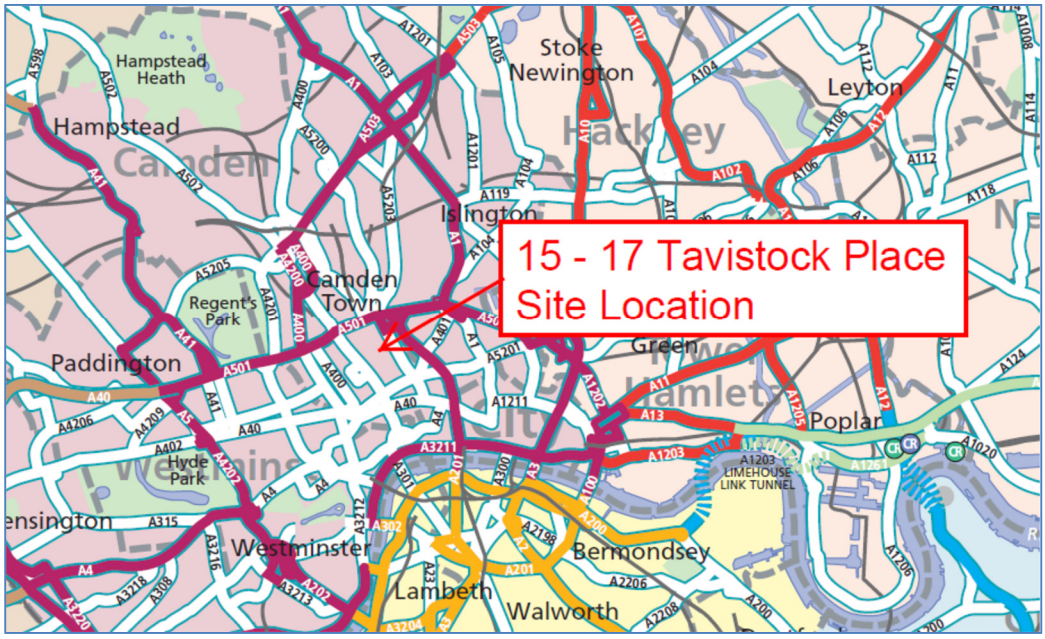


Figure 10. Site location in relation to TfL Road Network.

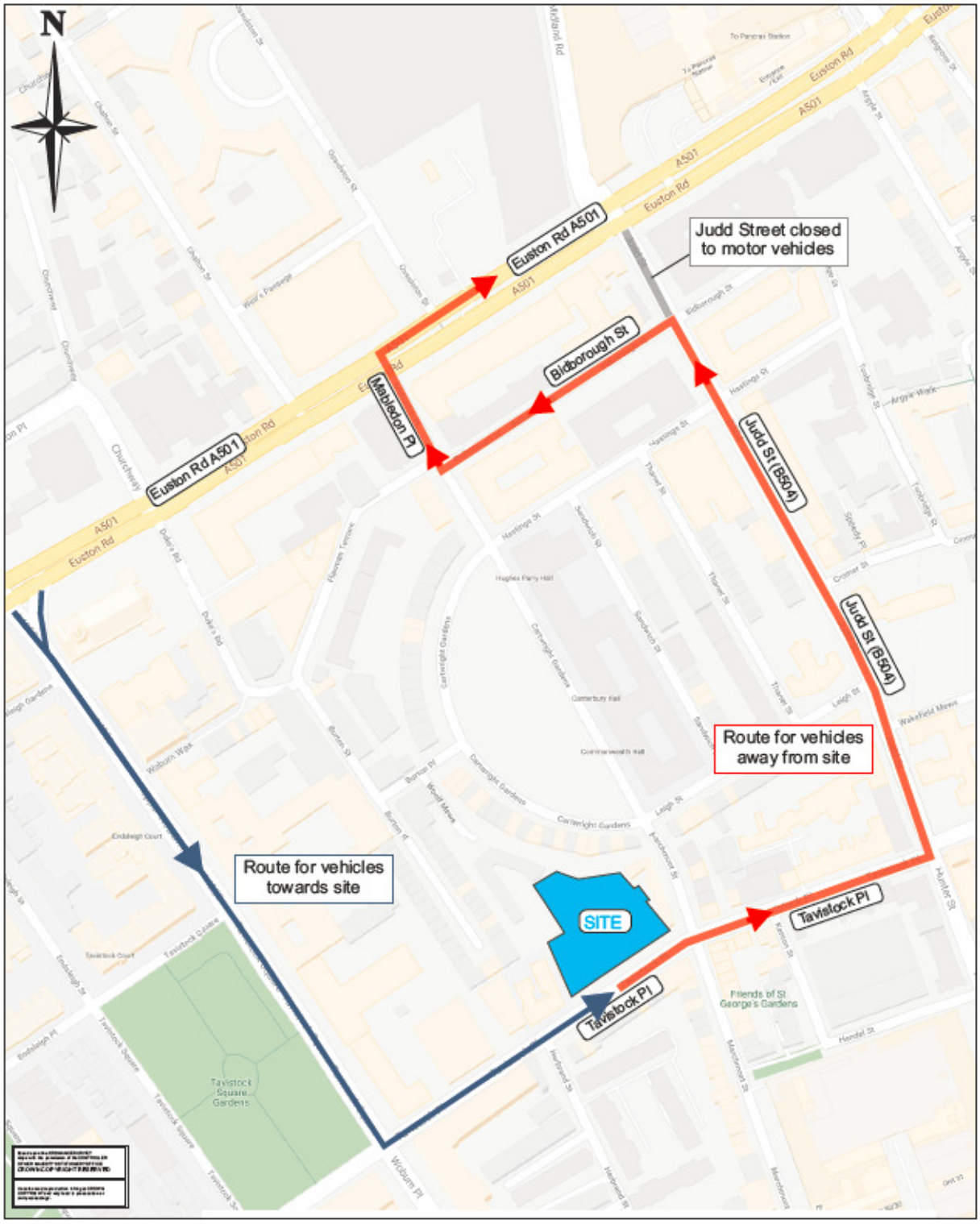


Figure 11. Route of construction traffic from TfL Road Network to site.

b. Please confirm how contractors, delivery companies and visitors will be made aware of the route (to and from the site) and of any on-site restrictions, prior to undertaking journeys.

All sub-contractors and suppliers will be issued with a copy of the Kier Construction Management plan prior to placement of orders by Kier Procurement Department. Where necessary, regular suppliers to the site will be invited to visit prior to any works commencing so that they can see at first hand the restrictions that are present. Compliance with the site online delivery pre-booking system will be made a condition of every order placed with non-compliance being penalised appropriately. In addition, the site delivery information including route maps and restrictions will be available on the online delivery booking website.

With regard to visitors and operatives alike, it will be made clear that there is no provision for on-site car parking and the use of local public transport will be recommended. Sub-contractors will be scored positively in monthly performance reviews for their level of public transport usage.

On site compliance will be reviewed on a weekly basis during site progress meetings to ensure that once again, the message is reinforced.

The loading bay in Herbrand Street will not be used by Construction traffic. Kier will include this in our site induction to restrict parking. Generally most contractors have initial delivery of tools and equipment to site and will unload using the on site provisions. After tools and equipment have been delivered most will use public transport.

21. Control of site traffic, particularly at peak hours: "*Clients shall consider other options to plan and control vehicles and reduce peak hour deliveries*" (P20, 3.4.6)

Construction vehicle movements are generally acceptable between 9.30am to 4.30pm on weekdays and between 8.00am and 1.00pm on Saturdays). If there is a school in the vicinity of the site or on the proposed access and/or egress routes, then deliveries must be restricted to between 9.30am and 3pm on weekdays during term time. (Refer to the *Guide for Contractors Working in Camden*).

A delivery plan should ensure that deliveries arrive at the correct part of site at the correct time. Instructions explaining such a plan should be sent to all suppliers and contractors. Consideration should be given to the location of any necessary holding areas for large sites with high volumes of traffic. Vehicles must not wait or circulate on the public highway. Whilst deliveries should be given set times to arrive, dwell and depart, no undue time pressures should be placed upon the driver at any time.

a. Please provide details of the typical sizes of all vehicles and the approximate frequency and times of day when they will need access to the site, for each phase of construction. You should estimate the average daily number of vehicles during each major phase of the

work, including their dwell time at the site. High numbers of vehicles per day and/or long dwell times may require vehicle holding procedures.

It is anticipated that construction vehicles that would access the site during construction would include concrete lorries, 9.150m long and 3.755m high and tipper lorries, 9.155m in length and 3.875m high. Swept path analysis of these vehicles has been carried out and the resultant drawings are available in Appendix D. Additionally, a small number of abnormal loads for plant deliveries would be anticipated in respect of which the timing and any special traffic management measures would be agreed in advance with the local authority.

A loading / unloading bay is also planned on Tavistock Place outside 15 – 17 Tavistock Place. The purpose of this loading bay is to unload / load materials from delivery vehicles utilising the tower crane to lift bulkier components from Street to place of installation on site. Whilst the tower crane is in place, the loading bay will be used every day Monday to Friday between 9:30am and 16:30pm to avoid peak periods of the cycle lane usage. A live analysis has been carried out on the use of the cycle lanes in both east and west bound directions and is available in Appendix K.

Further to a request by Camden Kier have confirmed that deliveries will be avoided during the lunch time foot fall peak between the hours of 12:00 and 14:00. Concrete wagons will be exempt from this. It has been agreed that should it be demonstrated that the foot fall increase during these hours is minimal, that Kier can approach Camden to rescind this agreement with mutual agreement with Camden. This point is covered by point 2 of Camden's further request contained within Appendix S.

Works Package	Anticipated Vehicle type / size	Anticipated dwell time	Average daily number	Unloaded from TP Y/N
Site Waste Removal				
Waste Removal from site (Substructure Phase)	Rigid skip lorry	15 mins	2 per week	N
Waste Removal from site (Superstructure Phase)	Waste Compactor	15 mins	1	Y
Site Establishment (incl hoardings)				
General material delivery	Rigid (Hiab)	20 mins	1	N
Demolition & Archaeology				
Plant delivery / collection	Rigid low-loader	30 mins	2 per week	N

Bulk aggregate collection (muck away)	Tipper	30 mins	6	N
Ground Works & Foundations (incl piling)				
Plant delivery / collection	Articulated low-loader	30 mins	2 per week	N
Bulk aggregate collection (muck away)	Tipper	30 mins	12	N
General material delivery	Rigid (Hiab)	20 mins	1	N
Concrete	Concrete wagon	45 mins	6	N
Tower Crane Installation				
Crane component delivery	Rigid	3 hours	One-off	Y
Craneage	Mobile crane (size TBC)	All day (road closure and crane licence needed)	One-off	Y
Superstructure				
General material delivery	Rigid (Hiab)	20 mins	1	Y
Concrete	Concrete wagon	45 mins	6	N
Concrete Pumping	Concrete pump	All day	1	N
External Envelope				
General material delivery	Rigid (Hiab)	20 mins	5	Y
Scaffold	Rigid	2 hours	2 per week	Y
Tower Crane Removal				
Crane component delivery	Rigid	3 hours	One-off	Y
Craneage	Mobile crane (size TBC)	All day (road closure and crane licence needed)	One-off	Y
Internal Fit Out and Finishes				
General material delivery	Rigid (Hiab)	20 mins	7	Y
Screed (bulk material)	Tipper	15 mins	2	N
External Landscaping				
General material delivery	Rigid (Hiab)	20 mins	2	Y

Bulk material	Tipper	15 mins	2	Y

More detailed construction traffic movement analysis prepared by our Traffic Consultant TTHC is available in Appendix L.

At a meeting with Camden Council's Planning Team of the 4th December 2018, James Hammond requested that we investigate the use of 13 Tavistock Place entrance and garden and the use of the Genesis carpark to the rear of this property as an alternative route for site deliveries. The findings of this investigation are covered in detail within the TTHC additional information document dated January 2019. The findings were that even with the rigid vehicles such as the concrete wagons and tipper lorries, there were numerous clashes with existing structure and buildings. The route also meant that the Westbound cycle lane would be entered during every vehicle delivery. 13 Tavistock Place also has access doors leading into their property leading onto the suggested access route and as such this option has been considered a significant safety issue to all concerned. The CLG representative has also been consulted and a clear response has been received and forwarded previously by email to the Camden Planning team confirming under no circumstances would they agree to the use of their access.

b. Please provide details of other developments in the local area or on the route.

Please refer to Section 16.

c. Please outline the system that is to be used to ensure that the correct vehicle attends the correct part of site at the correct time.

A web based booking portal will be utilised for all deliveries providing a delivery slot to each vehicle to avoid multiple vehicle arrivals to site. The booking schedule will be provided to the Traffic Marshalls managing the logistics strategy and any deliveries arriving without a pre-booked slot will be turned away. This strategy will be included within all supply chain contract orders and reinforced at a Pre-commencement meeting. The supply chain Supervisors will be inducted of this expectation prior to their start on site.

d. Please identify the locations of any off-site holding areas (an appropriate location outside the borough may need to be identified, particularly if a large number of delivery vehicles are expected) and any measures that will be taken to ensure the prompt admission of vehicles to site in light of time required for any vehicle/driver compliance checks. Please refer to question 24 if any parking bay suspensions will be required for the holding area.

Although a local logistics control zone may be used subject to Local Authority requirements and agreement, all deliveries will be on a just in time basis. A web based booking system will be used for all deliveries. The system is designed such that the insertion of FORS

accreditation details for the specific company making the delivery is mandatory. Failure to provide this information will by default not permit the delivery to be booked on the system. This pre-entering of data and the management of deliveries by allocated time slots will reduce time on site of vehicles from time of arrival to time of departure.

e. Please provide details of any other measures designed to reduce the impact of associated traffic (such as the use of construction material consolidation centres).

The existing access from Tavistock Place into the rear courtyard and shed of the School where the development is to take place has restricted headroom, insufficient to accommodate construction vehicles. However, as the building either side and its forecourt area are within the ownership of the London School of Hygiene & Tropical Medicine the intent is to make alterations to accommodate construction vehicles.

It proposed to reduce the level of the entrance to gain the additional headroom needed to allow access through to the rear courtyard for construction vehicles. A ramp will be provided between the new reduced level and the existing footway/carriageway level.

It is intended to start the ramp from the road kerb as per the swept path analysis section shown under section 25a of the CMP figure 21 using a 150mm thick concrete slab in accordance with Camden Highways requirements. This is subject to the level of the existing services that run along the footpath and whether these can facilitate cross over levels required. The cross over will require dropped kerbs either side for pedestrian access and will be included within the cross over application to Camden Highways. The section within the bounds of the site will be hoarded off.

A hoarding would be erected to enclose the works, including those to reduce the levels in front of the entrance. A section through the proposed ramp, showing its relation to the existing footway, is included in Appendix E.

By carrying out these alteration works, construction vehicles will be able to enter site specifically during increased vehicle movement periods such as during demolition, muck away and concrete pumping operations, thus reducing the need to park construction vehicles on Tavistock Place.

22. Site access and egress: *"Clients shall ensure that access to and egress from the site is appropriately managed, clearly marked, understood and clear of obstacles."* (P18, 3.4.3)

Vehicles entering and leaving the site should be carefully managed, using gates that are clearly marked and free from obstacles. Traffic marshals must ensure the safe passage of all traffic on the public highway, in particular pedestrians and cyclists, when vehicles are entering and leaving site, particularly if reversing.

Traffic marshals, or site staff acting as traffic marshals, should hold the relevant qualifications required for directing large vehicles when reversing. Marshals should be equipped with 'STOP – WORKS' signs (not STOP/GO signs) if control of traffic on the public highway is required. Marshals should have radio contact with one another where necessary.

a. Please detail the proposed access and egress routes to and from the site

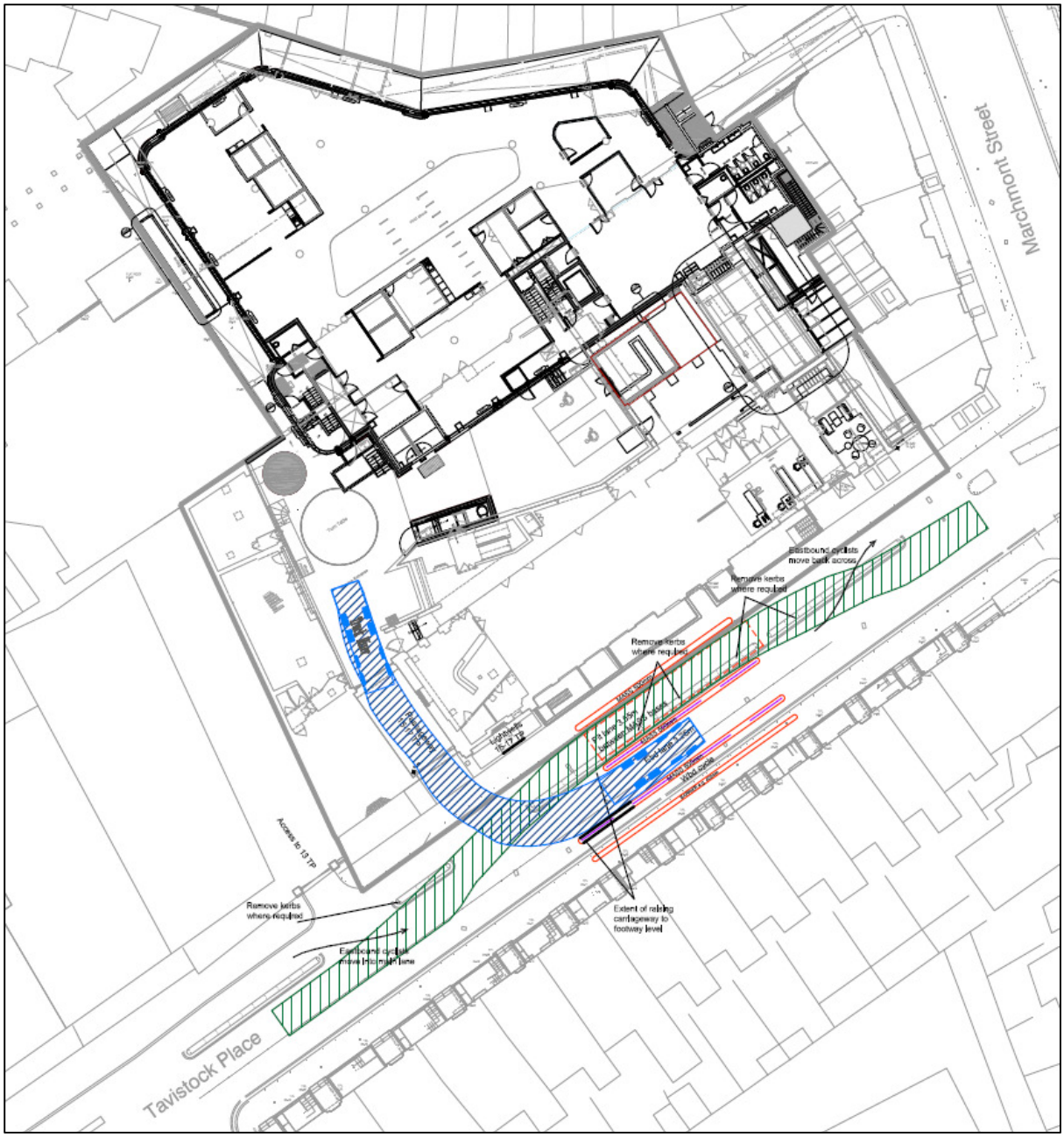


Figure 12 - Vehicle unloading from Tavistock Place via pit lane in green and swept path in blue of reversing vehicle into site.

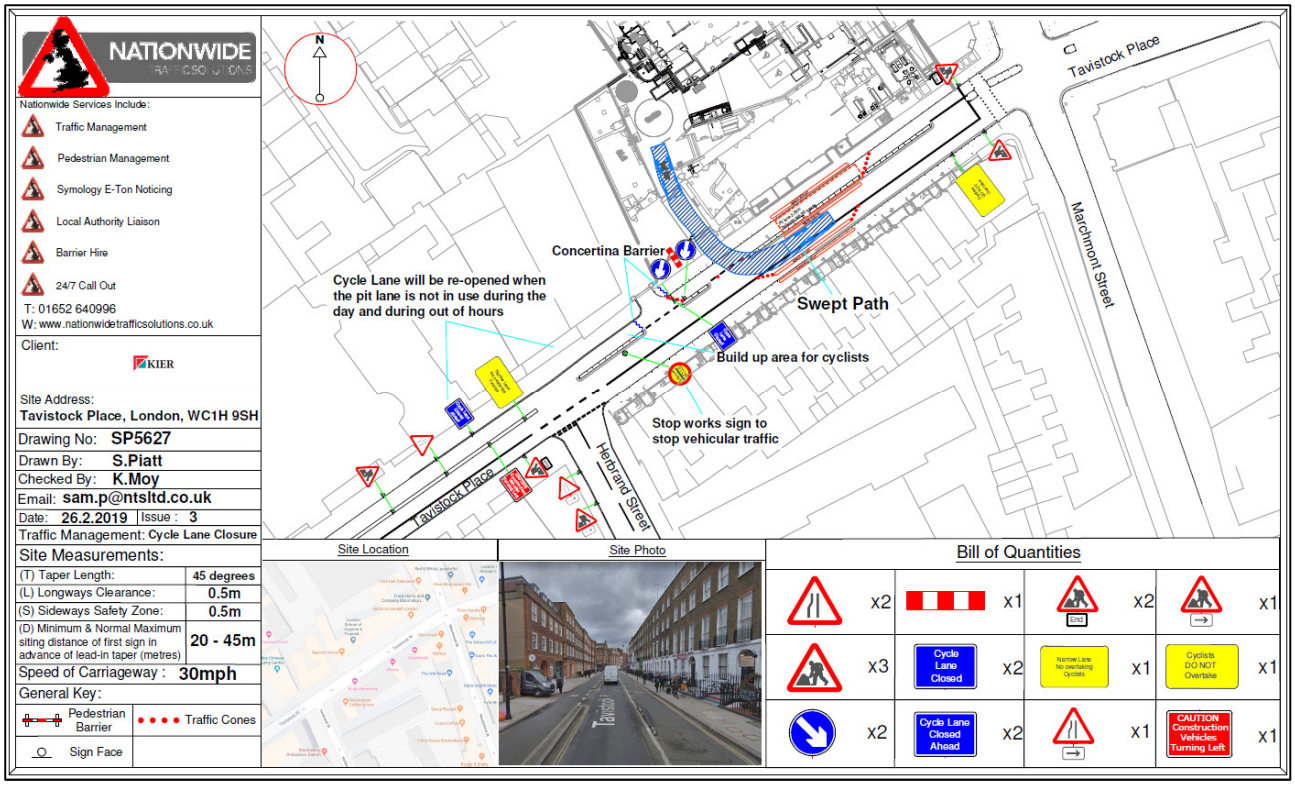


Figure 13 - Vehicle access to site via passageway and pit lane on Tavistock Place incl. traffic management signage .

b. Please describe how the access and egress arrangements for construction vehicles will be managed.

The main access point to the project will be via Tavistock Place which is an existing vehicular access for the London School of Hygiene. It is intended to make alterations to the head room height of the passageway by lowering the ground levels within to facilitate access by construction vehicles. Prior to the erection of the tower crane, the majority of delivery and collection vehicles will be manoeuvred onto site. This will be specifically during high volume vehicle movement periods during demolition, muck away and concrete pumping operations. The vehicle route to site will be as per the designated route identified in point 20a above. Once on Tavistock Place, Traffic Marshalls will be posted at the site entrance to accept the delivery / collection. As can be seen from the above logistics plan, there will be 5 Traffic Marshalls to manage the arrival and departure of vehicles to and from site. These are identified by the orange circle with the letter M within it. They will be positioned such that they are able to manage the following situations:

- Stop oncoming traffic using 'Stop – Works' signs whilst the vehicle is manoeuvred.
- Cycles coming from the West are protected by the Mass Barrier segregation and as such can continue to use the West bound cycle lane during the operations.
- Stop cycles coming from the East as the construction vehicle will need to cross the path of the cycle lane.
- Stop pedestrians on the footpath in both directions whilst the construction vehicle crosses the footpath.

To provide a physical barrier to prevent pedestrians scooting round the Traffic Marshalls, a concertina barrier will be pulled across the footpath and cycle lane to hold both pedestrians and cycles whilst the vehicle is manoeuvred. The required checking of vehicle and driver compliance as per the requirements of CLOCS will be carried out once inside the site boundary to limit the hold up of pedestrians, cycles and other road users. The same approach will be taken when vehicles leave site, albeit priority will be given to release cycles ahead of vehicles. Traffic Marshalls will be provided with instructions and briefed on this point Preliminary instructions for Traffic Marshall can be seen in Appendix L.
Once the tower crane has been erected, construction vehicles will be parked within the cycle lane. It is proposed that the existing central islands separating the cycle lane from the carriageway be removed locally to the site entrance to facilitate this and be reinstated on project completion. These will be replaced with a Mass Barrier system with low level pedestrian fencing set within to segregate the delivery vehicle from the carriageway, whilst parked up preventing other vehicles and pedestrians entering the loading / unloading bay during deliveries / collections. This Mass Barrier is a metal system that is interlinked. It will be mechanically fixed to the carriageway to enhance its already inherent robustness and stability. The pedestrian guard fixed into the top of the mass barrier is also clipped together meaning it would have to be unbolted before it could be removed and as such is robust against potential vandalism. (Mass Barrier Pedestrian Guard as per figure 14 below).

Figure 14. Mass Barrier Pedestrian Guard.

Management of these vehicle arrivals will be by 2 Traffic Marshalls as per the logistics plan above to manage the following situations:

- Stop cyclists coming from the East whilst the construction vehicle is manoeuvred into position in the load / unloading bay.
- Stop oncoming traffic whilst the vehicle is manoeuvred.

As all arrivals will be expected due to the pre booking system in place, the location of storage for the materials being delivered will have been predetermined and as such will ensure the delivery is unloaded efficiently. Once the delivery / collection is complete, the Traffic Marshalls will direct the vehicle out of the loading / unloading bay back onto the carriageway and the cycle lane will be re-opened for cyclists to use. The pavement on the opposite side of the road to the development will be maintained open at all times.

c. Please provide swept path drawings for any tight manoeuvres on vehicle routes to and from the site including proposed access and egress arrangements at the site boundary (if necessary).

The below swept path analysis drawing has been prepared to demonstrate the sweep of the largest construction vehicles to be used that will enter site using the logistics strategy noted above (In blue). The green hatching shows the swept path for artic delivery vehicles using the pit lane on Tavistock Place. The analysis suggests that the Westbound cycle lane would be maintained open throughout the construction period.

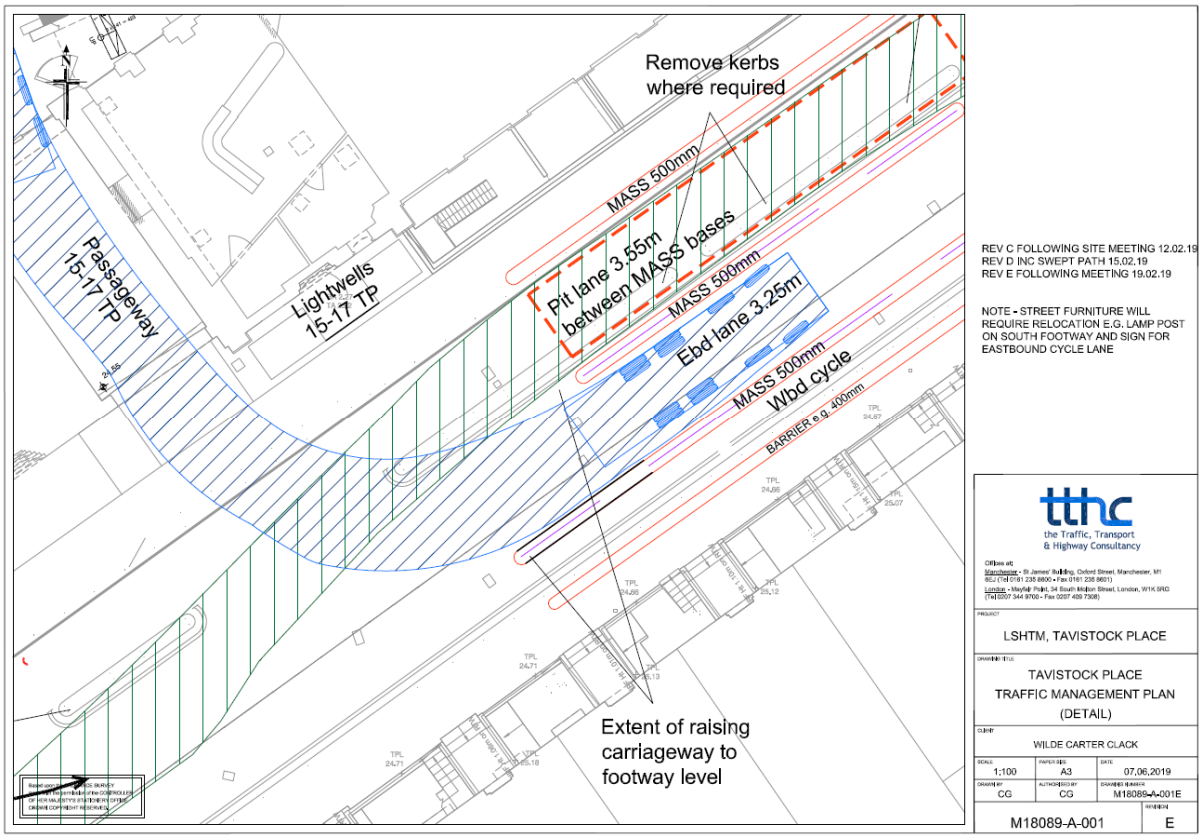


Figure 15 - Swept path analysis for delivery vehicles entering site and the pit lane.

d. Provision of wheel washing facilities should be considered if necessary. If so, please provide details of how this will be managed and any run-off controlled.

Where vehicles are to enter site, the new lowered ramp within the passage way entrance will receive a soft tamped concrete road that will extend beyond the rear boundary of the existing School building. Construction vehicles entering site will remain on this hard standing to keep tyres clean to avoid contaminating the Highway outside. This concrete road will be maintained regularly to avoid mud and debris build up and to minimise any potential dust blowing up from it out into the highway. A jet wash will be on hand to maintain the road way free of dust and to damp down if necessary and will also be used to clean any wheels that need it albeit it this will be minimal as the vehicle will remain on the hard standing. Any plant or equipment that has been in contact with the ground will be cleaned prior to departure from site.

23. Vehicle loading and unloading: ***"Clients shall ensure that vehicles are loaded and unloaded on-site as far as is practicable."*** **(P19, 3.4.4)**

If this is not possible, Traffic Marshalls must ensure the safe passage of pedestrians, cyclists and motor traffic in the street when vehicles are being loaded or unloaded.

Please provide details of the parking and loading arrangements for construction vehicles with regard to servicing and deliveries associated with the site (e.g. delivery of materials and plant, removal of excavated material). This is required as a scaled site plan, showing all points of access and where materials, skips and plant will be stored, and how vehicles will access and egress the site. If loading is to take place off site, please identify where this is due to take place and outline the measures you will take to ensure that loading/unloading is carried out safely. Please outline in question 24 if any parking bay suspensions will be required.

Please refer to point 22 above.

Waste skips will be delivered and collected from within the site boundary during the enabling works period as defined in point 10 above. Once the tower crane is operational, skips will be lifted into and out of site. Kier Construction has a minimum standard for the lifting of skips with a tower crane. (See figure 17 below) This outlines minimum standards in respect of skip integrity, age, identification and procedures for safe lifting. These minimum standards will be observed at all times.

It will be necessary to apply for a road closure for mobile crane operation for the erection and dismantle of the tower crane. Kier Construction will make the necessary applications to the Highways Management Team giving the required notice. This will include specific traffic management proposals for the operation. It is envisaged that each operation of erection and dismantle of the tower crane will take 2 days and will take place over 2 separate weekends in accordance with point 10 above.

KIER

MINIMUM STANDARD
Crane Lifting of Waste Skips

Construction & Infrastructure Services

The following Minimum Standard is applicable on all projects within the following Business Streams:

- Building UK
- Highways
- Infrastructure
- Utilities

Introduction

There is no industry standard for the construction of conventional rubbish skips. They are designed for lifting in direct connection with a service vehicle. There is no allowance for lifting overhead.
The lifting of skips overhead 'as a load' is a high risk lifting operation. Proprietary lifting cradle accessories are available but their attachment can be awkward and time consuming. A preferred solution is for skips that have been converted, fitted with direct lifting points.
The overhead lifting of skips will only be permissible if the following requirements are satisfied together with supporting documentary evidence.



The fabrication and welding of lifting attachments should be undertaken by the skip manufacturer; butt welded (full penetration) to a coded standard for steel plate. Lifting attachments must be constructed from a minimum of 15mm steel plate with a 40mm diameter drilled hole.


A unique identification number must be indelibly marked on the skip. Test results and SWL details shall be indelibly marked on the skip. Kier will de-rate this SWL by 50%.

Under no circumstances must skips be lifted by their service lugs

Testing and Examination:
Skips intended for lifting must be certificated from new and tested and examined every six months.
Testing must include a load test of 110% of rated capacity, with the skip suspended from all four lifting lugs (simulating working conditions).
Skips should be taken out of service (for lifting) after a maximum of two years and returned to normal use.

Authorised By: John Edwards	Page 1 of 2	SHEMS MST 07 0036
Author: Ian Davey	Date: April 2017	Version 1.5
As part of our SHEMS review, this document is valid until April 2018		

Safety Health Environment
It's in our hands

Figure 17 - Kier Construction minimum standard - Crane lifting of waste skips.

Camden

Highway interventions

Please note that Temporary Traffic Orders (TTOs) and hoarding/scaffolding licenses may be applied for prior to CMP submission but won't be granted until the CMP is signed-off.

If the site is on or adjacent to the TLRN, please provide details of preliminary discussions with Transport for London in the relevant sections below.

24. Parking bay suspensions and temporary traffic orders

Please note, parking bay suspensions should only be requested where absolutely necessary. Parking bay suspensions are permitted for a maximum of 6 months, requirement of exclusive access to a bay for longer than 6 months you will be required to obtain Temporary Traffic Order (TTO) for which there is a separate cost.

Please provide details of any proposed parking bay suspensions and TTO's which would be required to facilitate construction. **Building materials and equipment must not cause obstructions on the highway as per your Considerate Contractors obligations unless the requisite permissions are secured.**

Information regarding parking suspensions can be found here.

- Kier Construction intend on carrying out a Ground Penetrating Radar survey of the carriageway that is Tavistock Place immediately outside the extent of the London School of Hygiene boundary. These works are to be carried out by a Licenced Contractor 40Seven who will be responsible for arranging the TTO and implementing the necessary traffic management. The operation will be of short duration in respect of hours rather than days.
- The second TTO will be required for the installation of site welfare cabins on Tavistock Place above the footpath on a gantry immediately outside the London School of Hygiene building. The intent is to build the scaffold gantry and have it ready for placement of cabins using a Hiab delivery lorry parked up on Tavistock Place. Again, the works to place the cabins will takes hours rather than days. Please see figure 18 below. It will be necessary to have a second TTO for the removal of these cabins also.
- The third TTO will be required for the erection and dismantle of the tower crane. These operations will take place over a weekend as noted in point 23 above. During the erection and dismantle of the tower crane, the mobile crane used to erect the crane will need the full width of the carriageway. It will be possible to keep the footpath open on the other side of the road from the development, however the

footpath on the development side will have to be closed. The operation to erect and dismantle the tower crane will be carried out over a weekend and all necessary applications will be made to Camden to include the traffic management plan and diversion routes ahead of the works operations. A preliminary Lift Plan and Traffic Management Plan from HTC / Nationwide is contained within Appendix O.

- A forth TTO may be required for the intermittent closure of the cycle lanes. Kier Construction would like to discuss this further with Camden Highways Team.
- A fifth TTO will be required for the proposed highway works (Refer to figure 19 below) which include site clearance of existing hard segregation islands, raising the level of the carriageway for the delivery pit lane and West bound cycle lane, temporary cross over works, installation of temporary Mass Barrier segregation, white lining and directional signage.

Kier have had 3 site meetings with the Camden's Street Works Team to discuss TTO's and site logistics. A more detailed account is included within the response to Camden's further request for information against point 12 contained within Appendix S.

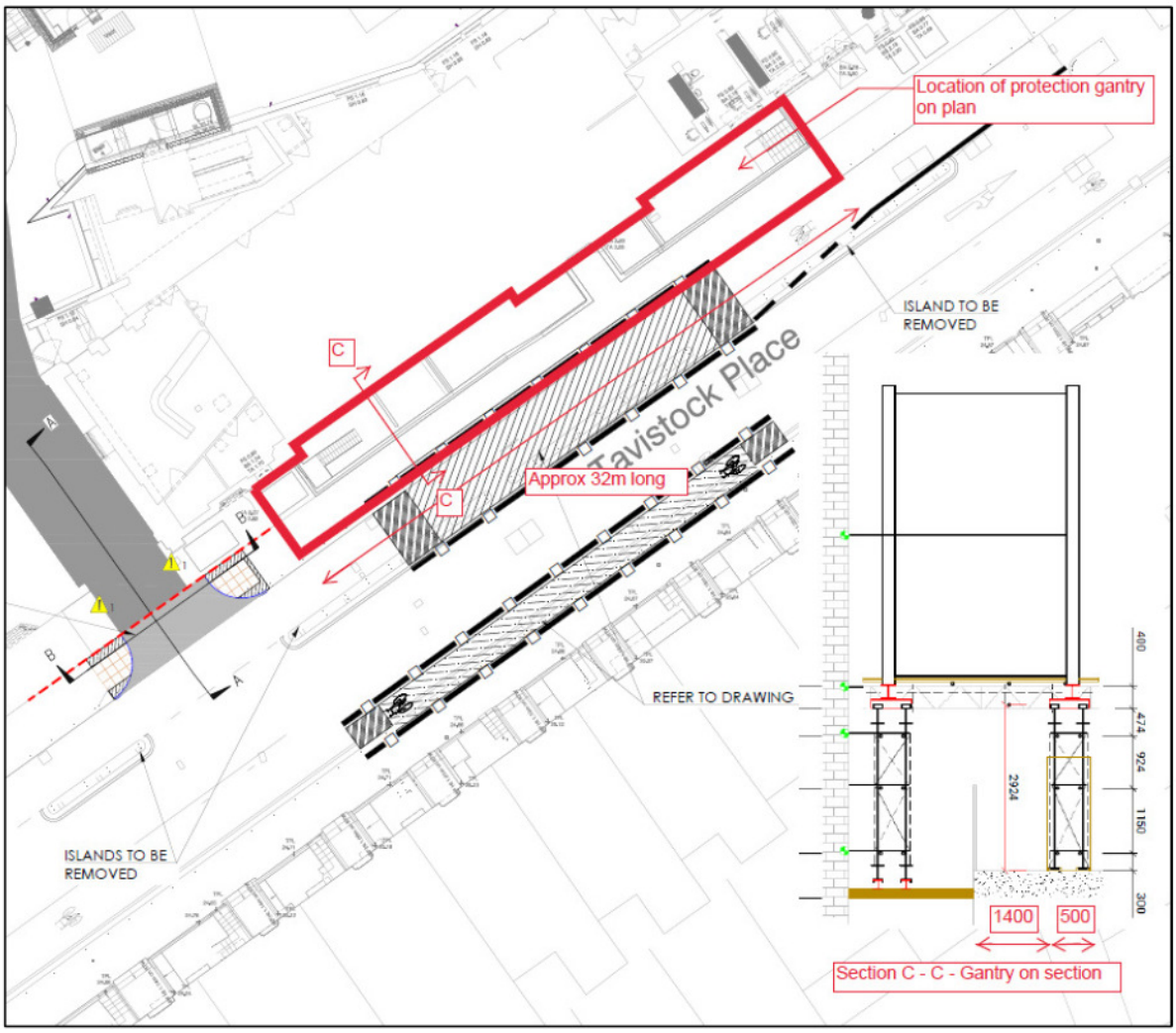


Figure 18. Plan & Section showing welfare accommodation above footpath to Tavistock Place.

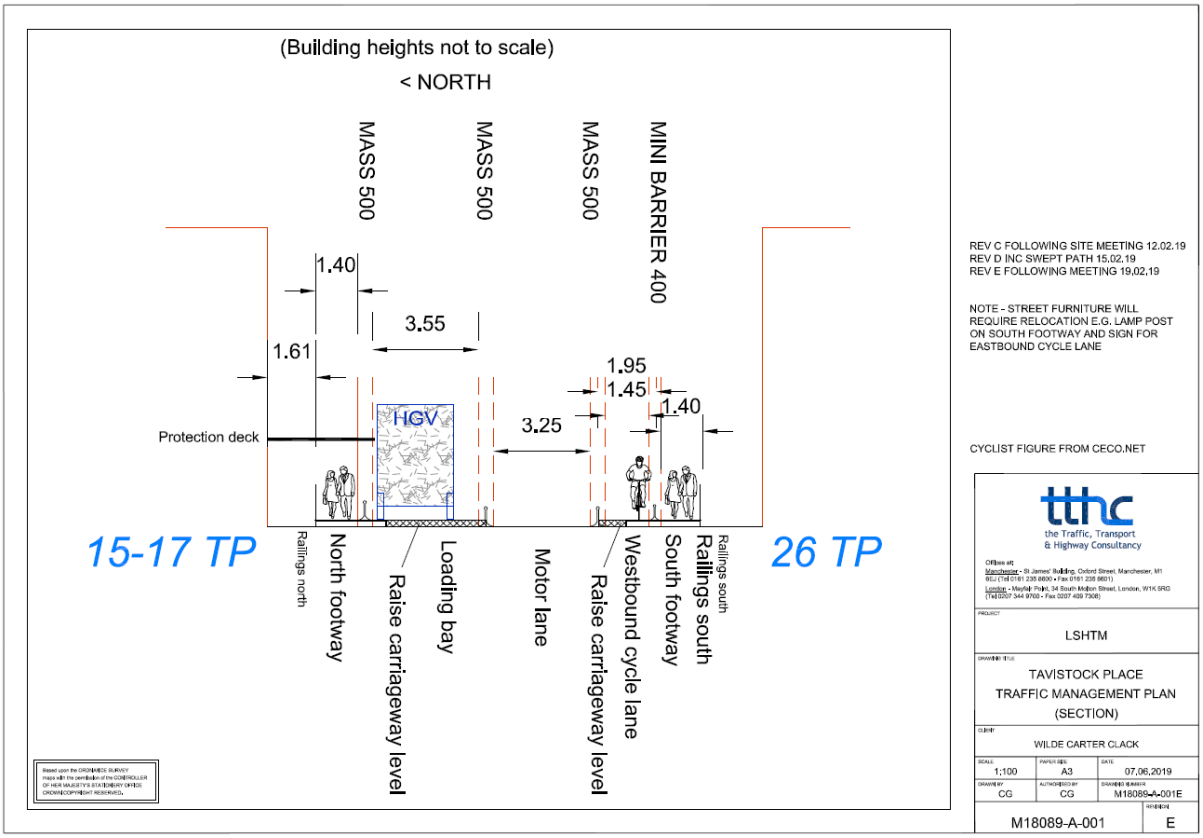


Figure 19. Cross section through Tavistock Place showing highway users and delivery pit lane.

25. Scaled drawings of highway works

Please note that use of the public highway for storage, site accommodation or welfare facilities is at the discretion of the Council and is generally not permitted. If you propose such use you must supply full justification, setting out why it is impossible to allocate space on-site. You must submit a detailed (to-scale) plan showing the impact on the public highway that includes the extent of any hoarding, pedestrian routes, parking bay suspensions and remaining road width for vehicle movements. We prefer not to close footways but if this is unavoidable, you should submit a scaled plan of the proposed diversion route showing key dimensions.

- a. Please provide accurate scaled drawings of any highway works necessary to enable construction to take place (e.g. construction of temporary vehicular accesses).

As noted above in point 24, Kier Construction intends on erecting a scaffold pedestrian gantry over the footpath and place welfare accommodation on top. The minimum footpath width of 1.4m will be maintained and it will not be necessary to encroach into the highway. Figure 20 below shows the extent of highway works on Tavistock Place including the required cross over. A full pack of highway design drawings along with a stage 1 & 2 Road

Safety Audit and designers responses are contained within Appendix R. This addresses point 1 of Camden's further request contained within Appendix S.

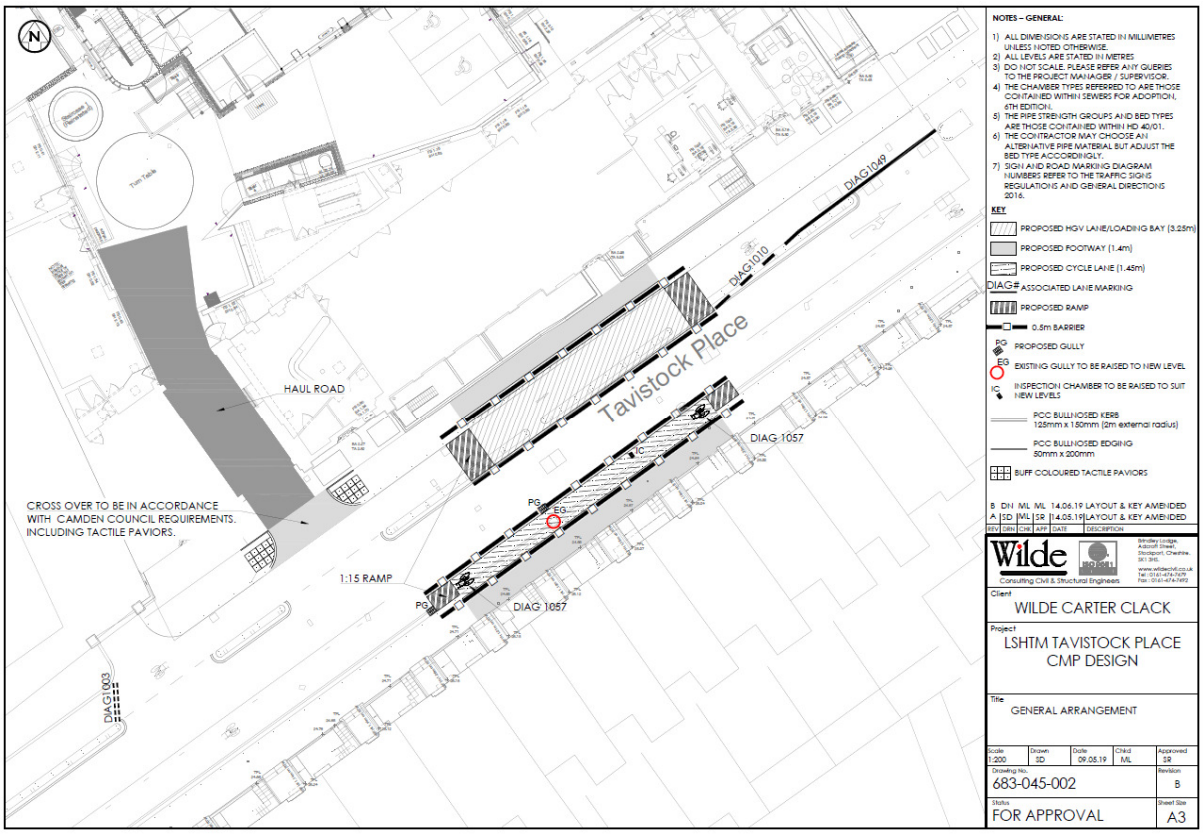


Figure 20 - Cross over and highway works.

As part of the logistics strategy to be able to bring construction vehicles into site via the passageway at peak vehicle movement periods during demolition, ground works and concrete frame construction, it has been noted that Kier Construction intends on lowering the ground to include a temporary cross over to the highway. Kier Construction will make the necessary applications for a temporary cross over licence. A Ground Penetrating Radar survey has been carried out which has identified utility services within the footpath. These will be protected where deep enough with a concrete capping slab over to Camden Highway requirements. Services identified as service A, C & D will be diverted as identified in figure 21 below and shown on plan from the GPR survey shown in figure 22. A full size drawing of figure 21 can be found within Appendix R. BT Openreach has been approached and an estimate obtained to carry-out these diversion works.

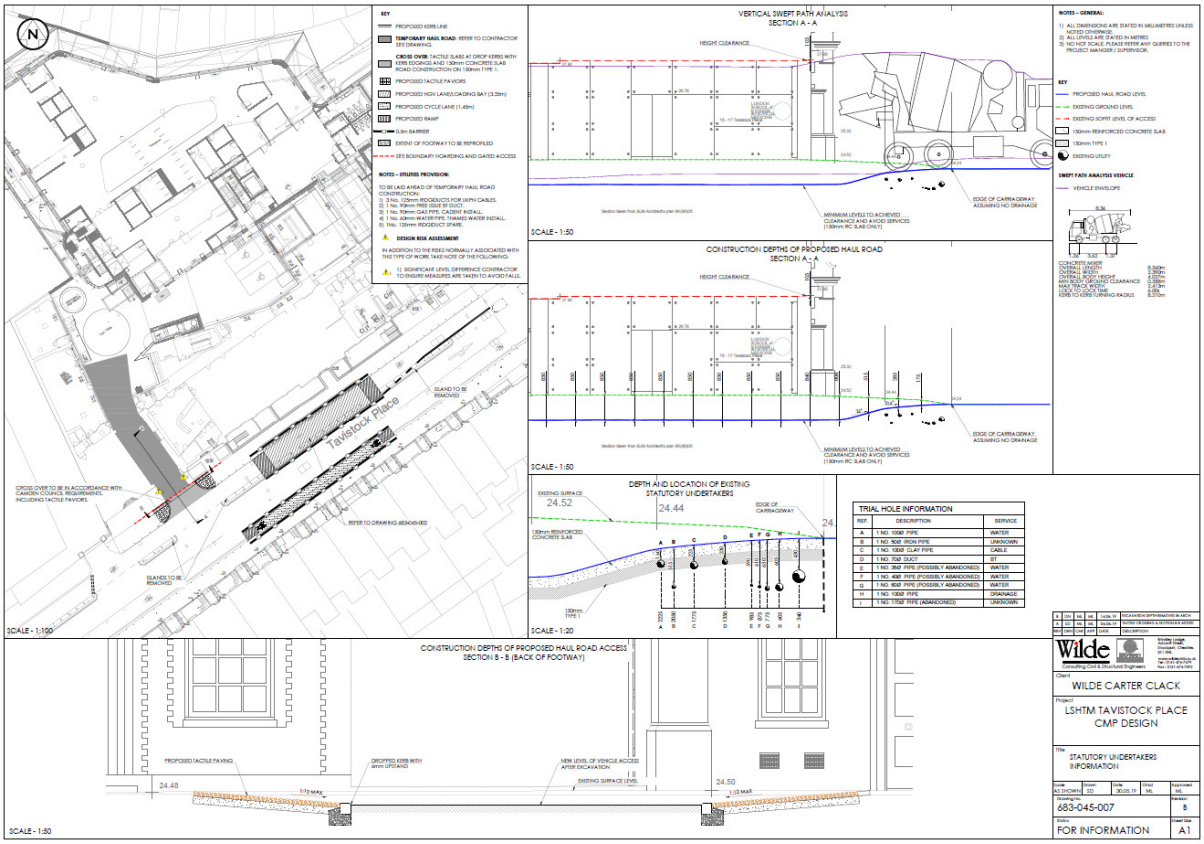


Figure 21. Details of vehicle entrance passageway with proposed temporary cross over requirement with identification of utility services.

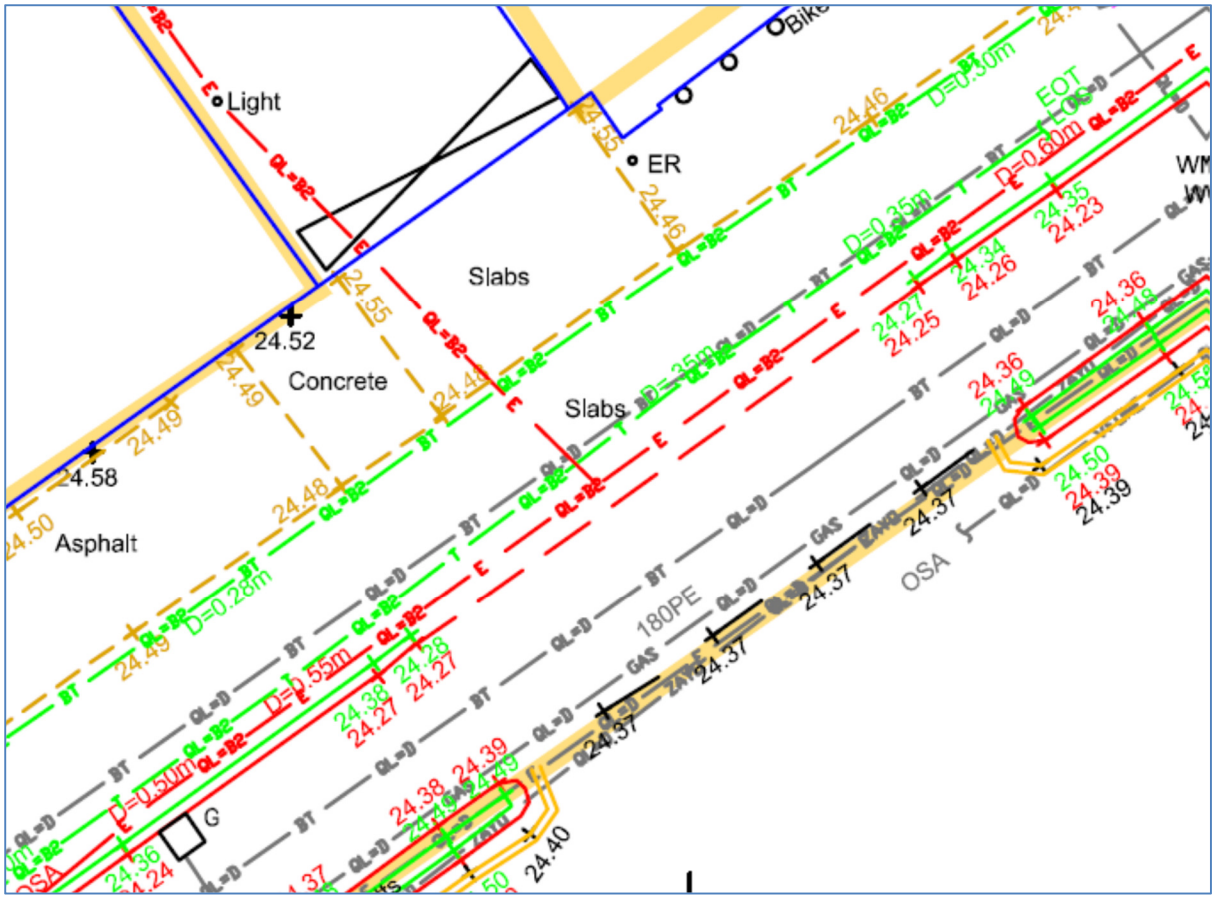


Figure 22. Utility mapping drawing showing services within the footpath at proposed cross over location.

b. Please provide details of all safety signage, barriers and accessibility measures such as ramps and lighting etc.

Safety signage will be posted on the site hoarding including the Considerate Constructors Scheme board with point of contact. Hoarding will be lit within the pedestrian walkway with white lights with red lights on the highway side. Concertina barriers will be used to stop oncoming cycles and pedestrians on arrival of construction vehicles entering site and Mass barriers will be used to segregate vehicles from cycles between the cycle lane and carriageway. Tap boards will be in place through the pedestrian gantry walkway for people with impaired vision to navigate their way through safely. Access along the footpath will be maintained and as such ramps will not be required. Further detail has been provided throughout this document.

26. Diversions

Where applicable, please supply details of any diversion, disruption or other anticipated use of the public highway during the construction period (alternatively a plan may be submitted).

Please refer to point 24 and 25b above under the TTO section and highway works where traffic management requirements are required along with route diversions.

27. VRU and pedestrian diversions, scaffolding and hoarding

Pedestrians and/or cyclist safety must be maintained if diversions are put in place. Vulnerable footway users should also be considered. These include wheelchair users, the elderly, those with walking difficulties, young children, those with prams, the blind and partially sighted. Appropriate ramping must be used if

cables, hoses, etc. are run across the footway.

Any work above ground floor level may require a covered walkway adjacent to the site. A licence must be obtained for scaffolding and gantries. The adjoining public highway must be kept clean and free from obstructions. Lighting and signage should be used on temporary structures/skips/hoardings etc.

A secure hoarding will generally be required at the site boundary with a lockable access.

a. Please provide details describing how pedestrian and cyclist safety will be maintained, including any proposed alternative routes (if necessary), and any Traffic Marshall arrangements.

Please refer to point 22 above that covers this topic.

b. Please provide details of any temporary structures which would overhang the public highway (e.g. scaffolding, gantries, cranes etc.) and details of hoarding requirements or any other occupation of the public highway.

As noted earlier in this document, a scaffold pedestrian gantry will be constructed to form a tunnel for the safe passage of pedestrians. This will not extend into the cycle lane / unloading bay. This will be lit and have the necessary tap boards and signage for disabled people. Any cabling will be carried over the footpath at high level to avoid the need for ramps on the footway. Concrete pumping operations are planned to be carried out from within site which again avoids the need to carry a pump line over the footway.

The hoarding will be 2.440m high and solid and as per relevant marked up drawings earlier in this document will be required to be placed out to just beyond the line of the pavement lights to accommodate the site works within. It will be lit through hours of darkness to provide sufficient illumination to maintain the pedestrian route.

It will be necessary to use the tower crane on site to offload from the designated unloading area and as such will overhang the public highway. The maximum radius will be set using the on-board zoning computer within the tower crane to prevent the crane radius going beyond the designated loading / unloading zone on the highway. Lifting over the footpath will be over the protection / pedestrian gantry.

Kier have a partner Phoenix Security that provide the 24/7 call out. The emergency number will be posted on the hoarding in a prominent position. The out of hours procedure can be seen within Appendix N.

SYMBOL IS FOR INTERNAL USE

Environment

To answer these sections please refer to the relevant sections of **Camden's Minimum Requirements for Building Construction (CMRBC).**

Please refer to Appendix Q for the signed Camden CMR247945 signed declaration.

28. Please list all noisy operations and the construction method used, and provide details of the times that each of these are due to be carried out.

Any works that can be heard beyond the boundary of the site must not be carried out outside of the following times:

- **08:00hrs – 18:00hrs – Monday to Friday**
- **08:00hrs – 13:00hrs – Saturdays**
- **No work on Sundays or bank holidays**

No works will be planned to take place outside of these times however should something outside of our control occur (such as the break-down of plant, e.g. the tower crane or concrete pumps), requiring the site to work beyond the stipulated times, then we would speak to the local Environmental Health Officer in order to get their guidance on how best to approach the out of hours working. To mitigate the risk of such occurrences, although the site hours as dictated by the Planning Consent allow working up to 18:00 hours, all works are planned to finish at 17:00, allowing an hour contingency period at the end of the day.

As a matter of course we will notify neighbours who maybe directly affected or potentially inconvenienced by our works, in order to minimise the impact we have on them and to ensure that they are fully informed at all times. These communications will be undertaken via a community email group, newsletter or site communications board.

Work Activity	Construction Methodology
Demolition – The removal of the steel frame shed structure, boundary walls, out buildings, breaking out existing ground bearing slab established as approximately 150mm think and the	Existing roof coverings to be removed by hand, steel roof trusses to be temporarily supported and flame cut and lowered to the ground with minimal noise. Existing boundary walls to be demolished will be carried out by hand to prevent damage to adjoining properties with the intent on leaving as much of the existing boundary wall in place as possible, firstly

grubbing up of any existing foundations including initial reduced level dig.	to contain noise within the site and secondly to minimise the impact of the adjoining surface finishes to the adjoining properties. Trial investigations have established that the existing ground bearing slab is un-reinforced and approximately 150mm thick. Isolation cuts / local structural separation between ground bearing slab and adjoining structures will be carried out to limit the extent of structural vibration transfer. Once separation is complete a hydraulic breaker attachment to a 360^0 excavator will break the existing ground bearing slab working away from the isolation cut / structural separation. Any existing foundations will be grubbed up using a 360^0 excavator with bucket attachment. Where possible the whole foundation mass will be pulled up out of the ground to prevent the need to use the hydraulic breaker within the ground again to limit the transfer of ground borne vibration. Arisings will be removed from site by loading them into tipper trucks using the 360^0 excavator with bucket attachment.
Bulk Excavation, formation of Piling Mat	Excavation will be carried out using a 360^0 excavator with bucket attachment. Spoil will be loaded into awaiting tipper lorries from within the site boundary. Delivery of 6F2 piling mat material will be via tipper trucks that will unload within the site boundary. These will be reversed into site via the Tavistock Place entrance.
Bored Concrete Piling	Rotary bored auger piling rigs will be used to install the concrete piles into the ground. Using such techniques reduces the impact of piling operations both from a noise and vibration point of view. Piling mats will be dampened down to prevent surface dust blowing up in the wind. Reinforcement within the pile will have de-bonding sleeves around it to the cut off level.
Concrete foundations and pile caps	Local excavation by 360^0 excavator with piles being cut down by use of hydraulic muncher attached to the excavator to reduce noise and limit the need for any breaking. Reinforcement cages will be tied on site due to restricted access but will be delivered to site pre-bent. Concrete will be pumped using a mobile / static pump to point of placement. Pile caps will be formed using permanent former to their perimeter to contain the concrete eliminating the need for traditional timber shutters and reducing the need to hammer in nails.
Structural Concrete frame (setting of formwork, reinforcement, concrete pours and striking of reinforcement)	A proprietary falsework system will be used. Horizontal ply sheeting will be nailed to the aluma beams that have timber inserts to receive nail fixings. Reinforcement will be delivered pre bent and will be fixed insitu on the ply decks. Columns will be formed using propriety formwork with reinforcement again being fixed insitu. Concrete pours for columns and walls will be by use of the tower crane and concrete skip, with slabs being placed by static / mobile concrete pump that will gain access via the Tavistock Place vehicle access.

Structural Steel frame	Steel frame will be prefabricated off site and delivered on a just in time basis. It will be unloaded to a predetermined lay down area on site. Steel sections will then be erected using the tower crane. Bolting up will be by using a pneumatic wrench. Use of pneumatic wrench will be limited to noisy works periods only on a 2 hours on 2 hours off basis.
Scaffold erection, adaption and dismantling	Manual handling of scaffold components and use of scaffold spanners to tighten and release bolts.
External envelope – lightweight steel framing system with Cement particle board cladding.	Where possible SFS members will be delivered to site pre-cut to size to limit the need for on-site cutting. Any on site cutting will be performed at a centralised cutting station with acoustic screens set around the cutting area to contain noise. Fixing of SFS will be by drill and fix of bolts / self-tapping screws with the external CP board fixed to the outside of SFS using screws. CP board will be cut to size using a rotary saw and will be performed within a centralised cutting station with acoustic screens set around the cutting area to contain emitted noise.
External envelope – curtain walling, windows and cladding, roof coverings.	Sections / units will be delivered to site and unloaded from the back of a lorry from Tavistock Place using the tower crane. Items will be delivered on proprietry stillages / pallets. A pre-determined laydown area will be designated for these components. Units prefabricated off site will be lifted into position and fixed to the structure. None pre-fabricated units will be made up on site and again lifted into position and fixed into place. Access will be via standing scaffold to the perimeter that will be fully sheeted to contain and dust, debris and noise. Minimal cutting of components is anticipated. Secured using fixings driven home generally by battery operated power hand tools and self-tapping screws or bolts.
Roof coverings – Hot melt system.	A flat roof hot melt water proof membrane will be applied to the concrete roof and terrace slabs. This is a quiet operation. Cutting of any ballast slabs will be kept to a minimum with pebbles being used to avoid cuts where suitable. Any cutting of slabs will be via water suppressed disc cutter and performed within a centralised cutting zone.
External works – shallow excavation, drainage, services, paving and soft landscaping.	Excavation work will be by mini excavator (due to space restrictions) with hand compactors / compaction rollers used where required. These operations are centralised within the courtyard area and away from the site perimeter. Any cutting of paving will be water suppressed using a disc cutter and will be carried out in a centralised cutting zone.

Noisy operations will be on a 2 hours on 2 hours off basis. These works will be in line with Camden's guidance between 8:00am – 10:00am, 12:00pm – 2:00pm and 4:00pm to 6:00pm.

It is not anticipated that internal fit out works once the building envelope is enclosed will cause any noticeable noise disruption to adjacent properties.

Please refer to the Noise, Vibration & Dust Management Plan Ref: 25309/NMP1/Rev1 dated 25th January 2019 for more detailed information.

29. Please confirm when the most recent noise survey was carried out (before any works were carried out) and provide a copy. If a noise survey has not taken place please indicate the date (before any works are being carried out) that the noise survey will be taking place, and agree to provide a copy.

An attended and unattended noise survey was carried out on the 12th & 13th February 2015. This has further been supported by the submission of the 'Noise Statement for Planning' already submitted in support of the Planning Application and a 'Noise Impact Assessment' by Pace Consult dated 25th September 2018, Copies of which are included in Appendix F.

30. Please provide predictions for noise and vibration levels throughout the proposed works.

Due to the nature of demolition and construction works, it is inevitable that a temporary increase in noise and vibration will be experienced. It is anticipated that there will be noise and vibration level implications for nearby properties but should generally be of expected typical demolition and construction levels. As a starting point we propose a boundary trigger action level of 75dBA Leq(10 hour) Monday to Friday and 75dBA Leq(5 hour) for Saturday for noise and 3mm/s for vibration.

Any action trigger levels imposed to control noise and vibration will be regularly reviewed (typically monthly) and adjusted up or down, based on review of data from noise and vibration monitoring equipment and feedback from the Local Authority and Neighbouring properties.

Please refer to the Noise, Vibration & Dust Management Plan Ref: 25309/NMP1/Rev2 dated 28th March 2019 for more detailed information contained within Appendix F.

31. Please provide details describing mitigation measures to be incorporated during the construction/demolition works to prevent noise and vibration disturbances from the activities on the site, including the actions to be taken in cases where these exceed the predicted levels.

The Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974, shall be employed at all times to reduce and control noise and vibration, with reference to the general principles contained in British Standard BS5228: 2009 'Noise and Vibration Control on Construction and Open Sites', including:

- The quietest / lowest impact processes that are reasonably practicable will be employed on site to carry out the demolition and construction works.

- The quietest vehicles and plant shall be used as far as is reasonably practicable.
- No machinery starting up on site before the designated site start times.
- No engines left running on vehicles waiting.
- Noise suppression / screening will be a prime consideration in order to reduce the noise impact for the surrounding community (e.g. around generators).
- Keeping voices and conversations to a low volume. No shouting or swearing.
- No banging of doors, gates, scaffolding.

As far as reasonably practicable, construction methods will be selected to minimise noise and vibration. In addition, local residents will be advised when the above works are programmed to commence via our regular information updates. Kier Contact details will also be provided to the local community in the event that there is a need to make contact due to noise or vibration disturbance in order that these can be investigated and dealt with accordingly.

Noise monitoring will be undertaken using a combination of semi-permanent (continuous) and attended monitoring methods. Attended monitoring methods will be carried out using a GEO Fennel FSM 130+ Noise Hand Held Type 2 Sound level Meter or similar. The purpose of this is to carry out spot checks on work activities against the levels predicted.

Where the measured noise levels are more than 3 dB (A) above the predicted noise levels averaged over the defined period of time or in the event of a complaint of noise, an investigation shall be carried out to ascertain the cause of the exceedance of the complaint and to check that Best Practicable Means are being used to control the noise. Noise levels shall be reduced further if it is reasonably practicable to do so. The work activity will cease if found that improvements need to be made.

Information relating to the control of noise and vibration will be communicated to all site operatives through the site induction, start of shift briefings and tool box talks. As such, all site operatives will be briefed to ensure that best practical means are implemented at all times and to show due consideration to sensitive receptors.

Prior to approval of any methodologies, pre-start meetings will be held with the relevant subcontractors to ensure BPM is employed when carrying out their site operations. Discussion will include measures to be adopted to minimise and/or change working practices that could foreseeably have the potential to cause excessive noise and vibration.

Please refer to the Noise, Vibration & Dust Management Plan Ref: 25309/NMP1/Rev2 dated 28th March 2019 for more detailed information contained within Appendix F.

32. Please provide evidence that staff have been trained on BS 5228:2009

CIRIA-accredited 'Environmental Good Practice on Site' training will be completed by all Site Management Staff. The course covers the requirements of BS 5228:2009. Environmental

Best Practice briefing will be given to all site operatives starting on site by means of a specific environmental section of the site induction.

Temporary electrics will be managed using an automated cut out of non-essential power and lighting, so that out of working hours, the lighting other than emergency escape lighting will be turned off at night to avoid light pollution to neighbouring properties.

33. Please provide details on how dust nuisance arising from dusty activities, on site, will be prevented.

Control of dust, particularly during periods of dry and windy weather, is a prime concern for all construction projects. Kier has a hierarchical policy of prevention – suppression – containment with regards to dust control for all of our projects in order to prevent dust migrating beyond the site boundary. This applies to an operative drilling a hole to dust being blown about the site in dry weather.

Control of dust will be implemented following the guidelines set out in the best practice guidance 'The Control of Dust and Emissions during Construction and Demolitions – Supplementary Planning Guidance, July 2014' produced by The Greater London Authority (Mayor of London). When necessary water mist suppression will be utilised at the point of work.

Dust emissions shall be monitored throughout the working day concurrently with the noise monitoring. Should dust be observed either in the air or deposited on vehicles or other sensitive receptors works shall be suspended and the working practice reviewed to determine a method to prevent a recurrence.

Monaflex sheeting will be used on the perimeter scaffolds to assist in containing dust produced within the new building being constructed. The Monaflex will have a double usage, in that it will also provide privacy screening between the site and neighbouring windows. The Monaflex will be maintained throughout its life to maintain its integrity. Prior to scaffold being taken down, the newly installed glazing will be coated with an opaque glass protection film which will maintain privacy to adjacent properties until such time as the permenant privacy screens are installed. Where the new building has terraces adjoining adjacent existing terraces, additional dust and privacy screening will be erected off the new terrace in these locations providing a level of privacy, security and dust containment from works being carried out on the terraces. This screening will need to be removed for a period to facilitate the necessary waterproof coverings and flashings to adjoining structures where required.

2.440 m high hoardings will be erected to exposed perimeters to contain dust within the site boundary, these will also provide additional security and privacy to our neighbouring buildings.

34. Please provide details describing how any significant amounts of dirt or dust that may be spread onto the public highway will be prevented and/or cleaned.

Please refer to section 22(d).

All ground or surface water run-off will be strictly controlled in line with environmental legislation and best practice to prevent pollution of drains and watercourses. All fuel will be stored in bunded tanks, at least 10m from any drain or gully. Emergency spill kits will also be available on site. All concrete wash-out will be controlled and treated to prevent contamination by use of Siltbuster units.

35. Please provide details describing arrangements for monitoring of noise, vibration and dust levels.

Kier Construction will appoint a specialist consultant well versed in the expectations of Camden Borough Council to provide real time monitoring stations for dust, noise and vibration. Amber triggers levels will be set on these monitoring stations which will alert Kier Construction of dust, noise and vibration levels approaching the red line. The monitoring system shall:

- Be capable of providing text and / or email alerts to multiple recipients, configurable per position.
- Be capable of streaming data live to a single project website for noise, vibration and dust. The web site shall:
    - Show live data based upon interval periods noise, vibration and dust.
    - Identify when these levels are breached.
    - Display historic and searchable data since the beginning of the project.

Monthly hard copy reports will be provided by the specialist consultant for the project that will report on the previous months readings.

In accordance with BS5228 monitoring locations would ideally be located at the neighbouring property along each site boundary adjacent to the nearest noise sensitive receptors. If this can't be arranged with the neighbouring properties, then the monitoring stations will be positioned around midpoint along each site boundary.

Noise, vibration and dust monitors will be strategically positioned at suitable locations around the perimeter of site, with a vibration monitor proposed for the existing UKPN substation within the Genesis resident carpark.

Noise

Monitoring equipment will be set up and action trigger levels established. The aim of the trigger level being to determine and achieve a suitable daily noise level at neighbouring

property. This is usually described as a dBA Leq(10hour) value, where the working day is 08:00 to 18:00 hours or Leq(5hour) 08:00 to 13:00 hours on a Saturday.

The action alert level should be dictated by what is reasonable considering proposals and using best practical means. It is widely acknowledged that action trigger levels could be established based on operational noise outputs from proposed plant items. It is counter intuitive to propose noise limits which are lower than the noise outputs of the items of plant, as this would unduly restrict the ability to undertake the required demolition and construction works.

The monitoring equipment will trigger alerts and depending on where they are installed, trigger level values will be adjusted with a view to controlling the noise impact at the neighbouring properties.

Vibration

BS 5228-2: 2009 provides the following guidance with regard to human perception and disturbance relating to vibration:

Vibration Level PPV (mm/s)	Effect
0.14	Vibration might just be perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration.
0.30	Vibration might be just perceptible in residential environments.
1.00	It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents.
10.00	Vibration is likely to be intolerable for any more than a brief exposure to this level.

Vibration action levels should lie somewhere between 1 – 10 mm/s PPV for intermittent vibration such as that of demolition / construction works.

Any action trigger levels imposed to control noise and vibration will be regularly reviewed (typically monthly) and adjusted up or down, based on review of data from noise and vibration monitoring equipment and feedback from the Local Authority and Neighbouring properties.

Where items of percussive / noisy plant are required, on site testing in advance of the works can be carried out. The test would inform Kier Construction and neighbours of the likely noise / vibration levels expected and would assist in the refinement of the activity to ensure best practical means.

Dust

As noted above, the real time monitors will record and notify dust levels and trigger points. The monitors will be set to an action trigger level of 250 µg/m3 averaged over a 15 minute period.

Please refer to the Noise, Vibration & Dust Management Plan Ref: 25309/NMP1/Rev1 dated 25th January 2019 for more detailed information.

36. Please confirm that a Risk Assessment has been undertaken at planning application stage in line with the GLA policy. The Control of Dust and Emissions During Demolition and Construction 2104 (SPG), that the risk level that has been identified, and that the appropriate measures within the GLA mitigation measures checklist have been applied. Please attach the risk assessment and mitigation checklist as an appendix.

Peter Brett Associates completed a project specific risk assessment in October 2017 and the resultant report Ref: 42230/3001 was submitted in support of the Planning Application 2017/5914/P. This was subsequently supported by a site specific Air Quality Dust Risk Assessment AQ001 dated 20th June 2018 at the request of Camden's Planning Team. A copy of both documents are included in Appendix G. The conclusion is that the site is of low risk for demolition, earthworks and construction activities and negligible for trackout and the mitigation measures determined from the GLA mitigation measures checklist and included within the Peter Brett Associate report will be actioned and carried out on site by Kier Construction throughout the demolition and construction phases.

37. Please confirm that all of the GLA's 'highly recommended' measures from the SPG document relative to the level of risk identified in question 36 have been addressed by completing the GLA mitigation measures checklist.

All the 'highly recommended' measures relating to a low risk will be addressed during the demolition and construction phases.

- **38. If the site is a 'High Risk Site', 4 real time dust monitors will be required. If the site is a 'Medium Risk Site', 2 real time dust monitors will be required. The risk assessment must take account of proximity to sensitive receptors (e.g. schools, care homes etc), as detailed in the SPG. Please confirm the location, number and specification of the monitors in line with the SPG and confirm that these will be installed 3 months prior to the commencement of works, and that real time data and quarterly reports will be provided to the Council detailing any exceedances of the threshold and measures that were implemented to address these.**

Although the site specific risk assessment carried out by Peter Brett Associates identifies the site as negligible to low risk and as such real time monitors are not required, Kier Construction propose to install real time monitoring for dust, noise and vibration using a specialist

consultant, for the purpose of identifying and controlling these environmental impacts for the benefit of our valued Client who will maintain a live environment within their adjacent property and for the other immediate neighbours in the area. These monitors will be installed ahead of operations on site to establish a base line and will be maintained throughout the demolition and ground works period in respect of vibration and throughout the whole demolition and construction of the frame process for noise and dust.

39. Please provide details about how rodents, including rats, will be prevented from spreading out from the site. You are required to provide information about site inspections carried out and present copies of receipts (if work undertaken).

Our Client 'The London School of Hygiene & Tropical Medicine' currently has in place a rodent management strategy, with bate boxes placed around the existing out buildings and covered shed where the demolition and construction is to take place.

The LSHTM Current Pest control contract with The Pied Piper cover treatments of rats, mice, cockroaches, garden ants & fruit flies for Tavistock Place. This includes:

8 visits per year included in contract , visits every 6-7 weeks

4 sticky board treatments (quarterly) over 4 days, morning & evening

Servicing & maintenance of 2 electric fly killer units

Pest control technicians :

- carry out routine checks on boxes & clear the rodents
- carry out site inspections
- provide reports and log book after each visit
- recommend proofing

Kier Construction would continue this strategy throughout the demolition and construction phases to keep rodent levels down. A specialist pest control company will be employed to perform an initial site survey and to then lay bate boxes as required of which would be maintained throughout the project duration.

High standards of site cleanliness, particularly within the site welfare will be a focus throughout construction and all site operatives will receive a briefing to this effect. Monthly environmental inspections will be carried out on site within which signs of the existence of rodents will be covered.

All connections to the sewer outfall will have installed an interceptor filled with water at the earliest opportunity to prevent rodents coming out of the sewers and onto site. Any open ends will be bunged as an additional precaution.

Please refer to Appendix P for evidence of ongoing pest control being carried out currently by The Pied Piper on behalf of The London School of Hygiene & Tropical Medicine.

40. Please confirm when an asbestos survey was carried out at the site and include the key findings.

Pennington Choices Ltd carried out for Kier Construction an Asbestos Refurbishment & Demolition Survey of the Schools existing buildings to be demolished and refurbished. The key findings were that Chrysotile asbestos was found in the corrugated roof sheeting to the out buildings and shed and bitumen adhesive below modern linoleum floor coverings. The asbestos reports are included in Appendix H.
Kier will be using a specialist licenced asbestos removal company to remove the asbestos. It is also our policy to appoint a specialist consultant to review method statements and to perform the final clearance certification.

41. Complaints often arise from the conduct of builders in an area. Please confirm steps being taken to minimise this e.g. provision of a suitable smoking area, tackling bad language and unnecessary shouting.

Appropriate conduct of site operatives will be a key part of the site induction which all operatives and visitors to site will receive. A strict policy of no smoking outside the site boundary will be put in place and the provision of a smoking area will be made available to operatives within site in a location which is not in clear site of adjacent properties. The use of bad language on site will not be tolerated by site management and instances will be dealt with immediately. Conduct of the workforce when away from site will also be covered by the site induction and all operatives will be required to remove protective clothing when outside of site.

In addition to the above, two-way radios will be utilised and used on site where appropriate to mitigate the need for shouting to pass messages on. Daily co-ordination meetings will be held with all site supervisors where issues of poor conduct can be dealt with and messages reinforced.

It is anticipated that site resources levels will peak at 90 No. A resource levelling exercise has been carried out on the programme to demonstrate the resource levels throughout the construction period. This is contained within Appendix M.

42. If you will be using non-road mobile machinery (NRMM) on site with net power between 37kW and 560kW it will be required to meet the standards set out below. The standards are applicable to both variable and constant speed engines and apply for both PM and NOx emissions.

From 1st September 2015

(i) Major Development Sites – NRMM used on the site of any major development will be required to meet Stage IIIA of EU Directive 97/68/EC

(ii) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IIIB of EU Directive 97/68/EC
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From 1st September 2020

(iii) Any development site - NRMM used on any site within Greater London will be required to meet Stage IIIB of EU Directive 97/68/EC

(iv) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IV of EU Directive 97/68/EC

Please provide evidence demonstrating the above requirements will be met by answering the following questions:

a) Construction time period (mm/yy - mm/yy):
08/19 – 12/21

b) Is the development within the CAZ? (Y/N):
Y

c) Will the NRMM with net power between 37kW and 560kW meet the standards outlined above? (Y/N):
Y

d) Please provide evidence to demonstrate that all relevant machinery will be registered on the NRMM Register, including the site name under which it has been registered:

Kier Construction confirms that in line with Kier Construction Best Practice (Appendix I) that relevant machinery will be registered and that during subcontract procurement we shall include the requirement for all our subcontractors to comply. The site has been registered under the name of London School of Hygiene and Tropical Medicine 2018.

e) Please confirm that an inventory of all NRMM will be kept on site and that all machinery will be regularly serviced and service logs kept on site for inspection:

We confirm that this will be maintained on site. Weekly inspection and regular service forms part of mandatory Kier Safety, Health & Environmental Standards and compliance will be monitored on an ongoing basis. Kier Constructions NRMM plant information form and register is included within Appendix I.

f) Please confirm that records will be kept on site which details proof of emission limits, including legible photographs of individual engine plates for all equipment, and that this documentation will be made available to local authority officers as required:

All relevant mobile plant will be logged with records on site that will include the required information to be compliant. The NRMM plant information form and register is included inAppendix I. All subcontractor orders will include this requirements.

SYMBOL IS FOR INTERNAL USE

Agreement

The agreed contents of this Construction Management Plan must be complied with unless otherwise agreed in writing by the Council. This may require the CMP to be revised by the Developer and reapproved by the Council. The project manager shall work with the Council to review this Construction Management Plan if problems arise in relation to the construction of the development. Any future revised plan must be approved by the Council in writing and complied with thereafter.

It should be noted that any agreed Construction Management Plan does not prejudice further agreements that may be required such as road closures or hoarding licences.

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately 3 months from completion.

Signed: 

Date: 20/06/19

Print Name: Justin Willison

Position: **Project Manager**

Please submit to: planningobligations@camden.gov.uk

End of form.