Construction Management Plan

pro forma v2.1

UCLH – Phase 5

Client – UCLH

Rev – Issue 3 - revisions made to address Camden comments received 02.11.16 on the previous revision are shown in red text throughout the document.

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Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
18/08/2016	Draft	Paul Coomber / Andrew Wilson
07/09/2016	Issue 1	Nicola Scammell
22/10/2016	Issue 2	Nicola Scammell / Andrew Wilson
02/11/2016	Issue 3	Andrew Wilson

Additional sheets

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

Appendix:

Date	Version	Produced by
18/08/2016	Draft	Paul Coomber / Andrew Wilson
07/09/2016	Issue 1	Nicola Scammell
22/09/2016	Issue 2	Nicola Scammell / Andrew Wilson
02/11/2016	Issue 3	Andrew Wilson

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.

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 Cyclist 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.**"

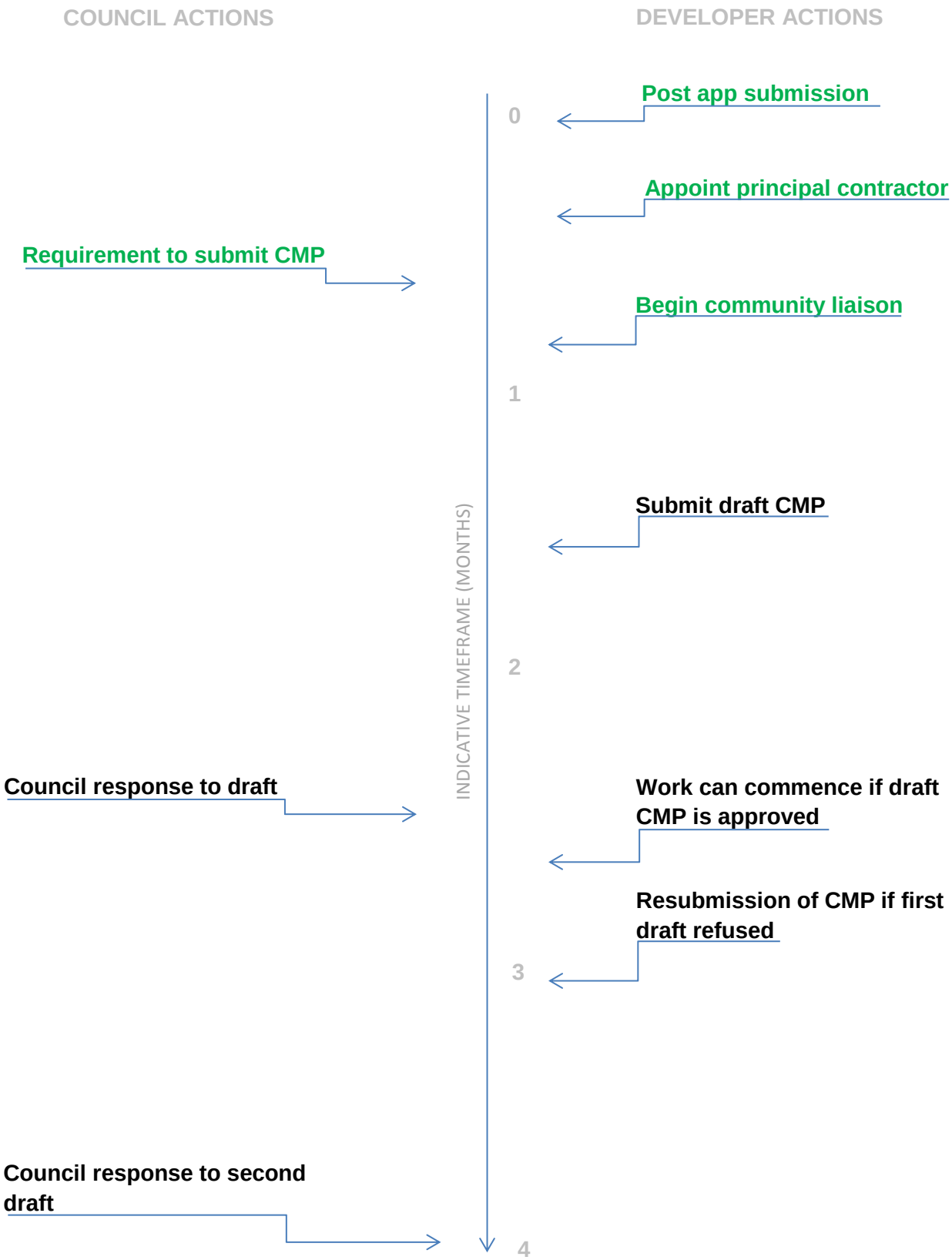
Please complete the questions below with additional sheets, drawings and plans as required. The boxes will expand to accommodate the information provided, so please provide as much information as is necessary. **It is preferable if this document, and all additional documents, are completed electronically 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: UCLH Phase 5, Huntley Street, Bloomsbury, London. WC1E 6AP

Planning ref: 2015/1281/P

Type of CMP - Section 106 planning obligation/Major sites framework: Main Works

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

Name: Andrew Wilson (Site Based Project Director)

Address: Mace, 155 Moorgate, London, EC2M 6XB

Email: andrew.wilson@macegroup.com

Phone: 07775 503 188

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: Andrew Wilson (Site Based Project Director)

Address: Mace, 155 Moorgate, London, EC2M 6XB

Email: andrew.wilson@macegroup.com

Phone: 07775 503 188

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: Nicola Scammell (Site Based Project Manager)

Address: Mace, 155 Moorgate, London, EC2M 6XB

Email: nicola.scammell@macegroup.com

Phone: 0782 725 8983

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: Andrew Wilson (Project Director)

Address: Mace, 155 Moorgate, London, EC2M 6XB

Email: andrew.wilson@macegroup.com

Phone: 07775 5503188

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.

The site is located in a mixed residential and commercial area in the Bloomsbury Ward of the London Borough of Camden at National Grid reference TQ 29480 82055. The site occupies an area of approximately 0.14ha and is bound to the North by Capper Street, to the East by Huntley Street and to the west by Shropshire Place. The site adjoins Gordon Mansions, a residential property, to the South and has a number or sensitive receptors in buildings around the project, mainly the UCL hospital, Macmillan Cancer building and Paul's House which is used to treat sick children.

UCLH Phase 5 will comprise of a new diagnostics, treatment and care of disorders of the ear, nose and throat and mouth including dental, hearing, speech and balance. The two existing buildings will be demolished (by others) prior to site possession by Mace leaving the basement slab in place.

The demolition of the existing buildings would have already been completed by the client in advance on Mace starting on site. The new development is a six storey building, including ground floor with a roof top garden and also three basement levels (14m from ground level to top of lowest basement slab). The building will be highly serviced with clinical and non-clinical facilities accommodated in levels -2 to 5 and services plant situated on floors -3, -2 & 6th floor.

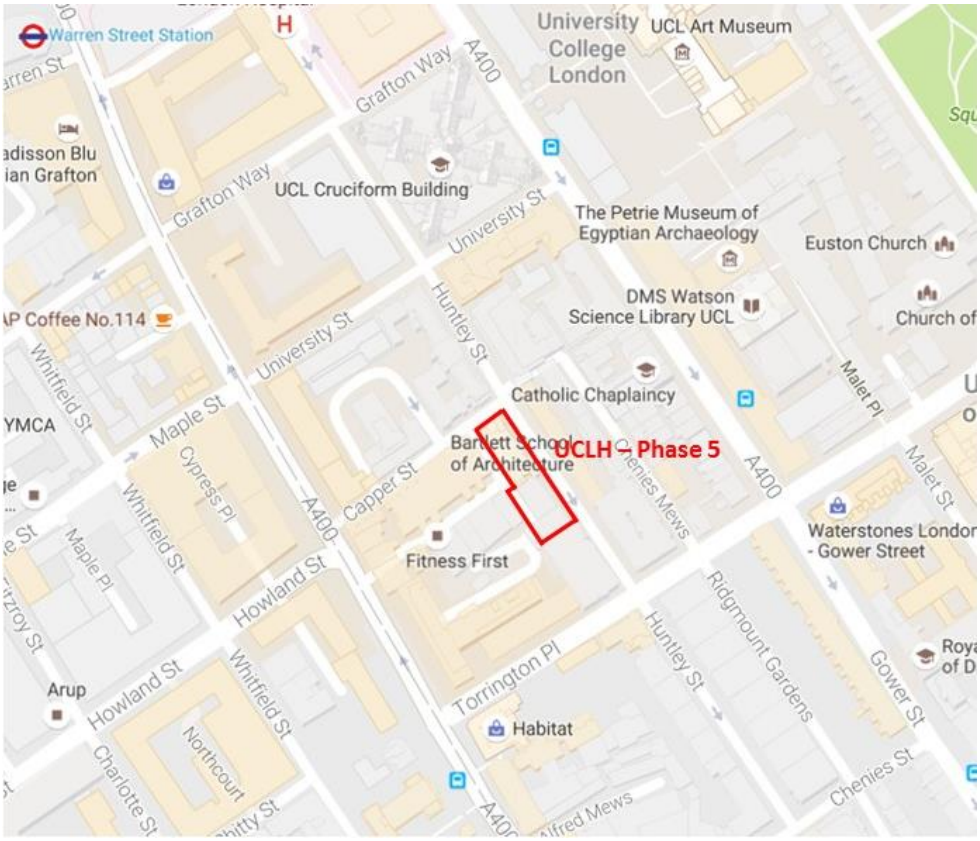


Figure 1 - site location (google maps)

Link to google maps:

https://www.google.co.uk/maps/place/Huntley+St,+Fitzrovia,+London+WC1E/@51.5231318,-0.1342025,17z/data=!4m5!3m4!1s0x48761b2ed9a35d09:0xd2aebc99803c327c!8m2!3d51.5226739!4d-0.1343827?hl=en

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).

Construction of a new build 80,000 ft2 Ear, Nose and Throat ambulatory treatment centre for the UCLH NHS Foundation Trust situated on Huntley Street in the London Borough of Camden:

Enabling Works

A steel gantry structure will be erected over Capper Street (between Shropshire Place & Huntley Street) which will be used to support our site welfare accommodation. The underside of the structure will be 5m above the highest point of the road in order that traffic can pass underneath the structure.

Construction

The construction will consist of a secant piled wall with capping beam followed by bulk excavation & installation of temporary propping works to enable excavation of basement to formation level (-3). The structural frame is to be a mixture of in-situ concrete, precast cores, post tension and pre-cast concrete with some steel elements. The façade comprises of Structural Framing System infill panels covered by brickwork skin along with a curtain walling system behind honeycomb brick work acting as solar shading. The building is topped with an inverted roofing system covered by a green roof. Internally, the building consists of blockwork / cavity drain liner wall to all the basement levels and most internal walls are formed of dry lining of various acoustic ratings. Ceilings are generally plasterboard in WC areas and accessible metal pan ceiling in all other areas. Due to the use of the building there are extensive building services along with a lot of medical equipment which will be installed as part of the works as well as after its completion.

Challenges

The project holds a number of challenges the some of which are:

- The restricted nature of the site area which uses the full extent of the footprint.
- Minimising the effect and disruption of our site deliveries particularly in relation to the impact on nearby receptors.
- Managing the expectations of the residents and hospital neighbours that exist around the project in relation to dust, noise and vibration.
- Building close to an existing properties to the south & west of the site and the temporary works involved.
- Narrow surrounding roads, particularly Capper Street and Shropshire Place.
- Managing the cumulative effect of the UCLH Phase 5 works in conjunction with the other large construction sites including the West End Plan (WEP) that are running concurrently.

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.).

There are a number of receptors around the site that could be affected by our activities. All will need careful consideration in particular Pauls House, the Macmillan Cancer Centre, Gordon Mansions and Shropshire House.

In order that we can have a focused approach to how we monitor and mitigate our impact on the wider community and neighbours we have accessed the level at which individual areas could be affected.

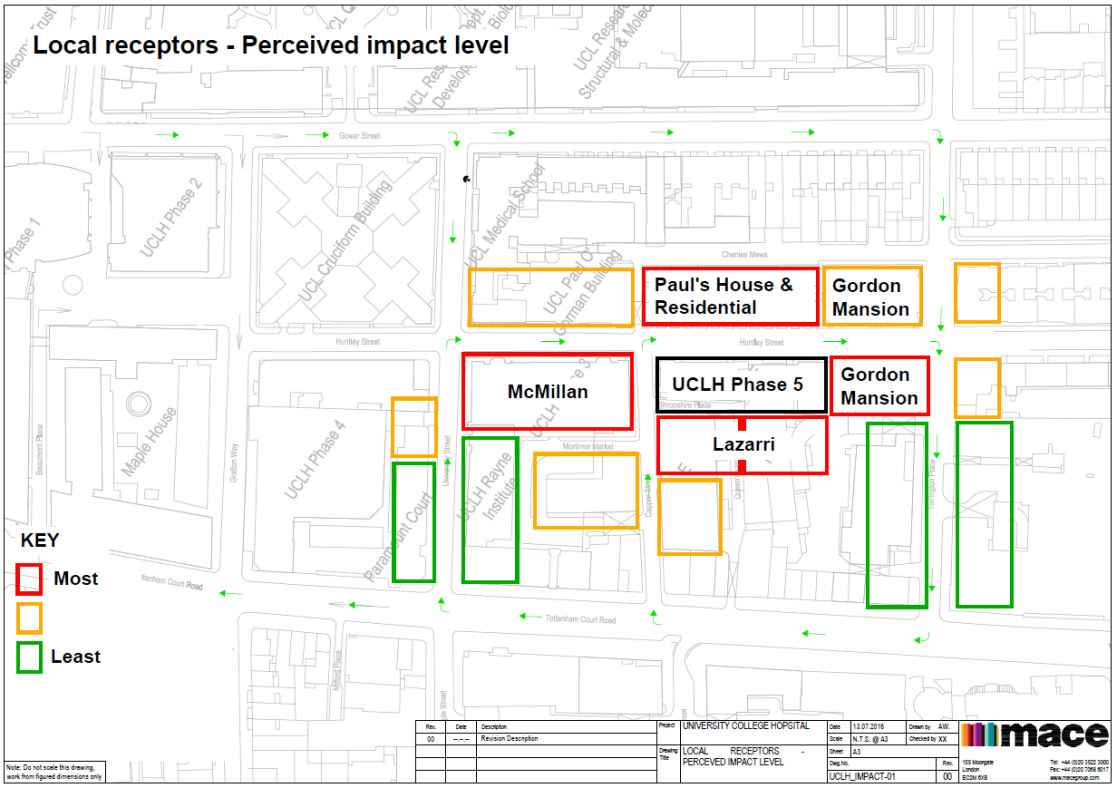


Figure 2 - local receptors

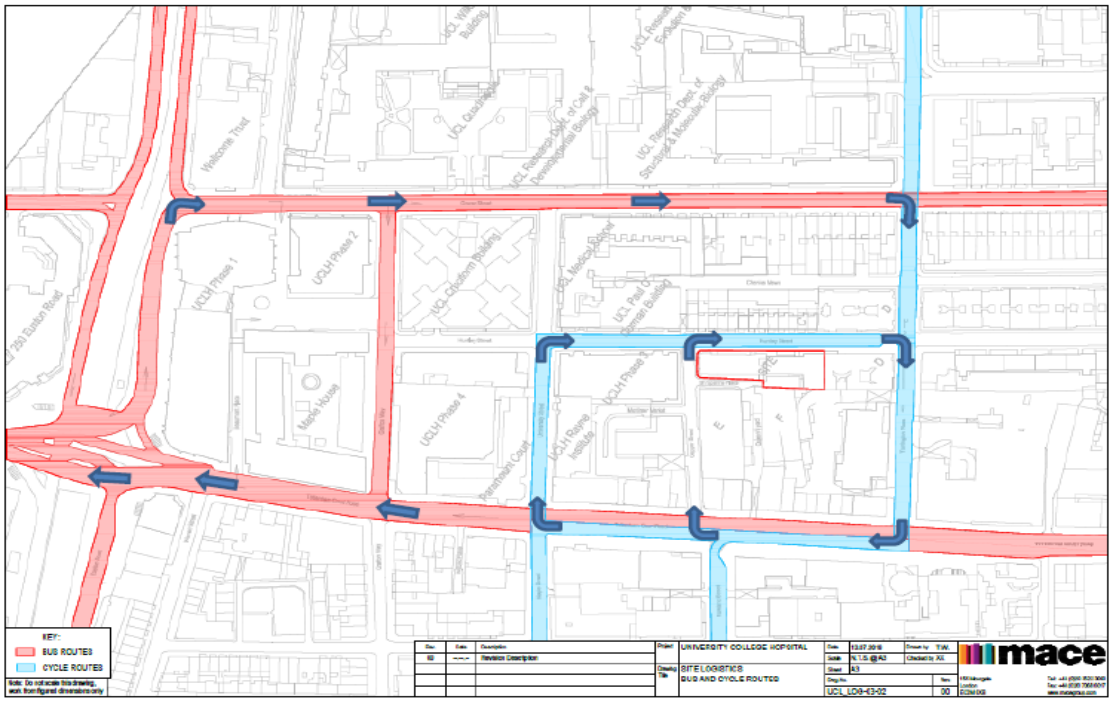
See Appendix G for full size version of the above drawing:

Local Receptors - perceived impact level	**UCLH_Impacts-01**	Appendix Page A120

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.

There will be three delivery gates on the Huntley Street pit lane and one delivery gate on Shropshire Place

The drawing extract below details the Cycle Routes (in blue) Bus Routes (in Red) and our main delivery route in blue arrows.



Full size copy of the above drawing and Details of Traffic & parking bay management / road information are located in Appendix E:

Site Logistics Bus and Cycle Routes	**UCL_LOG-03-02**	Appendix page A95
Existing Road Markings with Proposed Parking Bay Suspension Locations	**UCLH_LOG-03-05B**	Appendix page A101
Proposed Road Markings and Proposed Parking Bay Suspensions	**UCLH_LOG-03-06A**	Appendix page A102

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).

Key Dates:

Start On site -	07/11/2016
Piling works -	23/11/2016 – 28/03/2017
Basement works inc. excavation -	03/03/2017 – 19/01/2018
Frame works -	14/12/2017 – 02/07/2018
Envelope works -	08/06/2018 – 26/03/2019
Completion -	21/06/2019

Details of the programme are in appendix B:

UCLH - Phase 5 Master Tender Programme	**00002 rev 18/07/2016**	Appendix page A5

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

We intend to work the standard Camden working hours:

- 08.00 to 18:00 on Monday to Friday
- 08:00 to 13:00 on Saturdays for 'noisy' works (once at fit-out stage quiet internal works make be completed outside of these hours)
- No working on Sundays or Public Holidays or Saturdays on a Public Holiday weekend

Access to the site welfare will be from approximately 07:00 but no physical works will be permitted until after 08:00. The pedestrian site entrance is located on the corner of Capper Street and Huntley Street, away from the adjacent residential buildings. Personnel will generally approach site from Euston Square or Warren Street. If approaching from Goodge Street personnel will be advised to access site via Capper Street so as not to disturb residents along Huntley Street.

There will be some elements of works that will be required to take place out of hours such as piling rig delivery, tower crane erection. Neighbours will be notified in writing a minimum of 1 week in advance of these works taking place.

There are no planned late concrete pours although these may rarely be required if traffic problems etc are encountered.

Any planned out of hour's works will be requested as amendments to the section 61 that we intend to enter into. This is explained further in the response to Question 21 later in this document.

The client has appointed a communications advisor 'Local Dialogue' who we will work closely with to provide the neighbours with information about these specific works and general works in a communication bulletin.

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.

Preconstruction diversions and alterations

All pre construction service diversions have been carried out by the client using utilities specialist Reach Active. This included a new district heating main route and three temporary substations on Huntley Street which will replace the existing substations on site.

Services for the works

A water supply will be left in the site for Mace to connect to for supplies to the welfare gantry and temporary water for building purposes. Drainage connection will be into the existing sewer outfall.

Electricity will be provided from the temporary substation on Huntley Street.

There may be the need to temporarily remove a lamp post and two traffic signs situated on the corner of Huntley Street in order to allow articulated vehicles and one lamppost on Capper Street to facilitate the accommodation gantry.

Permanent services

The temporary substations on Huntley Street will ultimately be replaced by the new permanent substation being installed within the building as part of our works.

The sewer outfalls will remain as existing.

New water, gas and communications intakes will be installed form the existing services close by in the Huntley street footpath / pit lane. Mace do not propose to carry out any out of hours service works.

Reach Active service diversion drawing are located in Appendix A:

Reach Active Indicative Trench Design and Cross Section	**RA-UCLH-PH5-ITDCS-001**	Appendix page A3

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 grant 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 should consider establishing contact with other sites in the vicinity in order to manage traffic routeing and volumes. Developers in the Tottenham Court Road area have done this to great effect.

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. Details of meetings including minutes, lists of attendees etc. must be included.

In response to the comments received, the CMP should then be amended where appropriate and, where not appropriate, a reason should be 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.

Erith in conjunction with UCLH NHS Foundation Trust has engaged with the local community throughout the demolition phase and Mace will continue to do so throughout the pre-construction and construction phases of the project.

Prior to submission of this CMP we have presented our proposed strategies to the Community Working Group and considered their comments. The schedule referenced below identifies any points raised and our response to them. We have also reviewed the previous minutes from the CWG for the demolition phase and have endeavoured to incorporate comments where appropriate.

The programme of engagement as contained within the invitation letter is copied below:

Activity	Forecast Date (w/c)
CWG meet to establish relationship	17 August 2016
UCLH develop first draft of the CMP and issue to the CWG	22 August 2016
CWG meeting to discuss	1 September 2016
CWG comments on CMP issued	5 September 2016
UCLH second draft issued to CWG	7 September 2016
CMP issued to LBC for signoff	7 September 2016

Minutes of the CWG meeting chaired by Councillor Francis are located in appendix C along with all other related correspondence:

CWG invitation to neighbours		Appendix page A7
CWG invitation to Bloomsbury Ward Councillor		Appendix page A9
Schedule of invitees	UCLH_SCH-001	Appendix page A11
Minutes of CWG meeting 1	UCLH_CWG_M1	Appendix page A12
Minutes of CWG meeting 2	UCLH_CWG_M2	Appendix page A29
Schedule of Representations and Responses	UCLH_CWG_Representations & Responses	Appendix page A38

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.

Engagement with the community will continue throughout the works.

The following will be carried out by Local Dialogue with our detailed input:

- Monthly community working group meeting.
- Weekly update e-mail covering the next 3 weeks works.
- Six weekly newsletter including adjacent building sites.
- Short notice e-mail for any emergency works.
- General contact & complaints phone /e-mail / address.

The following will be provided directly by Mace:

- Emergency contact & complaints phone / in person.

Details of the above will be posted on the site notice board prominently located on the outside of the hoarding and easily accessible to neighbours as well as posted / e-mailed to them. Mace will be open and approachable on site to ensure any issues investigated immediately.

Mace will log all complaints on a project complaints register. The register will provide information on day, time, details of complaint, details of monitoring carried out and any additional mitigation works. Should complaints be received concerning works/activities, then all works/activities being the cause of complaint must cease (Tasks in progress accepted due to structural integrity issues), until such time as Best Practicable Means are confirmed.

Complaints Log Template	**MACE-UCLH-PH5-CL-001**	Appendix page A254

15. Schemes

Please provide details of any schemes such as the 'Considerate Constructors Scheme', such details should form part of the consultation and be notified to the Council. Contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

Its Mace policy that all projects sign up to the Considerate Constructors scheme and scores form part of the project Key Performance Indicators. As a project we will target achieving a Gold Award which the Mace team has a track record of achieving.

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.

There are several other construction projects underway at the same time as the UCLH Phase 5 project:

UCLH Phase 4 Proton Beam – The Bouygues project is currently underway and will be the closest site to Phase 5. Currently the Phase 4 CMP shows that the principle route for construction vehicles are entering and existing site via Grafton Way; this should not interface with the Phase 5 deliveries other than the short section of Gower Street from Euston Road to Grafton Way. The number of vehicles approaching the Phase 5 project is relatively few as such it is expected there will be little effect on Gower Street congestion. More recently Phase 4 has been granted permission for construction vehicles to enter the Northern section of Huntley Street from University Street. This junction of University Street and Huntley Street is the only vehicle access to Phase 5 which the exception of van sized vehicles which can approach from Capper Street. This junction therefore has the potential to be busy. Bouygues are principally using the Phase 5 South East gate for concrete pours for which Mace and Bouygues will coordinate our deliveries to ensure both sites do not peak on the same day and times. Mace and Bouygues are already meeting for formal weekly coordination meetings, are in daily contact and have access to each other's online delivery management systems. This strategic management and the onsite coordination between vehicle banksmen working in tandem will ensure the junction remains safe to vulnerable road users and clear to passing traffic.

UCLH A&E infill - The existing ambulance drop off area is to be in filled to provide a larger A&E facility. Construction vehicles are proposed to travel south along Gower Street into a Pit Lane on Gower Street. This pit lane will be situated where there are currently parking spaces as such it will not reduce the traffic capacity of Gower Street. On exiting the pit lave vehicles will turn right into Grafton Way and onto Tottenham Court Road as such will not interface with the Phase 5 deliveries. The A&E CMP is in the process of being agreed as such we will liaise with the project further as it progresses.

UCL Data Centre - This project is immediately to the rear of the Phase 5 site. Deliveries will be via Torrington Place form the UCLH logistics centre directly into the service yard as such traffic interfaces should be minimal. The project shares some neighbours as such it may be necessary to coordinate any noisy works.

West End Project – We have now been provided with the WEP programme and scope of works. The only direct interface Phase 5 will have with the WEP is on Gower Street as this is our proposed delivery route but WEP have advised they will not be reducing road capacity so it is not envisaged that congestion will be greatly affected.

The key mitigation measure will be the close coordination and cooperation of all the projects. Mace will engage in weekly meetings with Phase 5 and A&E and hope that the WEP can attend also. As is already in place Local Dialogue will continue to issue coordinated weekly e-mail updates and monthly newsletters that cover all UCLH works.

Please refer to appendix D for a map detailing the above projects:

Adjacent Construction Projects	**UCLH_LOG-IMPACT-02**	Appendix page A93

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 Considerations

17. Name of Principal contractor:

Mace Group, 155 Moorgate, London, EC2M 6XB

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 in the appendix and CLOCS Standard point 3.4.7).

Mace require that all vehicles are CLOCS compliant, this requirement is contained in the documentation sent to all Subcontractors at tender stage and is a contractual requirement. This will again be discussed at mid bid stage, before final place of order and also ate pre commencement meetings held between Mace site management and Subcontractor supervisors.

The agreed traffic route will be sent to all the sub-contractors who will be required to send all their suppliers. All deliveries will be booked in through an online booking in system which is run by our logistics contractor. Through this process the sub-contractor will have to confirm that the vehicle is compliant to enable him to place the booking.

Once on site the vehicle will be checked by the Traffic Marshal that control the gates to ensure the vehicle complies prior to being allowed on site for unloading. If found to be non-compliant the delivery will be rejected. The traffic marshals wear body cameras to record the test to confirm that all sensors, alarms and guards are in place. Every vehicle is tested at every delivery, even if it has attended site previously on the same day.

All compliance or non-compliance will be logged via our safety system to ensure that sub-contractors performance can be monitored and any unsuitable trends will be dealt with at the highest level of the companies.

A copy of the vehicle check list is included in Appendix D:

Vehicle log Sheet page 1	**UCLH_LOG-logsheet-01**	Appendix page A91
Vehicle log Sheet page 2	**UCLH_LOG-logsheet-02**	Appendix page A92

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:

Andrew Wilson - Mace Project Director

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 links to the Transport for London Road Network (TLRN).

The proposed traffic route for UCLH P5 project will be as below. The route has been chosen to remove left hand turns and also to avoid the Phase 4 main site gate. The route has been designed to loop around the site in one direction for both deliveries incoming and leaving the project. The route has been discussed with Camden during the pre-construction period and agreed with Camden Highways officer as the most suitable for the proposed restrictions due when works to the West End Plan start.

Incoming deliveries

All deliveries will come from the West on the Euston Road A501, coming off the main trunk road at Euston Square junction taking the South slip road. All vehicles will turn into Gower Street (A400) from Euston Road (RH turn). The vehicle will then continue down Gower Street turn right into Torrington Place and head towards the Tottenham Court Road Junction. The vehicle is then to follow Tottenham Court Road until it arrives at the University Street junction where it is to turn right into University Street. The vehicle will then turn right into Huntley Street and head for the site pit lane (which will be drive in / drive out in order that no reversing is required) where it will be checked in by the logistic contractor and a CLOCS compliance inspection carried out. Once this inspection is complete unloading will be permitted.

The pit lane will be one direction and will have Traffic marshals with stop / go boards. These marshals will be permanently situated at the pit lane to hold any traffic or cyclist when a delivery is coming out of the pit lane, additionally any visual aids will be used at the pit lane such as Trixi mirrors will also be reviewed and installed if it aids the diver's vision.

Deliveries exiting the site

When exiting the project the vehicles will continue following Huntley Street to the Torrington Place junction where the vehicle will turn right towards Tottenham Court Road A400 (RH turn). Once at the end of the Torrington Place the vehicle will only be allowed to turn towards Euston Road (RH turn). Once at Euston Road (Euston Tower junction) vehicles will be permitted to continue straight on to Hampstead Road A400 or turn right back on to Euston Road A501 trunk road (RH turn).

Deliveries to Shropshire Place (small vans only)

Deliveries to gate 4 on Shropshire Place are to use the same pre-determined route to Gower Street A400 they are to continue along Gower Street A400 to Torrington Place junction. Turn into Torrington Place (RH turn). Continue towards Tottenham Court Road junction. Turn onto Tottenham Court Road A400 (RH turn) upto the Capper Street junction. Vehicles are to turn into Capper street (RH turn) heading East to Shropshire Place. Once at Shropshire Place and due to the fact the road is a dead end any vehicle will be reversed (under traffic marshal control) into the unloading area, this will allow the vehicle to drive forward out of the project out of Shropshire Place back onto Capper Street (RH turn) heading to turn onto Huntley Street (RH turn). The delivery is to continue past the pit lane and then follow the same route as all other vehicles exiting the project. Deliveries to Shropshire place will be limited in number and only small vans will be permitted. This route will be reversed to give access to Capper Street from Huntley Street instead of from Tottenham Court Road when the WEP close the Capper Street / Tottenham Court Road Junction. When this happens the short section of Huntley Street in front of the MacMillan Cancer Centre will be changed to two way traffic. The Phase 5 works will not prevent this happening.

If for any reason such a delayed preceding delivery a vehicle cannot be accommodated within the pit lane it will be cancelled. If the Vehicle is already on the road towards site a traffic marshal will be repositioned to the Gower street junction to re-direct vehicles to continue down Gower Street A400 and loop the site via the Torrington Place and Tottenham Court road route. Vehicles will not be permitted to queue or park on adjacent streets or outside the pit lane.

Huntley Street, Torrington Place and half of University Street are designated cycle routes, these routes are unavoidable as the site is situated in Huntley Street. To safely exit our vehicles from site additional traffic marshal control will be provided at the Huntley Street / Torrington Place junction to help with deliveries crossing cycle lane.

See appendix D for diagrams:

Logistics Plan - Delivery Access Points	**UCLH_LOG-Img-001**	Appendix page A86
Surrounding Area Junction Photos	**UCLH_LOG-04-01**	Appendix page A87
Vehicle Tracking Articulated truck	**UCLH_LOG-03-01A**	Appendix page A88
Vehicle Tracking Concrete Mixer	**UCLH_LOG-03-01B**	Appendix page A89
Vehicle Tracking Light Goods Van	**UCLH_LOG-03-01C**	Appendix page A90

See appendix E for bus and cycle route diagram:

Site Logistics bus and cycle routes	**UCLH_LOG-03-02**	Appendix page A95

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.

Mace subcontractors will receive a copy of the Construction Phase Plan and the Traffic Management & Logistic Plan for the project. This will be revised and reissued as necessary as the project progresses and all sub-contractors and suppliers will be contractually obliged to adhere to it.

The Traffic Management & Logistic Plan will contain the route map with in it and this is again discussed with the sub-contractor supervision at their pre-start meeting. A separate route map will be issued to the sub-contractor supervision electronically when they place a booking via the online system in order that they can forward it direct to their suppliers. Both the delivery route and the CLOCS requirements are stated in the site induction that all operatives and supervisors attend.

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.

Delivery Hours General

Deliveries will be permitted as Camden's 'accepted' hours of 09:30 - 16:30 Monday to Friday and 08:00 - 13:00 on Saturdays. Camden have confirmed that ready mixed concrete deliveries are acceptable between 08:00 - 18:00 Monday to Friday and 08:00 - 13:00 on Saturdays.

Whilst the above concession is appreciated and goes someway to addressing the concerns raised with the restricted delivery hours we would like to further discuss the possibility of a concession of 4 vehicles prior to 09:30 and 4 after 16:30 for the duration of the project. As discussed in the previous commentary below this has advantages to local neighbours, the hospital and the WEP (fewer deliveries will delay the project completion potentially knocking onto WEP). The increase of 8 vehicles per day at peak will have little effect on Congestion and the safety of vulnerable road users will be mitigated as the measures detailed in this document.

The following paragraph has been retained from issue 2 of the CMP for reference:

Acceptance of the above hours has been included as discussed at the S106 meeting with Camden on the 21.10.16 but we would like to discuss further the extension of these hours. We believe there is genuine benefit to the residential neighbours, hospital patients, WEP (as discussed Andy Hellyer) and to safety of extending these hours. The allowance of four vehicles between 08:00 and 09:30 and four between 16:30 and 18:00 will have a very minor impact on wider traffic congestion (especially when considering the very short distance from the major trunk road) which we understand is the primary driver for this restriction but would have a great positive impact on the above mentioned receptors. If these hours are not accepted in the future there will be more deliveries required in the permitted hours, weekend work will be required which will affect the local residents and the entire programme will extend which will negatively affect all receptors including WEP. We look forward to discussing our proposals further Camden in the future.

The following two paragraphs have been retained from Issue 1 of the CMP:

Our proposal for deliveries based on consultation with the Community Working Group is 08:00 to 18:00 Monday to Friday and 10:00 to 14:00 on Saturdays if required. This proposal is based on weekday deliveries taking place between 08:00 and 18:00. In additon to CWG consultataion we have assesed the local area and mitigation methods employed and considered the following: there are no schools on the route, current precedence of normal working hour deliveries and the pit lane ensuring no backed up vehicles and interfaces with peak times at adjacent buildings.

The peak vehicle movements for the project will be associated with the bulk excavation will be for a relatively short period of time only. Allowing the deliveries to be more evenly spaced throughout the day as opposed to restricted into a shorter delivery period will be beneficial and safer. The busiest neighbour traffic is associated with the MacMillan cancer centre which peaks at around 09:30. Our deliveries commencing before this as opposed to at the same time will be beneficial to residents, our site and the hospital.

Initial Deliveries and Site Preparation

The early weeks of the project will involve a number of large deliveries, including cabins, steel gantry, welfare accommodation, piling rig, crawler and temporary propping. The piling equipment will be delivered on 2.55m wide 6 axle 40t articulated lorries which the police may require be bought into central London out of site hours due to the size of the plant. Concrete will be supplied via approximately 6 to 8 No' 4 axle 33t concrete lorries per day with 4 to 6 No' 4 axle 30t "muck away lorries" for excavated material removal. The piling mat material will be delivered by up to 18 No 4 axle 30t "muck away lorries".

The above large deliveries will be on different days. The maximum number of deliveries in any one day will be the 18 No' piling mat material deliveries. No deliveries will be accepted onto site before 09:30 or after 16:30 except for oversize vehicles (potentially 4 No) as required by the police and concrete deliveries. The hoarded pit lane will accommodate 3 vehicles of this type as such no queuing or circling of local roads will be necessary or permitted.

Basement Construction - Piling and Excavation

Piling will be followed by bulk excavation and installing temporary works progressively and we envisage for the first week 1 No' 2.55m wide 6 axle 40t artic per day delivering the large & small excavators and 4 to 6 No' smaller 3 axle Lorries ranging from 3.5 – 20 tonne delivering smaller plant and materials and temporary works progressively. During piling (approximately 12 weeks duration) a combination of approximately 25 No' 4 axle 30t "muck away lorries" and concrete lorries per day will attend site.

Following piling the main excavation will commence (approximately 18 weeks duration) at which time a peak of approximately 35 No' 4 axle 30t "muck away lorries" per day will remove the excavated waste from site. This rate will quickly reduce as the basement gets deeper the rate of excavation will slow.

The maximum number of deliveries in this phase in any one day therefore will be the 35 No' bulk excavation lorries. No deliveries will be accepted onto site before 09:30 or after 16:30 except concrete deliveries. The hoarded pit lane will accommodate 3 vehicles of this type as such no queuing or circling of local roads will be necessary or permitted. Cont'……

Figure 3 - piling works CGI

Figure 4 - basement excavation CGI

Substructure Concrete Frame and Crane Erection

Once at formation the -3 level basement slab will be cast followed by the basement slabs and columns with concrete being fed by up to 18 No' 4 axle 33t concrete Lorries per day when pouring the deep sections of the raft slabs. This phase is approximately 26 weeks duration. Precast concrete core elements will be delivered by articulated lorry, this method will reduce the need for delivery of shutters and concrete associated with cores.

It will be at this stage the two tower cranes will be installed. This will require a road / footpath closure licence for Huntley Street for safety reasons to allow the setting up the mobile crane most probably a 180-200t. The erection of both cranes will be done over two weekends. The components for each of the cranes will be delivered on a number of 2.66m wide 6 x axle 40t artic lorries staggered through the day (approximately 6-8 No') and some small ancillary vehicles. It is intended that the tower crane erected first will erect the second tower crane as such reducing mobile crane requirements, TTO applications will be made for this activity.

The maximum number of deliveries in this phase in any one day therefore will be the 18 No' concrete Lorries. No deliveries will be accepted onto site before 09:30 or after 16:30 except for the tower crane erection and concrete deliveries. The hoarded pit lane will accommodate 3 vehicles of this type as such no queuing or circling of local roads will be necessary or permitted.

Figure 5 - tower crane erection

Superstructure Concrete Frame Construction

Once at ground floor level the frame construction will be much quicker per floor than the basement (approximately 28 weeks duration). This will require a number of concrete deliveries depending on the pour sizes ranging from 4 No' per day up to 10 No' per day when pouring slabs. Concrete deliveries will be 4 axle 33t concrete lorries per day in addition to 2 - 3 rigid and articulated lorry deliveries of formwork and materials. Precast concrete elements will continue to be delivered by articulated lorry (approx. 2 No / day).

All the deliveries for the superstructure phase will be unloaded from either gate 1-3 (pit lane) and occasional small deliveries to gate 4 (Shropshire place). All deliveries will be managed by our logistic contractor who will have traffic marshals on each gate.

Removal of the tower crane will be similar to its installation, this will require a road / footpath closure licence for Huntley Street for safety reasons to allow the setting up the mobile crane. The components for each of the cranes will be removed on a number of 2.66m wide 6 x axle 40t artic lorries staggered through the day (approximately 6-8), plus some small ancillary vehicles.

The maximum number of deliveries in this phase in any one day therefore will be the 10 concrete lorries and 5 other vehicles. No deliveries will be accepted onto site before 09:30 or after 16:30 except for the tower crane erection and concrete deliveries. The hoarded pit lane will accommodate 3 vehicles of this type as such no queuing or circling of local roads will be necessary or permitted.

Envelope construction

The envelope phase of the project involves number of different trades ranging from brickwork, curtain walling and windows, SFS cladding, roof steel and green roofing materials, along with the scaffold materials required to access these works. The majority of deliveries will be via on 5 axle 30t lorries with smaller vans / lorries ranging from 3.5 – 20 tonne delivering smaller plant and materials. Some of the prefabricated cladding and MEP elements will be delivered on 2.66m wide 6 axle 40t artic lorries. This prefabrication strategy will reduce the overall number of deliveries coming to site compared to if traditional construction methods were used.

The maximum number of deliveries in this phase in any one day therefore will be approximately 10 lorries of varying size. No deliveries will be accepted onto site before 09:30 or after 16:30 except concrete deliveries. All deliveries will be contained within the hoardings.

Figure 6 - envelope construction

Internal Fitout

As the project progresses to the next phase, two hoists will be installed to serve the remainder of the substructure works and fit out programme. A large 6m hoist will be installed on the Huntley Street elevation and a smaller hoist on the Shropshire Place elevation.

Figure 7 - Huntley Street 6m hoist

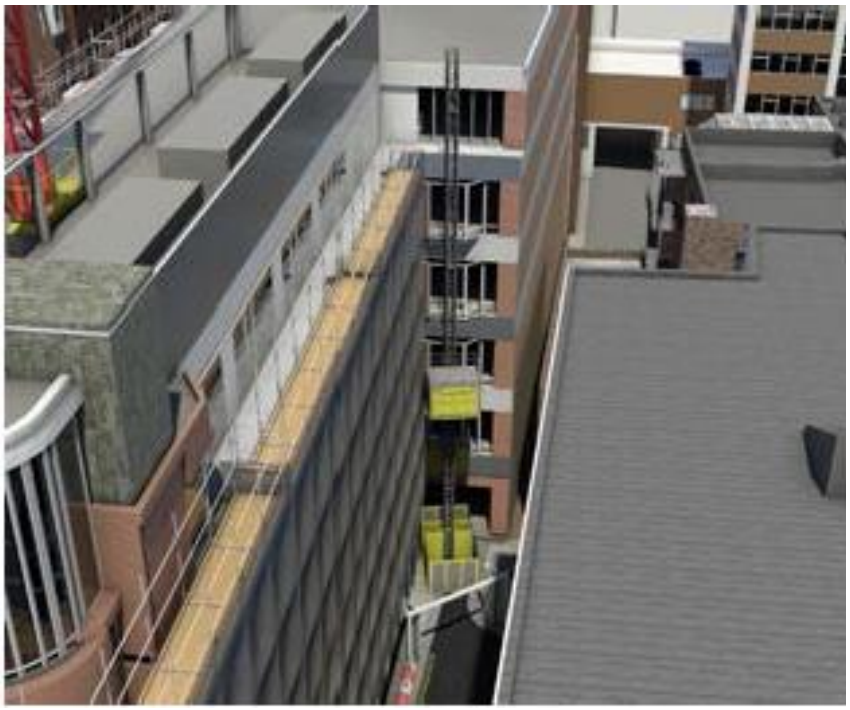


Figure 8 - Shropshire Place small hoist

The internal fit out period will be generally served by smaller 2-3 axel vehicles ranging from 3.5 tonne to 20 tonne. We would expect approximately 10 deliveries per day of this size with the largest deliveries being prefabricated M&E modules. There will also be waste collections via a compactor and 3 axeled 30t skip lorries twice a day at peak.

This will continue until completion.

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

The Phase 5 project will interface with other site traffic on the A400 Gower Street imediately as the vechicles turn off Euston Road but from there all traffic will proceed to its own localised site entrances as such there are no final queing or parking interfaces.

Please refer to the answer to question 16 in relataion to this question also.

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.

Mace will engage a logistic contractor to undertake the management of deliveries. We will use an online system (Datascope) to manage all delivery bookings and time slots for each gate. Both hoist and crane usage can also be identified so unloading can be as efficient as possible.

Any vehicles that come to site without the appropriate booking will be turned away at Huntley Street / University Street junction and told to continue down to Gower Street so there is no congestion in Huntley Street. No vehicle will be accepted by the logistic team if it has not been previously booked.

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.

Off-site loading areas are not suited for the project, instead we intend to operate within our hoarded and pit lane areas a just in time policy for material delivery. Due the lack of storage space on site it is intended that materials will be immediately lifted or hoisted into the work area required to reduce the need for double handling and increase the efficiency of the crane usage.

If a sub-contractor needs to take delivery of more materials than are required for what they need at any one point in time due to material supplier stipulations then we will require that the sub-contractor deliver the materials to their own yard first and then make separate smaller deliveries to site observing the just in time policy.

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).

There are a number of opportunities that have been identified to pre fabricate elements of the building rather than construct from individual materials and these will be progressed through the design phase to ensure that we can limit the amount of vehicles required and waste produced on site.

We are actively looking for the opportunity to use prefabrication for some of the structural and envelope and fit out elements to reduce the quantity of deliveries significantly.

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 Marshalls must ensure the safe passage of pedestrians, cyclists and other traffic when vehicles are entering and leaving site, particularly if reversing.

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

It is proposed that the site will operate two sets of gates:

Gates 1 to 3 - the pit lane on Huntley Street will be where the majority of vehicles will be accepted. The pit lane will have a one way in / out arrangement with an additional central gate to allow the pit lane to be split in two sections which will allow more efficient management of deliveries. Traffic marshals will operate a stop / go board arrangement to stop traffic whilst the delivery exits the pit lane. The gates at either end of the pit lane will be hinged and the centre gate will be sliding. Gates will be opened and closed between each delivery and a secondary red and white tape barrier employed whist the gate is being operated. The locations of the gates have been based on the vehicle tracking diagrams.

Gate 4 – (from frame onwards and during site set-up) situated in Shropshire place will be for infrequent smaller vehicles due to the tighter access road. Vehicles will be marshalled whilst reversing into the unloading area.

Swept path drawings are referenced in part c of this question below.

Please refer to appendix D for a plan of the site gates:

Logistics Plan - Delivery Access Points	**UCLH_LOG-Img-001**	Appendix page A86

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

Senior Construction Manager Paul Coomber will be responsible for ensuring that a workable logistics plan is in place, the measures set out I this CMP are enforced and that everybody understands and works within the plan. A dedicated logistics manager will be responsible for the day to day implementation of the plan and ensuring that adequate resources are in place to manage the traffic route and vehicle movements to and from site.

The pit lane (gates 1-3) will be one direction and will have Traffic marshals with stop / go boards situated at the pit lane to hold any traffic or cyclist when a delivery is coming out of the pit lane. Additionally visual aids such as Trixi mirrors will also be explored and installed if it aids the driver's vision.

Gate 4 is in Shropshire Place which is a dead end. Any vehicle will need to reverse under traffic marshal control into the unloading area, this will allow the vehicle to drive forward under Traffic Marshal control out of the project out of Shropshire Place back onto Capper Street (RH turn) heading to turn onto Huntley Street (RH turn).

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).

Please refer to appendix B for the swept path drawings:

Vehicle Tracking Articulated truck	**UCLH_LOG-03-01A**	Appendix page A88
Vehicle Tracking Concrete Mixer	**UCLH_LOG-03-01B**	Appendix page A89
Vehicle Tracking Light Goods Van	**UCLH_LOG-03-01C**	Appendix page A90

Traffic marshals will be placed at all four main junctions that our route follows as well as a vehicle spotter on Gower Street (see Q27a for further detail). With particular reference to the right turn from Tottenham Court Road into University Street it may be necessary for vehicles to position themselves in the outside lane of Tottenham Court Road and turn across the inside two lanes. In order to facilitate this manoeuvre safely it will be necessary to stop the traffic in the inside two lanes very briefly. This will be done by our vehicle banksmen of which two will be available at this junction and then lead the vehicle up University Street and into Huntley Street. It is likely that this will only be required for the relatively few articulated vehicles attending site. Assuming Parking restrictions on University Street are obeyed any small and rigid vehicles should be able to make the turn from the outside lane as such not requiring traffic to be stopped.

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.

It is only envisaged that vehicles will access the site in the piling and initial groundwork stages following installation of a new and clean piling mat. A jet wash will be positioned in the pit lane at the top of the temporary vehicle ramp into the exiting basement to wash off any arising that may be on the vehicles. Once the basement excavation starts all vehicles will be at road level within the pit lane.

Even at this stage dust levels will be kept down to a minimum by the use of a road sweeper.

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.

The perimeter of the building footprint takes up the full extent of the site. As such a pit lane hoarding will be constructed on Huntley Street and a hoarded area on Shropshire Place at certain times of the project. This will allow all deliveries to be unloaded within a secure hoarded area reducing any risk to vulnerable road users and reducing any traffic congestion. Ultimately this is the safest solution for all parties. In order to facilitate this a Temporary Traffic Order (TTO) and parking suspensions will be required (see question 24 below).

We anticipate utilising four traffic marshals, 1 ticket checker and a security guard at peak.

All vehicle movements in and out of unloading areas will be under traffic marshal control and will be unloaded with the tower crane or self-unload if the materials are to be distributed by the hoist.

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.

- **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.

Temporary Traffic Orders (TTO's) will be required for the project for the Huntley Street Pit Lane hoarding, additional double yellow lines, Huntley Street / Torrington Place road narrowing adjustment, accommodation gantry to Capper Street and road closures to facilitate site set up and crane erection etc.

The main issues associated with the above is the reduction in residents parking spaces and the reduction of single yellow lines for blue bade dispensation permits. Several measure have been put into place to mitigate this impact most notably a wholesale change into the way the dispensation permits are issued. The number, duration and enforcement of the system is now much more robust. The UCLH Parking and Traffic Management Policy is contained in the CMP appendix page A214. It was noted that the council will not support the provision of the lost residential parking bays to another location as such our previous suggestions in this regard can be ignored. The more significant road closures on Huntley Street and Capper Street are required for short periods of times to facilitate specific activities such as tower crane erections as such their impact short lived but heavily managed. These suspensions have been in place during the previous phase of the works as such there is a precedence for them and an understanding with the local receptors.

Parking suspensions will be required in order to facilitate a clear carriageway width in the location of the Huntley Street pit lane and to increase room for vehicles to have enough sweep when turning. They will be required for the duration of the project. The number of bays to be suspended has been kept to the minimum and split between standard operating suspensions and short term suspensions for large delivery vehicles.

Suspension for the duration of the project:

- Along Huntley Street opposite the site where the pit lane is to be installed we need to suspend 10 No' residents parking bays and the solo motor cycle bay in front of 46-70 Huntley Street.
- Last residents parking space (1no) in front of Gordon Mansions to allow a crossing point (only required if a crossing point is deemed necessary by Camden).
- Last 2no parking bays in front of the Cancer Centre on Capper Street between Mortimer Market and Huntley Street junctions (for the accommodation gantry).

Individual bays for intermittent large deliveries in addition to the above:

- The 1st Pay bay to Huntley Street outside 74 Huntley Street (1no).
- 1st disabled bay outside the hospital (1no) plus the hospital concession parking on the single yellow lines on the junction to University Street / Huntley Street. This will only be required intermittently only for large deliveries.

Refer to appendix E for the locations of the above parking bays:

Proposed Road Markings with proposed Parking Bay Suspensions - Main Duration	**UCLH_LOG-03-06A**	Appendix page A102

We will liaise directly with UCLH to address the issue of patient dispensation permits which currently permit disabled badge holders to park on single and double yellow lines which would impact the swept paths of delivery vehicles at junctions. It is likely that Mortimer Market will be grater utilised for patient drop off and pick up.

Double Yellow Lines in some locations will be required to prevent out of hours parking on single yellow lines causing issues with morning deliveries

Refer to appendix E for the locations of the required double yellow lines:

Existing Road Markings and Parking Bays	**UCLH_LOG-03-05B**	Appendix page A101
Proposed Road Markings with proposed Parking Bay Suspensions - Main Duration	**UCLH_LOG-03-06A**	Appendix page A102

Road closures will be required for construction of the pit lane (approx. 1 weeks), construction of the Capper Street accommodation Gantry (approximately 1 months), accommodation cabin installation onto the gantry (approximately 2 weeks), erection of tower cranes (approximately 2 weekends) and closure of Shropshire place initially for site set up (approx. 3 months) and later in the project for logistics routes (material lay down). The closure of Shropshire Place only affects deliveries to Queens Yard; an agreement has been made between UCLH and the occupants of Queens Yard to distribute deliveries for them. A logistics operative is provided to distribute deliveries from Capper Street (larger deliveries will be received to the pit lane) to Queens Yard along the footpath that remains open. Queens Yard also has vechciluar access from Tottem Court Road should any one off larger deliveries be required. Copies of letters of agreement can be provided with the TTO if required. Shropshire Place has been closed for several months to date for services works as such this procedure is well rehearsed.

Road closure for hoarding installation	**UCLH_LOG-03-04D**	Appendix page A100
Road closure for gantry erection	**UCLH_LOG-03-04A**	Appendix page A97
Road closure for cabin installation and tower crane	**UCLH_LOG-03-04B**	Appendix page A98
Traffic management layout including Shropshire place	**UCLH_LOG-03-04C**	Appendix page A99

The Huntley street road narrowing is identified on the articulated lorry swept path drawing in Appendix D:

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 detailed in preceding questions the new phase 5 building takes up the full extent of the site as such it will be necessary to use some areas of the local highways and foot paths for logistics purposes.

The main highways works necessary to enable the construction works are listed below:

- Temporary closure of Capper Street to enable gantry construction.
- Temporary closure of Huntley Street to allow hoarding construction.
- Narrowing of Huntley Street to accommodate pit lane (full project duration).
- Welfare accommodation Gantry situated over Capper Street allowing traffic to pass beneath (full project duration).
- Parking suspensions and yellow lines to facilities the above and vehicle tuning paths (full project duration).
- Closure of Shropshire place initially to enable site set up & later during the frame and fit-out stages.
- A temporary vehicular crossing is not possible due to the very shallow depth of existing services due to coal vaults. The footpath will be protected with steel road plates as it was during the demolition phase.

TTO's and Licences have been submitted and we look forward to agreeing these on approval of this CMP when the relevant parties will be permitted to engage with us.

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Appendix F listed below identifies the key stages of the project with corresponding logistical arrangements. Associated road closure drawings are referred to in question 24 above.

Initial works and piling	**6825_UCH_LOG_02-03**	Appendix page A108
Excavation and Basement construction	**6825_UCH_LOG_02-04**	Appendix page A109
Concrete frame and envelope	**6825_UCH_LOG_02-05**	Appendix page A110
Internal works - Shropshire Place closed	**6825_UCH_LOG_02-06**	Appendix page A111
Internal works - Shropshire Place open	**6825_UCH_LOG_02-07**	Appendix page A112

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

Road signage will be provided as detailed in appendix E:

Lux road signage proposals - Main Duration	**HIRE ADVICE 177-00001**	Appendix page A103
Lux road signage proposals - Capper St Gantry Erection	**HIRE ADVICE 177-00002**	Appendix page A104
Lux road signage proposals - Cabin and Crane Erection	**HIRE ADVICE 177-00003**	Appendix page A105
Lux road signage proposals - Shropshire Place closed	**HIRE ADVICE 177-00004**	Appendix page A106

Hoardings will be branded in UCLH colour and graphics with all required construction site safety and directional signage incorporated.

Lighting to hoardings and timber / concrete baulks will be LED bulkheads mounted on them (white along footpaths and red against highways and vehicle gates). Lighting will also be provided to the footpath alongside the office gantry where the gantry may block out some daylighting or street lighting. The Huntley Street street lights have already been temporarily relocated to the opposite side of the road for the duration of the project.

Ramps envisaged are a vehicle ramp in to the existing basement for the piling and early excavation works and any required to kerb edges where foot path diversions are in place of access point into site. These will be dropped curbs, not plastic temporary ramps. Generally the vehicle entrances are straight forward at road level.

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).

The Huntley Street footpath alongside the site will form part of our pit lane and scaffold area as the building progresses, as such will remain closed to pedestrians (currently closed for demolition). It is intended for pedestrians to be diverted and use the opposite footpath, signage will be erected to alert them to cross to the opposite side. Due to the size of the street and the road being one way only it is not envisaged there is a need to provide temporary crossings points or any traffic lights. If the kerb is high at this point then drop kerbs be installed to aid wheel chair access.

Pedestrians will also be diverted in Capper Street as the footpath between Shropshire Place and Huntley Street becomes part of our site (as it currently is for demolition). Again it is not envisaged that a temporary crossing point is needed and that pedestrian signage will be sufficient.

The speed limit will also be reduced to 10mph in Huntley Street and Capper Street where our traffic interventions exist.

Road Closures will also be required for specific tasks throughout the project. Capper Street will need to be closed for the installation of the accommodation gantry structure and cabins for approximately 8 weeks (same for dismantle). Huntley Street will need to be closed for a period of a weekend for each of the two tower crane installations (again for dismantle) and also a 3 week closure will also be required when we install the pit lane (and same for dismantle).

Shropshire Place road is to be closed initially to facilitate site set up and later during the project to accommodate site logistics routes. Shropshire Place footpath will remain open throughout the duration of the project to facilitate pedestrian access and maintain fire escapes routes.

Drawings associated with the above are referenced in responses to questions 24 25 a & b above.

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.

Due to our vehicles crossing a designated cycle lane at Huntley Street / Torrington Road Junction by turning right we will position clear warning signage at the end of the cycle lane for cyclists to be made aware of vehicles turning right.

As previously described the sweep of the articulated vehicles is tight coming out of Huntley Street onto Torrington Place and will need a number of measures put in place to protect road users. A marshal will be positioned on the junction to direct the vehicle out the junction when it's safe to do so.

The current physical lane width restriction at the end of Huntley Street will need to be removed to ensure vehicles do not mount the kerb. The current position being used by pedestrians to cross the road at the bell mouth of the Torrington Place junction is near the vehicle swing when coming out or Huntley Street and therefore it is imperative to stop the pedestrians crossing at this point and redirect them up Huntley Street to another location away from the vehicles when turning. Drop kerbs will be required to be installed as these kerbs are high at this point.

To ensure pedestrians cannot take short cuts across the junction pedestrian barriers will be installed either side of the junction leading to the temporary crossing position.

The same pedestrian barrier set up is also required in Shropshire Place to segregate pedestrians using the footpath accessing the gym form our reversing vehicles backing into gate 4 but will end up being incorporated within our site.

Details of cycle routes are in appendix E as referenced below. See other drawing references with the answers to questions 24 and 25.

Traffic Marshalls will be positioned on junctions; Tottenham Court Road with University Street (two if large vehicles crossing lanes), University Street with Huntley Street (working alongside Bouygues Marshall), Huntley Street with Torrington Place and on Huntley Street to manage the pit lane, Capper Street and Shropshire Place. All marshals will be in radio communication with the full time logistics manger and with each other to inform of incoming vehicles. They will also all wear body cameras and be empowered to send away any un-booked or non CLOCS compliant vehicles.

Site Logistics bus and cycle routes	**UCLH_LOG-03-02**	Appendix page A95

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.

Site office gantry

Due to the site taking the whole area of the site there is no room for site welfare cabins within the site demise. With this in mind, we have no option but to position the welfare units over the Capper Street highway. The most suitable position is over Capper Street. A steel gantry will be designed to span the carriageway and installed to support welfare and office accommodation which will be three levels high of eight number cabins long. Staircase access will be provided from the Ground floor inside the perimeter of the site to the gantry level which will be a minimum of 5.5m above road level. The gantry will permit traffic to continue to use Capper Street as well as pedestrian access along the footpath adjacent to the Cancer Centre. The gantry is close to the adjacent UCLH Cancer Centre who have confirmed they have no objections to the structure. The accommodation will be suitably fire rated.

We have reviewed the availability of adjacent buildings to accommodate the site welfare and office facilities but there is none of sufficient size (approx. 250 operatives). Sharing facilities with the Phase 4 site is also not feasible due to proximity and capacity. As stated above only the Cancer Centre will be directly affected by the structure and they have given us their blessing.

Material Storage

Due to the lack of storage especially for long items required for the frame and envelope we propose to take Shropshire Place into the site demise temporarily. A TTO will be required to facilitate this and agreement with the associated neighbours for which discussion has commenced. The footpath will remain open at all times. This is the same set up as is currently in place for the preceding works.

Tower Cranes

We will be using 2 No' luffing jib cranes on the site and whilst the working the radius of the crane is a max of 35m the angle of the jib can be raised and can be controlled so any over sailing over the highway can be minimised and there will be no lifting of loads beyond the hoarded perimeter of the site or pit lane. When not being used the crane has an out of service free slew radius of 17m, which will over sail the highway but only the highway that forms the pit lane. A Camden indemnity for will be completed to facilitate this.

Details of site layout & gantries through the various stages of the project are included in appendix F:

Initial works and piling	**6825_UCH_LOG_02-03**	Appendix page A108
Excavation and Basement construction	**6825_UCH_LOG_02-04**	Appendix page A109

Environment

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

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.

General site hours are 08:00am - 18:00 weekdays and 08:00 - 13:00 on Saturdays. No works will take place on Sundays, Bank holidays or any Saturday on a bank holiday weekend. See response to question 21 also.

It is our intention to enter into a section 61 agreement with Camden Council in advance of the works which will outline the permitted noise, vibration and dust level permitted. Noteworthy noisy works are listed below:

1. Breaking out existing basement slab, foundations and obstructions to allow installation of piles.
2. Piling (Piling rig and attendance vehicles Note: Delivery of plant out of hours works due to traffic restrictions).
3. Capping beam (breaking off top of secant piles).
4. Basement excavation and installing temporary works (excavator and muck away lorries).
5. Ground works and drainage (excavator and muck away lorries).
6. Tower crane install (Deliveries and mobile crane Note: weekend works due to traffic restrictions).
7. Concrete Frame Construction (concrete pours, concrete lorries and reinforcement works).
8. Steelwork at roof level and office gantry (Ratchet guns and steel deliveries)
9. Pre-cast concrete (Deliveries).
10. Curtain walling / envelope cladding (Mechanical fixing & deliveries).
11. Roof works (Deliveries).
12. External works (Tools when installing hard landscaping).

It is expected that with the exception of the existing basement slab break out the works will be less disruptive that that experienced by the Community Working Group during the demolition works and adjacent (non UCLH) projects.

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.

A background noise study was carried out in July 2014 and can be found as an Appendix to the Sandy Brown Acoustic Report.

Noise monitoring was carried out throughout the demolition phase of the project by UCLH's demolition contractor and monitoring will continue throughout the construction phase.

Prior to Mace starting the main works (following the completion of the demolition works), 2 weeks of back ground noise monitoring will be undertaken once the demolition phase is complete to provide a benchmark. A copy of this report will be provided to Camden Council.

A Noise / vibration & dust monitoring scheme has been drawn up and sensors will be strategically positioned to suit location of local receptor to monitor emissions. This will incorporate real time monitoring and reporting and alerts if any trigger levels are exceeded. Monitoring will commence at 07:00 and stop at 19:00 each day.

Noise assessments are located within Appendix G:

Noise, Vibration and Dust Monitoring proposal	**MAC200 UCL Hospital**	Appendix page A116

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

Mace will complete a CandnaA model (computer aided noise abatement) to best understand the noise impacts generated from the site allowing changes to the construction method if targets are exceeded. Once modelling is completed target limits can be set in in collaboration with the client and local receptors and a section 61 agreement formulated. Details of this model and all noisy plant will be included in the S61 Application.

Current predictions are:

Type of emmission	Preposed trigger / action levels
Nuisance Noise	Trigger level – 73db LAeq 10hr period at the nearest receptor Action level - 75db LAeq 10hr period at the nearest receptor Short term trigger level for concrete slab break out (see noise modeling in S61) – 75db LAeq 10hr period at the nearest receptor Short term action level for concrete slab break out (see noise modeling in S61) – 77db LAeq 10hr period at the nearest receptor
Nuisance Vibration	Acceptable vibration levels at monitor ≤1mm/s First trigger level (Report) at monitor ≤3mm/s Second trigger level (Action) at monitor ≤5mm/s The levels at the receptors will be lower than that at the monitors which will be mounted along the perimeter of the site. Please refer to BS table on P59 of this document for further details.
Nuisance Dust (PM10)	Trigger level – 200 ug/m3 Action level – 250 ug/m3

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.

We have met with the Community Working Group who have advised from their experience the previous activities that have resulted in noise and vibration for them.

UCLH have had both an Air Quality Report by Jacobs (V4) and An Acoustic report by Sandy Brown (14275 R04-B) has stipulated some requirements.

The full assessments are attached in appendix H:

Air Quality Assessment	**BPP-04-F9**	Appendix page A122

From this Mace will develop an environmental monitoring scheme tailor made for the project duration. The details of this will be set out in a Section 61 Application but a summary is as follows:

Noise mitigation measures:

1. Careful review of design with noise and vibration in mind.
2. Silencing of reversing white-noise beepers to ensure mitigation of noise
3. A programme of community liaison will be established and implemented by Mace, in order to ensure all potentially sensitive premises are notified of forthcoming works.
4. Plant and equipment that are placed at street level will be done with due consideration of the safety and amenity of local residents, businesses and pedestrians.
5. All complaints will be recorded and investigated with any appropriate corrective actions implemented.
6. Modern, silenced and well-maintained plant fitted with efficient attenuators, mufflers or acoustic covers, where appropriate will be used at all times. All relevant plant and equipment will be expected to meet the noise limit and noise marking requirements prescribed by the “Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001” implementing the EU Directives Regulations 2001/14/EC.
7. Equipment including vehicles will be shut down when not in use.
8. Engine compartments will be closed when equipment is in use.
9. Semi-static equipment to be sited and orientated as far as is reasonably practicable away from occupied buildings and will, where appropriate, be provided with localised screening.
10. Specific worksites may be hoarded at the beginning of the works which will have the benefit of providing acoustic screening. In other areas, specific temporary acoustic barriers may be used to screen specific de-construction activities where such screen are practical and will provide a significant noise reduction at noise sensitive receptors.
11. Breaking out activities will be closely supervised at sensitive locations to ensure that this is limited to the minimum necessary duration in order to minimise inconvenience to adjacent occupied properties.
12. Wherever possible mains electricity will be used rather than placing reliance on generators to supply power.

13. Materials will be handled in a manner that minimises noise.
14. Crane spindle, pulley wheels and moving parts of platforms shall be adequately lubricated in order to prevent undue screeching and squealing.
15. Shouting and raised voices shall be kept to a minimum.
16. Where possible, broadband/white noise alarms will be utilised instead of traditional reversing alarms.
17. Stationary plant such as generators will be located as far as practicably away from the nearest sensitive receptors;
18. All plant powered by combustion engines will be fitted with suitably maintained silencers;
19. Electrical or LPG powered plant will be used, where practicable, rather than plant powered by combustion engine;
20. Plant will be used in accordance with the manufacturers' recommendations;
21. Plant such as mobile cranes which may be used intermittently will be shut down between work periods or throttled down to a minimum;
22. Acoustic covers to engines will be kept closed when engines are in use;

Vibration Control Measures

Mace will use BPM to minimise vibration from the works including;

1. A perimeter trench will be cut into the existing slab to reduce the impact of vibration on the surrounding properties. This will interrupt the direct transmission path of vibrations when we break out the slab.
2. Site personnel will be instructed in environmental matters and BPM to reduce noise and vibration. They will be informed in the site induction into the surrounding environment.
3. Loading of material into vehicles within designated bays only
4. All deliveries to be scheduled to occur during daytime hours only and engines to be switched off when waiting
5. All plant to comply with relevant national or international standards, directives and recommendations
6. Monitoring perimeter of site for visible signs of defects

Monitoring Proposals

- Noise sensors situated at the boundary at the location of high risk receptors.
- Real time monitoring on line reviewed by site team for trends.
- Alerts informing site team of spikes in noise out puts.
- 24hr contact number (FM24).
- Complaints log.

Mace will ensure a proactive approach of the management of noise and vibration through every phase of the project by using the process below

Details of the proposed environmental monitoring scheme are in appendix G:

Noise, Vibration and Dust Monitoring proposal	**MAC200 UCL Hospital rev 1**	Appendix page A116

Mitigation – Measures to reduce noise, dust and vibration

Best Practicable Means (BPM) (S72 of CPA 1974) will be employed to minimise noise, dust and vibration. Mace will retain full control and keep any responsibility for, any subcontractor working under their management on the site.

Staff Briefings

Operatives will to be briefed on the requirements to keep noise, dust and vibration to a minimum in their induction training and through method statement briefings. These briefings will include measures implemented during works at this project in order to ensure compliance with the SC requirements of the following applicable legislation:

- The Control of Pollution Act 1974 (Section 61)
- The Environmental Protection Act 1990
- EC Directives 2000/14/EC & 2005/88/EC.
- The Noise Emission in the Environment by Equipment for Use Outdoors
- Regulations 2001 (as amended
- The Highways Act
- The Road Traffic Act
- The Control of Asbestos at Regulations
- The Hazardous Waste Regulations
- The Waste Electrical, Electronic Equipment Regulations
- The Control of Pollution (Oil Storage) Regulations
- Waste (England and Wales) Regulations
- The Site Waste Management Plans Regulations
- The Provision & Use of Work Equipment Regulations
- The Control of Noise at Work Regulations
- Revised BS6187 Code of Practice for Full and Partial Demolition
- Mace and Keltbray's Environmental Policies and procedures
- BS 5228:2009 Part 1 & 2 with A1 2014
- Institute of Air Quality Management Guidance on the assessment of dust from
- demolition and construction
- Mayor of London Sustainable Design and Construction Supplementary Planning Guidance

The table below highlight human perception of vibration as stated within BS5228-2:2009 Part 2 as follows:

Table 2 – Guidance on Effects of Vibration

Vibration Level	Effect
0.14mm/s	Vibration might be just perceptible in the most sensitive situation for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration
0.3mm/s	Vibration might be just perceptible in residential environments
1.0mm/s	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.
10mm/s	Vibration is likely to be intolerable for any more than a very brief exposure to this level in most building environments.

Mace Vibration Trigger Levels

Acceptable vibration levels at monitor	≤1mm/s
First trigger level (Report) at monitor	≤3mm/s
Second trigger level (Action) at monitor	≤5mm/s

Acceptable Vibration Level

This is the vibration level that should not be breached by day to day activity on site. If it is thought that activity on site if to be in breach of this level then this shall be communicated to the surrounding residents via the monthly newsletter outlining the work to be undertaken and the length of works.

First Trigger Level

If the first trigger level is breached the site team are to produce a record sheet which identifies the vibration level, site activity as the time of the breach which is to include a site photograph taken within 10 minutes of the trigger level breach.

Second Trigger Level

If the second trigger level is breached the site team are to halt site activity and undertake a brief investigation in to current site activity. This investigation will include a review of the vibration level reached, site activity being undertaken, plant being used for the site operation and if possible contact should be made to the resident where the breach was achieved. Site work will not commence until the site team are assured that the level will not be achieved once work commences.

These trigger levels have been set so that there is a significant reduction in the risk of ever reaching 10mm/s.

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

The Mace Environmental Manager allocated for the project has undergone training for BS 5228:2009. Mace project personnel will receive a tool box talk briefing on the contents of BS 5228:2009 delivered by the Environmental Manager. This information along with the targets levels set will be used to draft a site specific slide within the site induction so all operatives are aware of the noise and vibration target profile for the project and what control measures can be applied to mitigate emissions.

Copy of Environmental Managers certificate in appendix G:

Certificate of attendance	**UCLH_Cert-BS5228-2**	Appendix page A115

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

The recommendations on suitable control measures made in the Jacobs Air Quality Assessment and the GLAs guidelines will be used to mitigate nuisance dust as far a reasonably practicable. The following mitigation measures will be considered to minimise dust and other emissions from site activities and disruption or nuisance to neighbouring occupiers:

- Proactive site management and inspection regime of loading bays.
- Dust control measures being agreed with sub-contractors in advance and written into their method statements.
- Restrict the use of brooms for sweeping. Extractors and hoovers to be given priority.
- High pressure water hose or dust suppression mist cannon
- Real time dust monitoring and recording at boundary with alert system if trigger levels are exceeded.
- Maintaining solid 2.4m high hoardings;
- Spraying water at work faces, loading operations and site access roads;
- Dampening of exposed soil and stockpiles if necessary;
- The location of stockpiles of brick, concrete, soil and other materials away from dusts sensitive properties, taking into account prevailing wind, if necessary;
- Erecting windbreak netting around material stockpiles and vehicle loading/unloading areas;
- Inspection and cleaning of local highways, pit lane and site boundaries for dust deposits; weekly as a minimum but as appropriate to weather conditions;
- Loading of material into lorries within designated bays/areas;
- Sheeting of lorries leaving site carrying loose deconstruction material;
- No burning of any materials on site;
- All site personnel trained in best practice for dust control by regular Environmental Toolbox talk.

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.

The only phase of the project that vehicles will be entering the site will be in the piling phase when the rig or any attendance lorries such as muck away will descend to the existing basement slab level via a granular fill ramp. A concrete topping could be added if it is deemed that too much mud is being bought up to the pit lane. Jet washing of any wheels will be carried out on the basement slab prior to tracking up the ramp, this will keep any run off water contained within the site. The vehicle will be checked again prior to leaving the pit lane. The roads that surround the site will be inspected on a regular basis and if required a road sweeper will be bought in to clean the pit lane and highway.

Generally vehicles will stay on the road level within the pit lane. A traffic marshal will ensure that any droppings of mud or dust that may occur from the loading / unloading of lorries is scooped up by shovel immediately. If required a sweeper will be bought in to clean the pit lane or and delivery gates. Sweeping via the use of brooms will be discouraged to stop dust being brushed into the air.

Any vehicle leaving the project such as muck away or skips will be covered by sheeting or a proprietary lid prior to leaving the site so nothing can fall out the lorry whilst on the highway.

Internally housekeeping will be a major priority not only from a dust point of view but from a safety point of view. Waste will be cleared up by sub-contractors and sweeping will be actively discouraged with non-dust making methods prioritised and dry sweeping with brooms banned. Waste will put in wheelie bins which have lids, these will be kept shut. They will be taken down to ground level by hoist where they will be emptied into a compactor lorry which will be damped down as required.

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

A monitoring scheme has been put together for the project by Jon Campbell Associates advising on the specification, position and installation of the various types of monitors required for the project. Data from the monitors will be recorded and stored remotely and will have on-line access to live data streaming with visible traffic light system which will be set to alert at the levels identified in question 30 above.

The suggested scheme involves 2 weeks of back ground monitoring using the equipment in the table below which will be added to the data already obtained by the demolition contractor. The background noise monitoring will commence on 24.10.2016.

Monitor specifications are listed below. These monitors will be installed for the background noise monitoring and will be left in place until the end of the project save for the temporary vibration monitor which will be removed after the frame works are complete.

Should Camden receive legitimate complaints regarding noise, dust or vibration, Mace will install an additional monitor in a location to be agreed with Camden if deemed necessary.

Monitor Type	Specification	Number
Dust Monitor	AER-DS-Dust Sentry AER-DS-SC10-PM10 Cyclone (MCERTS Certified) AER-DS-R38 Dust sentry Moxa G3111 Modem AER-DS-Basic-Data subscription	2 (plus 1 temporary for groundworks, piling and frame construction)
Noise	Son-EM2010-C1-E-EM2010 Class 1 sound monitor Son-Data-SIM and data hosting & reporting	2
Vibration	AVA-INS200014 – AvaTrace M60 Vibration logger AVA-INS200013B 0PM-3Dxc Triaxial geophone for M60 AVA-AVANET - SIM	1 (plus 1 temporary for groundworks, piling and frame construction)
Anemometer	AER-DS-R1 –Gill WindSonic Sensor	1

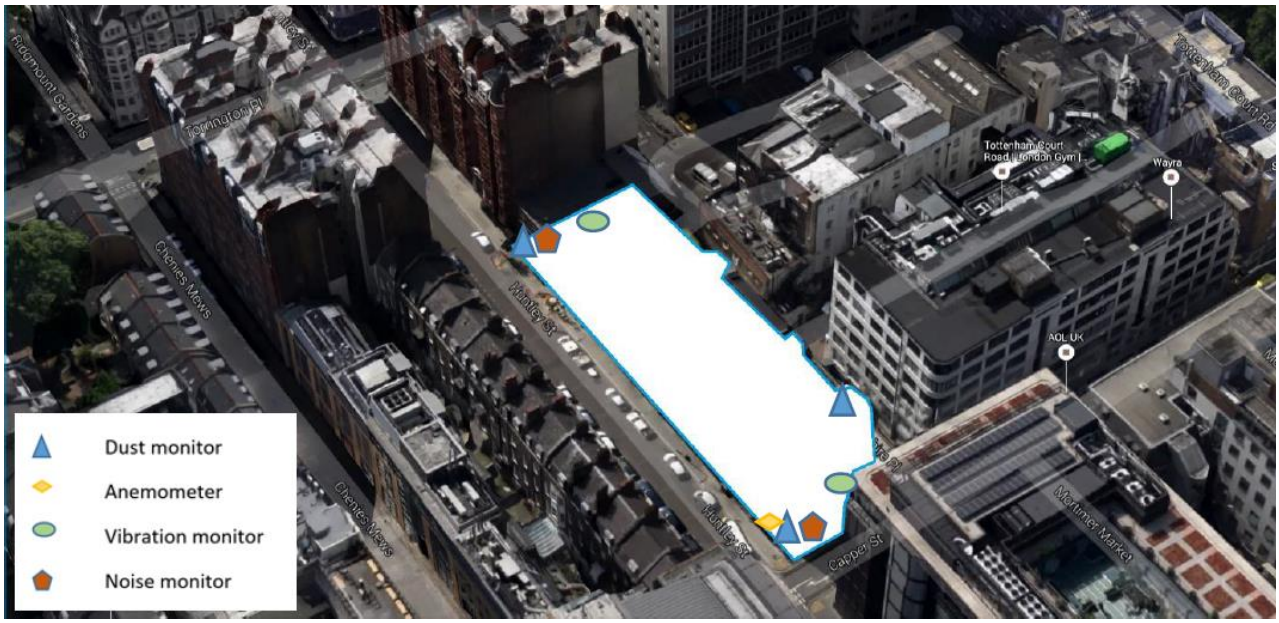

Figure 9 – background noise monitoring and construction phase monitoring locations

Full details of environmental monitoring scheme are in appendix G:

Noise, Vibration and Dust Monitoring proposal	**MAC200 UCL Hospital rev4**	Appendix page A116

36. Please confirm that a Risk Assessment has been undertaken at planning application stage in line with the GLA's Control of Dust and Emissions Supplementary Planning Guidance (SPG), and the risk level that has been identified, with evidence. Please attach the risk assessment as an appendix if not completed at the planning application stage.

Prior to planning, UCLH engaged Jacobs to complete an Air Quality Assessment. Section 6 (Page 34) of the report identifies the construction risks. Table 19 in this report identifies the Dust Emission Magnitude as follows:

Activity	Dust emission magnitude
Demolition	Small
Earthworks	Small
Construction	Medium
Track out	Small

Figure 10 - table 19 from Jacobs report.

The Summary of this section of the Jacobs report is as follows:

"An assessment of the potential impact of dust emissions from the construction phase of the Proposed Development at Huntley Street, Camden has been carried out. The objective of the assessment was to identify whether the development itself would cause a significant impact on local air quality during the construction phases due to dust emissions.

The appraisal of the potential dust levels associated with the construction of the proposed development at the site shows that, although dust is likely to be generated from site activities and the site would be classed as a "Medium risk site" for Demolition and Construction and a "Low risk site" for Earthworks and Trackout activities, these risks can be reduced effectively through appropriate mitigation measures. Some degree of dust impact may be possible at nearby sensitive locations if the dust is not properly mitigated or there is a failure of the control measures (e.g. a failure of the water supply for dust suppression) and this could lead to a short-term dust annoyance.

The measures to control dust emissions and monitor the effectiveness of the mitigation would be agreed formally with LBC as part of a CEMP or equivalent management plan. It is anticipated that this would be achieved through the inclusion of an appropriate planning condition.

Therefore, providing the mitigation measures are in place and appropriately managed during the construction phase, it is concluded that the Proposed Development is suitable from an air quality perspective."

The full report is contained in appendix H:

Air Quality Assessment	**BPP-04-F9**	Appendix page A122

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.

The Jacobs report referenced in question 36 above identifies the measures to be employed to mitigate the risk. This is identified in Tables 22 to 27 inclusive on pages 35 – 39.

In addition we have reviewed the Institute of Air Quality Management checklist which was derived from the GLA draft mitigation measures prepared for update of 'The control of dust and emissions from construction and demolition: Best Practice Guidance' and can confirm that we will implement all mitigation measures highly recommended for a medium risk and a high risk site.

Air Quality Assessment	**BPP-04-F9**	Appendix page A122
Institute of Air Quality Assessment Checklist	**IAQC-MACE-001**	Appendix page A255

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.

The site has been given 2 risk ratings depending on the activities being carried out:

Activity	Dust emission magnitude
Demolition	Small
Earthworks	Small
Construction	Medium
Track out	Small

Figure 11 - table 19 from Jacobs report.

The site is a 'Medium Risk Site', as such two real time dust monitors are required. However, following discussion with Camden Council Environmental Health Department we acknowledge the perceived risk due to the proximity of the Macmillan Cancer Centre and other sensitive receptors and on this basis a 3rd dust monitor will be installed for the duration groundworks, piling and frame construction. If at the end of this period Camden Environmental Team feel that the 3rd monitor needs to remain then this can be discussed.

Monitoring will start once the demolition contractor has completed their works (two weeks prior to start) but we will have access to the monitoring carried out during the demolition phase if required. Access to the data and reports will be made available as required.

The monitors will be placed on the hoarding lines as detailed in the response to question 35 above. Sensitive receptors include the Pauls House children's ambulatory cancer centre and the Macmillan Cancer Centre.

In addition to the Mace monitoring scheme the client have implemented additional dust mitigation measures as follows:

1. Macmillan Cancer Centre – the maintenance regime for the supply air filters the filters has been increased for the duration of the construction works
2. Paul's House – mobile HEPA filters have been installed in all bedrooms and are being regularly maintained by UCLH for the duration of the construction works

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).

Mace will mitigate any rodent problems by ensuring

1. Excellent housekeeping, on site & in welfare
2. No eating out on site
3. No food waste left outside for pick up
4. All food waste to be kept in metal bins
5. All food waste removed from site regularly
6. Employment of a specialist to supply a pre-emptive rodent control scheme

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

UCLH engaged FML to survey the existing building prior to demolition, upon which asbestos was identified. Redhill was engaged to remove all asbestos prior to demolition. We are in recipients of clearance and reoccupation certificates.

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.

Mace takes its image and reputation very seriously will have set site rules for all operatives and staff to abide by which will be communicated at induction when they start on site. Mace will not tolerate in appropriate behaviour and have a disciplinary procedure where the offending person will be warned about their behaviour (termed as a yellow card) and their company notified. If the person in questions persists they will be removed from site (Red card).

Our in house company FM24 will be used to log any complaints and pass them on to the appropriate manager. The helpline will be displayed on the site hoarding. Any complaints received and the action taken by Mace will be discussed at the community liaison meetings held on a regular basis.

A smoking shelter will be provided with in the site compound out of site from the public and hospital view and the welfare accommodation will be adequately sized to accommodate all operatives. Our security and traffic marshals will be briefed to move people into / out of the site and prevent any loitering.

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

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 : **November 2016 - June 2019 (137 weeks)**

b) Is the development within the CAZ?: **Yes**

c) Will the NRMM with net power between 37kW and 560kW meet the standards outlined above?: **Yes**

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: **The project has been registered as UCLH – Phase 5 and actual equipment will be specified as it is procured, ensuring it meets the required standards. Compliance with the aforementioned standards will be a contractual requirement for all Subcontractors.**

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: **Yes**

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: **Yes**

Details of NRMM are in appendix I

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: 02.11.2016

Print Name: Andrew Wilson

Position: Mace Project Director

Please submit to: planningobligations@camden.gov.uk

End of form.

Appendices - see separate document

Appdx Ref	Appendix Title	Document Title	Document number	Rev	Appendix page number
A	**Site Information**				**A2**
		Reach Active INDICATIVE TRENCH DESIGN AND CROSS SECTION	RA-UCLH-PH5-ITDCS-001	-	A3
B	**Programme**				**A4**
		Master Tender Programme	2	-	A5
C	**Community Working Group**				**A6**
		CWG invitation to neighbours		-	A7
		CWG invitation to Bloomsbury Ward Councillor		-	A9
		Schedule of invitees	UCLH_SCH-001	-	A11
		Minutes of CWG meeting 1	UCLH_CWG_M1	-	A12
		Minutes of CWG meeting 2	UCLH_CWG_M2	-	A29
		Schedule of comments and actions	UCLH_CWG_Representations & Responses	-	A38
		Letter for CMP draft issue	P5-UCH-000-ZZ-L-P-001_CMPCover	-	A83
D	**Site Logistics**				**A85**
		Logistics Plan - Delivery Access Points	UCLH_LOG-Img-001	-	A86
		Surrounding Area Junction Photos	UCLH_LOG-04-01	-	A87
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		Vehicle Tracking Concrete Mixer	UCLH_LOG-03-01B	1	A89
		Vehicle Tracking Light Goods Van	UCLH_LOG-03-01C	1	A90
		Vehicle log Sheet page 1	UCLH_LOG-logsheet-01	1	A91
		Vehicle log Sheet page 2	UCLH_LOG-logsheet-02	1	A92
		Neighbouring Construction projects	UCLH_Impacts-02	0	A93
E	**Traffic Management & Parking Bay suspensions**				**A94**
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		Traffic Management Road Closure - Capper St Gantry Installation	UCLH_LOG-03-04A	0	A97

		Traffic Management Road Closure - Capper St Cabins Installation	UCLH_LOG-03-04B	0	A98
		Traffic Management Road Closure - Shropshire Place	UCLH_LOG-03-04C	0	A99
		Traffic Management Road Closure - Pit Lane	UCLH_LOG-03-04D	0	A100
		Existing Road Markings and Parking Bays	UCLH_LOG-03-05B	0	A101
		Proposed Road Markings with proposed Parking Bay Suspensions - Main Duration	UCLH_LOG-03-06A	0	A102
		Lux road signage proposals - Main Duration	HIRE ADVICE 177-00001	-	A103
		Lux road signage proposals - Capper St Gantry Erection	HIRE ADVICE 177-00002	-	A104
		Lux road signage proposals - Cabin and Crane Erection	HIRE ADVICE 177-00003	-	A105
		Lux road signage proposals - Shropshire closed	HIRE ADVICE 177-00004		A106
F	**Site layout and gantries**				**A107**
		Logistics - initial works and piling	68525_UCLH_LOG-02-03	0	A108
		Logistics - excavation and basement	68525_UCLH_LOG-02-04	0	A109
		Logistics - P5 Hoarding line - concrete frame and envelope	68525_UCLH_LOG-02-05	0	A110
		Logistics - P5 Hoarding line - internal works (Shropshire Place Closed)	68525_UCLH_LOG-02-06	0	A111
		Logistics - P5 Hoarding line - internal works	68525_UCLH_LOG-02-07	0	A112
		Letter of acceptance for cabins	P5-UCH-000-ZZ-L-P-003-Cabin-approval-to-LBC	-	A113
G	**Noise Modelling & environmental monitoring scheme**				**A114**
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		Local Receptors - perceived impact level	UCLH_Impacts-01		A120
H	**Noise and Vibration assessments**				**A121**
		Air Quality Assessment	BPP-04-F9	17	A122
I	**NRMM information**				**A185**
		NRMM Register		0	A186
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		UCLH parking and Traffic Management Policy	010/FAC/T		A215
L	**Environmental additional information**				A253
		UCLH P5 Complaints or Enquiries Log			A254
		Institute of Air Quality Checklist	**IAQC-MACE-001**		A255