Construction Management Plan

pro forma

Camden

Contents

Revisions	**3**
Introduction	**4**
Timeframe	**6**
Contact	**7**
Site	**9**
Community liaison	**12**
Transport	**14**
Environment	**26**
Agreement	**31**

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
21/01/2020	1.0	Quod

Additional sheets

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

Date	Version	Produced by

Introduction

The purpose of the **Construction Management Plan (CMP)** is to help developers to minimise construction impacts, and relates to all construction activity both on and off site that impacts on the wider environment.

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 nature 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 the Construction Logistics and Community Safety (**CLOCS**) Standard and the Guide for Contractors Working in Camden.

Camden charges a fee for the review and ongoing monitoring of CMPs. This is calculated on an individual basis according to the predicted officer time required to manage this process for a given site.

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 during construction. 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 road closures or hoarding licences.

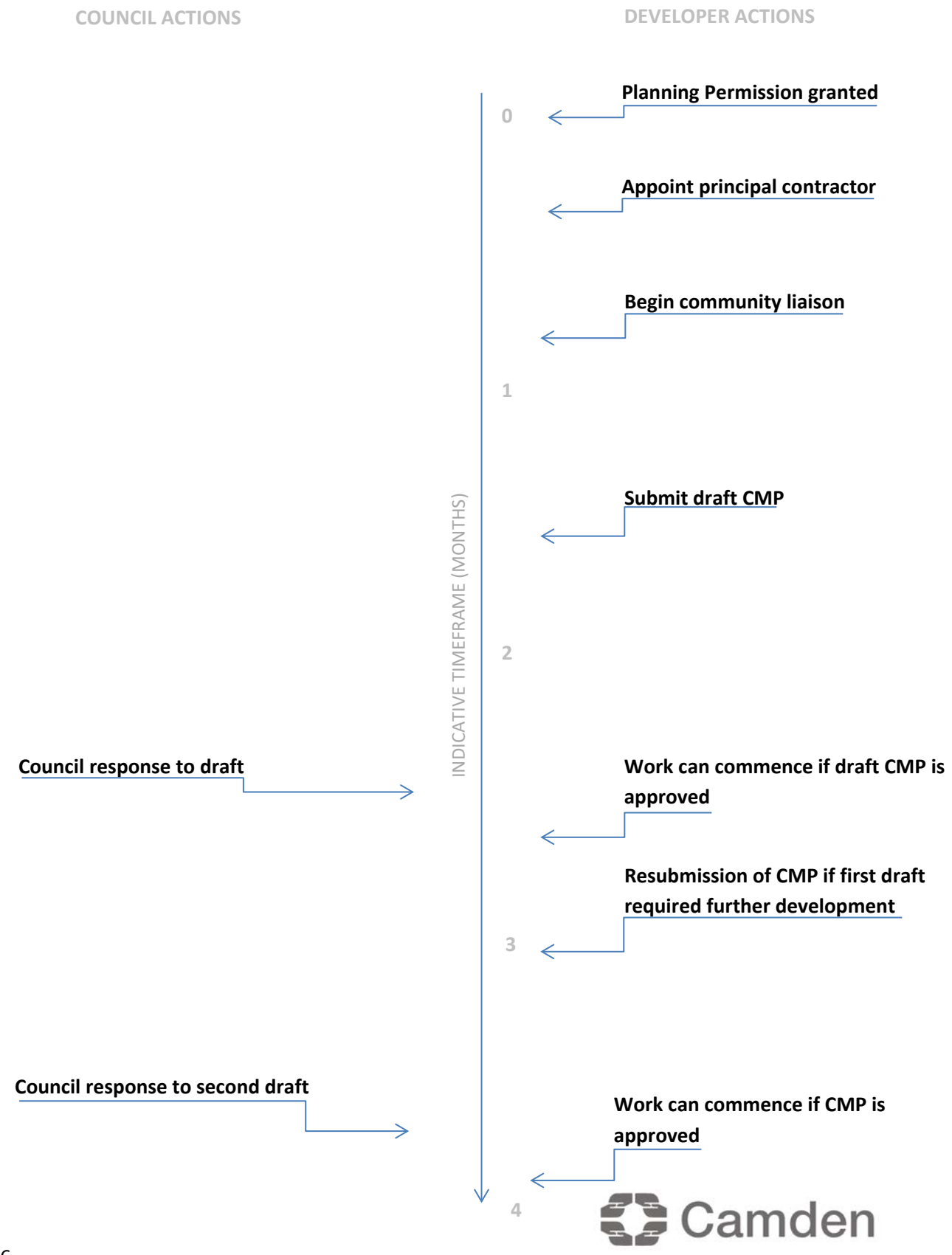
If your scheme involves any demolition, you need to make an application to the Council's Building Control Service. Please complete the "**Demolition Notice.**"

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 only provide the information requested that is relevant to a particular section.

(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
Planning Permission granted
0
Appoint principal contractor
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 required further development
3
Council response to second draft
Work can commence if CMP is approved
4

Contact

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

Address: Land bounded by Grafton Terrace, Maitland Park Villas and Maitland Park, containing existing TRA hall and garages; and land adjacent to Maitland Park Villas containing existing Aspen House, gymnasium and garages

Planning reference number to which the CMP applies: 2014/5840/P as amended by 2015/6696/P

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

Name: Gregory Markes

Address: Quod, Ingeni Building, 17 Broadwick Street, London W1F 0DE

Email: gregory.markes@quod.com

Phone: 07710095387

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: *Project Lead and organogram to be confirmed upon award of Contract*

Address: Bouygues UK Becket House 1 Lambeth Palace Road | London | SE1 7EU

Email:

Phone: Office 020 7401 0020

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: Dilan AlPasha

Address: 5 Pancras Square, Kings Cross, London N1C 4AG

Email: Dilan.AlPasha@camden.gov.uk

Phone: 020 7974 5548

Daily Resident Liaison officer will be appointed at award of contract

Name: Paula Arkell –Waller (**Deputy Social Value Manager)-**

Address: Becket House | 1 Lambeth Palace Road | London | SE1 7EU

Email: Paula.arkell-waller@bouygues-uk.com

Phone: Office 020 7401 0020 / Mob 07530583959

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: Adrian Cook Bouygues UK (Maitland Park Camden)

Address: Becket House | 1 Lambeth Palace Road | London | SE1 7EU

Email: adrian.cook@bouygues-uk.com /george.warner@bouygues-uk.com

Phone: 020 7401 0020

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.

Site location plan provided in **Appendix 1.** Area to which the demolition works relate is highlighted by the red shading on the figure shown on page 30 of the DMP.

Site is currently vacant residential building (Aspen House) and associated garages and the Maitland Park gym. Proposals are for the demolition of these structures to aid the redevelopment of the estate.

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).

Demolition of Aspen House and associated garages, and Maitland Park gym only.

Challenges are the confined access routes and site boundaries and the close proximity of neighbouring residents.

8. 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).

Demolition works are proposed to begin in mid-February and would last eight weeks.

Further details to be provided upon appointment of the demolition contractor.

9. 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

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

Note that during construction activities that may over run or planned to take longer than the agreed working hours such as any large concrete pours contact will be made to the local environmental officer in advance.

Community Liaison

A neighbourhood consultation process must have been undertaken prior to submission of the CMP first draft.

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

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

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

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

Cumulative impact

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

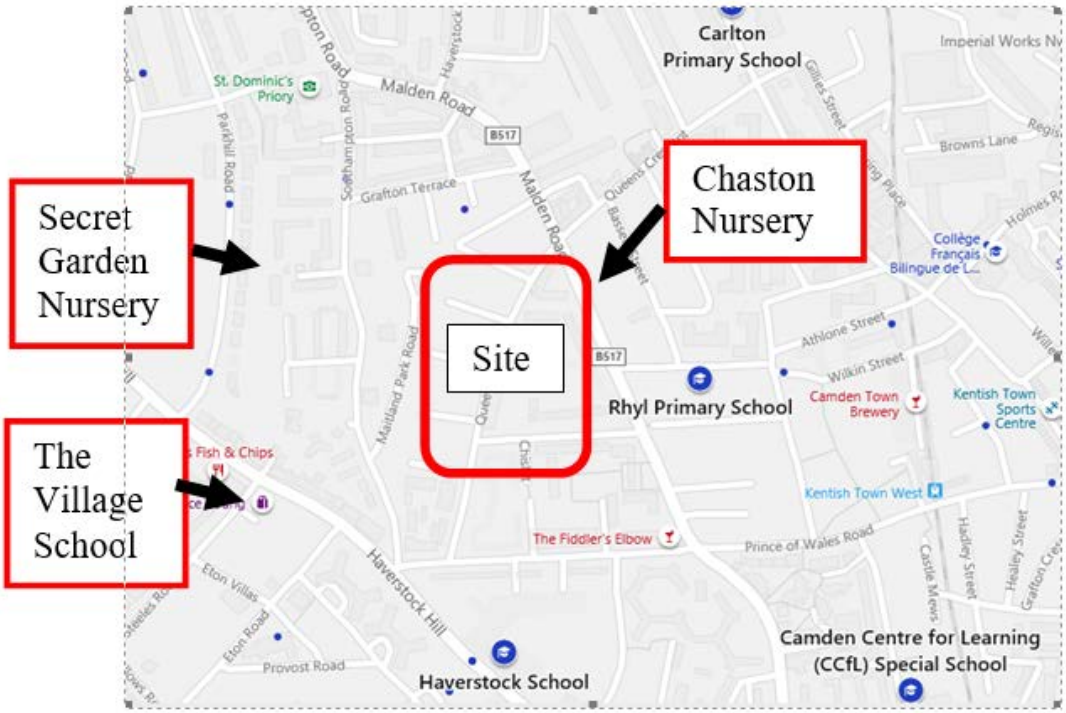
The Council can advise on this if necessary.

10. Sensitive/affected receptors

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.).

Dwellings at Maitland Park Villas, dwellings on Parkhill Road (specifically no.s 12-22), dwellings at Hornbeam House and Whitebeam House.

Other nearby sensitive receptors are shown below:



11. Consultation

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

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

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

between boroughs then we would recommend contacting the relevant neighbouring planning authority.

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

Two community engagement events were held in the Maitland Park gym on the 11th and 14th September 2019. Details of the proposed demolition methods were on display. The events were open to the public and notice letters were sent to nearby residents in advance of the events. The Maitland Park Tenants and Residents Association was in attendance.

12. Construction Working Group

For particularly sensitive/contentious sites, or sites located in areas where there are high levels of construction activity, it may be necessary to set up a construction working group.

If so, please provide details of the group that will be set up, the contact details of the person responsible for community liaison and how this 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.

N/A

13. Schemes

Please provide details of your Considerate Constructors Scheme (CCS) registration. Please note that Camden requires enhanced CCS registration that includes CLOCS monitoring. Please provide a CCS registration number that is specific to the above site.

Contractors will also be required to follow the Guide for Contractors Working in Camden. Please confirm that you have read and understood this, and that you agree to abide by it.

TBC upon appointment of contractor

14. 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.

At present no other contractors are working in close proximity.

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 CCS monitors as part of your enhanced CCS site registration, and possibly council officers, to ensure compliance. Please refer to the CLOCS Standard when completing this section.

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

CLOCS Contractual Considerations

15. Name of Principal contractor:

TBC

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

To be developed in more detail upon award of contractor

1. All subcontractors appointed are made aware of the CLOCS and FORS policy
2. ALL delivery vehicles are checked and record by the logistics gateman upon arrival
3. BYUK monitor the vehicles and take regular checks of the vehicle registration for the CLOCS policy

17. 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.

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

TBC

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.

18. 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, stations, public buildings, museums etc.

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.

Please show vehicle approach and departure routes between the site and the Transport for London Road Network (TLRN). Please note that routes may differ for articulated and rigid HGVs.

Routes should be shown clearly on a map, with approach and departure routes clearly marked. If this is attached, use the following space to reference its location in the appendices.

Proposed exit and entry routes are shown in on pages 22-24 of the submitted Demolition Management Plan, attached at Appendix 2.

To be finalised with the local highways upon award of contract.

Initial consultations with Camden Highways have taken place to allow the final logistics plan to be prepared.

All deliveries will therefore be managed by the BYUK logistics managers with booking being requested a minimum of 48hrs in advance although longer will be requested to ensure acceptance onto site.

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

1. Dedicated TMP (transport management plan) will be developed and included in all Sub contract tenders
2. TMP will be included as part of the final order placement and at forms part of the pre contract start meetings
3. Included within the site inductions
4. Displaying of the TMP routes in prominent positions
5. Regular review (monthly minimum) of the plan with any revisions communicated to the supply chain

19. 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 should be restricted to the hours of 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 the hours of 9.30am and 3pm on weekdays during term time.

Vehicles may be permitted to arrive at site at 8.00am if they can be accommodated on site. Where this is the case they must then wait with their engines switched off.

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**.**

Please provide details of the types of vehicles required to service the site and the approximate number of deliveries per day for each vehicle type during the various phases of the project.

For Example:
32t Tipper: 10 deliveries/day during first 4 weeks
Skip loader: 2 deliveries/week during first 10 weeks
Artic: plant and tower crane delivery at start of project, 1 delivery/day during main construction phase project
18t flatbed: 2 deliveries/week for duration of project
3.5t van: 2 deliveries/day for duration of project

TBC

b. Cumulative affects of construction traffic servicing multiple sites should be minimised where possible. Please provide details of other developments in the local area or on the route that might require deliveries coordination between two or more sites. This is particularly relevant for sites in very constrained locations.

N/A

c. Please provide swept path analyses for constrained manoeuvres along the proposed route.

TBC

d. Consideration should be given to the location of any necessary holding areas/waiting points for sites that can only accommodate one vehicle at a time/sites that are expected to receive large numbers of deliveries. Vehicles must not queue 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.

Please identify the locations of any off-site holding areas or waiting points. This can be a section of single yellow line that will allow the vehicle to wait to phone the site to check that the delivery can be accommodated.

Please refer to question 24 if any parking bay suspensions will be required to provide a holding area.

TBC

e. Delivery numbers should be minimised where possible. Please investigate the use of construction material consolidation centres, and/or delivery by water/rail if appropriate.

N/A

f. Emissions from engine idling should be minimised where possible. Please provide details of measures that will be taken to reduce delivery vehicle engine idling, both on and off site (this does not apply to concrete mixers).

This will be included in the Project TMP in more detail

1. All vehicles upon entry of the site will be required to turn off their engines
2. Any vehicles where drop off loading bays are allocated will be required to turn off their engines.

20. 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)

This section is only relevant where vehicles will be entering the site. Where vehicles are to load from the highway, please skip this section and refer to Q23.

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

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

a. Please detail the proposed site access and egress points on a map or diagram. If this is attached, use the following space to reference its location in the appendices.

Shown on page 22 of the Downwell DMP, Appendix 2.

b. Please describe how the access and egress arrangements for construction vehicles in and out of the site will be managed, including the number and location of traffic marshals where applicable. If this is shown in an attached drawing, use the following space to reference its location in the appendices.

Bouygues will appoint a dedicated traffic marshaller. NOTE there is no reversing in and out of the site allowed.

c. Please provide swept path drawings for vehicles accessing/egressing the site if necessary. If these are attached, use the following space to reference their location in the appendices.

TBC

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. Please note that wheel washing should only be used where strictly necessary, and that a clean, stable surface for loading should be used where possible.

Wheel washing facilities will be provided on site and waste water collected to avoid blocking local drainage.

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

This section is only relevant if loading/unloading is due to take place off-site on the public highway. If loading is taking place on site, please skip this section.

a. 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 this is attached, use the following space to reference its location in the appendices. Please outline in question 24 if any parking bay suspensions will be required.

TBC

b. Where necessary, 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 detail of the way in which marshals will assist with this process, if this differs from detail provided in Q20 b.

Street Works

Full justification must be provided for proposed use of the public highway to facilitate works. Camden expects all options to minimise the impact on the public highway to have been fully considered prior to the submission of any proposal to occupy the highway for vehicle pit lanes, materials unloading/crane pick points, site welfare etc.

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.

Please note that there is a two week period required for the statutory consultation process to take place as part of a TTO.

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

If the site conflicts with a bus lane or bus stop, please provide details of preliminary discussions with Transport for London in the relevant sections below.

22. Site set-up

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, relevant street furniture, and proposed site access locations. If these are attached, use the following space to reference their location in the appendices.

TBC

23. Parking bay suspensions and temporary traffic orders

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

Please provide details of any proposed parking bay suspensions and/or TTO's which would be required to facilitate the construction - include details of the expected duration in

months/weeks. Building materials and equipment must not cause obstructions on the highway as per your CCS obligations unless the requisite permissions are secured.

Information regarding parking suspensions can be found here.

N/A

24. Occupation of the public highway

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. 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 justification of proposed occupation of the public highway.

N/A

b. Please provide accurate scaled drawings of any highway works necessary to enable construction to take place (e.g. construction of temporary vehicular accesses, removal of street furniture etc). If these are attached, use the following space to reference their location in the appendices.

N/A

25. Motor vehicle and/or cyclist diversions

Where applicable, please supply details of any diversion, disruption or other anticipated use of the public highway during the construction period. Please show locations of diversion

signs on drawings or diagrams. If these are attached, use the following space to reference their location in the appendices.

N/A

26. Scaffolding, hoarding, and associated pedestrian diversions

Pedestrians 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 ramps 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, and hoarding should not restrict access to adjoining properties, including fire escape routes. 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. Where applicable, please provide details of any hoarding and/or scaffolding that intrudes onto the public highway, describing how pedestrian safety will be maintained through the diversion, including any proposed alternative routes. Please provide detailed, scale drawings that show hoarding lines, gantries, crane locations, scaffolding, pedestrian routes, parking bay suspensions, remaining road width for vehicle movements, temporary vehicular accesses, ramps, barriers, signage, lighting etc. If these are attached, use the following space to reference their location in the appendices.

N/A

b. Please provide details of any other temporary structures which would overhang/oversail the public highway (e.g. scaffolding, gantries, cranes etc.) If these are attached, use the following space to reference their location in the appendices.

N/A

27. Services

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.

N/A

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.

1. Demolition of existing building
2. Piling
3. Concrete works and placement
4. Machine movements during excavations

To be further developed upon appointment of contractor.

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.

Noise and Vibration Impact Assessment prepared in July 2014. Attached in Appendix 3.

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

Please refer to Table 16 of the Noise and Vibration Impact Assessment, attached in Appendix 3.

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.

Please refer to section 6 of the Noise and Vibration Impact Assessment (July 2014), provided in Appendix 3.

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

TBC

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

Please refer to Section 2.33 of the Demolition Management Plan prepared by Downwell, attached in Appendix 2.

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.

Vehicles leaving the site will be checked for loose debris and have their wheels cleaned if excessively dirty. The roads surrounding the site will be regularly checked for debris and dirt. If identified this will be cleaned at the earliest convenience. Run-off water is to be allowed to disperse down the surface water drainage that has had a filter cover placed over it to prevent soil/dirt from entering the drain.

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

Strategically placed dust monitoring devices will be placed within the site boundary as set out in the Camden presentation. The equipment will monitor noise levels and notify the project team and other key personnel who require the readings, should levels exceed those set by the local authority/EA suggested levels. If levels exceed then the current work activities will cease, and the incident will be investigated? Work methods and protection measures can then be adapted to try and ensure that an exceeded level does not happen again.

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

Risk assessment currently being carried out.

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.

TBC

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.

TBC

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).

TBC

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

TBC

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.

During breaks the workers will not be permitted to congregate outside the neighbouring properties. Shouting, swearing and other nuisance behaviour will not be tolerated by our staff.

Designated smoking area will be provided.

In the event of a complaint from a neighbour or a member of the public in relation to any site activity, they will be given the Site Managers details.

Records will be kept of all complaints, including details of any actions taken.

Behaviour culture is covered in the site induction and BYUK CMP plan which is issued to all tenderers and at award of contract

Promotion of the Considerate Contractors schemes

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 (mm/yy - mm/yy):

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

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

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:

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:

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:

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.

Signed: ……

Date: ……..

Print Name: ……

Position: ……

Please submit to: planningobligations@camden.gov.uk

End of form.

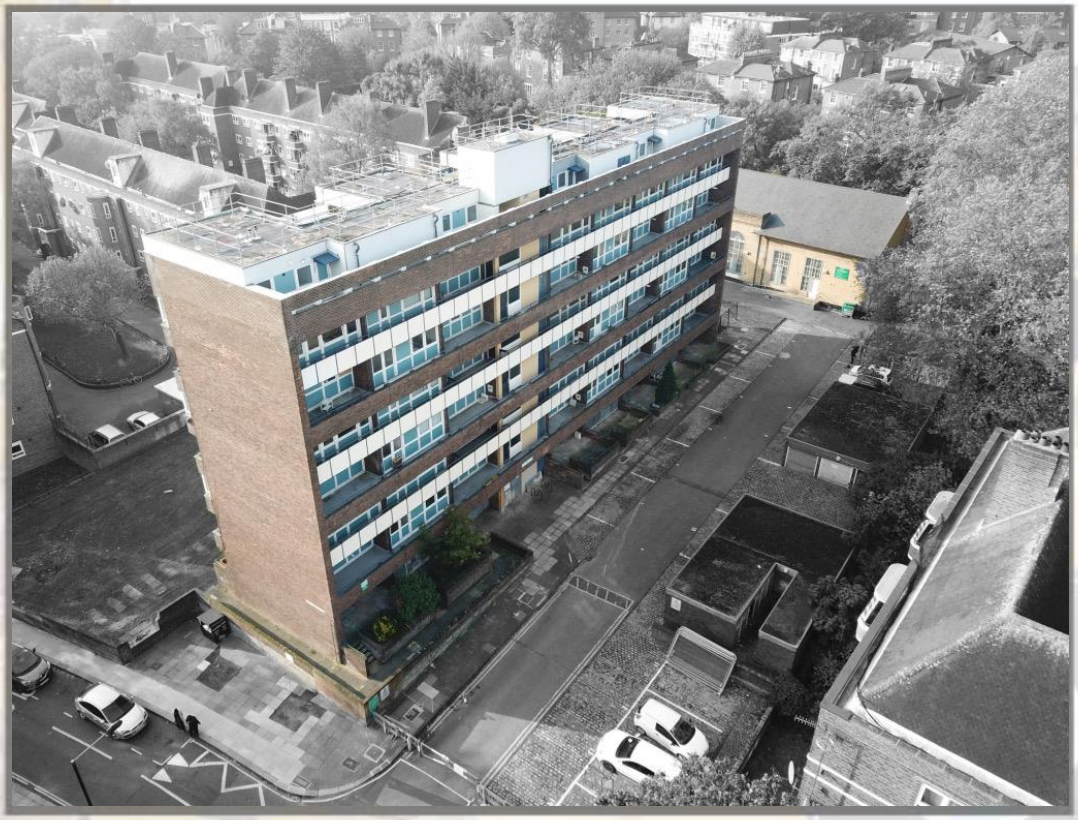
Appendix 1 – site location plan

Appendix 2 – Downwell Demolition Management Plan

DOWNWELL GROUP

Enabling Solutions

Demolition Management Plan



Aspen House
Maitland Park Villas
London
NW3 2EH

Date: 5th December 2019

Proudly Working with Bouygues

BOUYGUES

Revision Number: ***004***

Project Code: DD19-0033-P

DOWNWELL GROUP
Enabling Solutions

Contents

Contents 1
Project Contacts 3
Introduction 4
1. Project Details 5
1.1 Location and Description of the Project 5
1.2 Scope of the Works 6
1.3 Timing of the Works 6
1.4 Pre-Construction Information 7
1.5 Liaison Between Parties 7
2. Safe Management of the Work 7
2.1 Management Structure, Competence & Responsibilities 7
2.2 Health & Safety Goals for the Project 8
2.3 Health & Safety Monitoring 9
2.4 Methods of Communication 9
2.5 Selection and Control of Contractors 10
2.6 Site Security 10
2.7 Site Inductions and on-Site Training 10
2.8 Welfare Facilities and First Aid 11
2.9 Accident Reporting, Recording and Investigation 12
2.10 Risk Assessments and Safety Systems of Work 13
2.11 Site Rules 14
2.12 Fire and Emergency Procedures 15
2.13 Delivery, Storage & Removal of Materials 17
2.14 Services 19
2.15 Adjacent Land Use 19
2.16 Temporary Works 20
2.17 Preventing Falls 20
2.18 Maintenance of Plant & Equipment 21
2.19 Traffic Routes, Segregation & Parking 21
2.20 Waste Management 24

2.21 Permit to Work 24
2.22 Stability of Structures 25
2.23 Working at Height 25
2.24 Control of Lifting operations 26
2.25 Plant & Equipment 26
2.26 Excavations 26
2.27 Confined Spaces 27
2.28 Scaffold 27
2.29 PPE Maintenance 28
2.30 Asbestos 28
2.31 Manual Handling 29
2.32 Noise 29
2.33 Dust 30
2.34 Vibration 31
2.35 Control of Substances Hazardous to Health 32
2.36 UV Rays 33
2.37 Contaminated Land 33
2.38 Design, Work Methods & Sequence 34
2.39 Trees 34
2.40 Unexploded Ordnance (UXO) 34
2.41 Ecology 34
2.42 Resident Liaison 35
2.43 Rodent Control 35
2.44 Concrete Crushing 36
2.45 Reduced Dig 36
Acknowledgment Sheet 38

Document Register				
Revision No.	Comments	Revised/Created By	Approved	Date
001	**Initial issue**	**Matthew High**	**Del Wyer**	**1/11/19**
002	**Revised following comments from GM of Bouygues**	**Matthew High**	**Del Wyer**	**15/11/19**
003	**Revised following comments from Gregory Markes & Adrian Cook**	**Matthew High**	**Del Wyer**	**22/11/19**
004	**Revised following further comments from BYUK H&S Team**	**Matthew High**	**Del Wyer**	**5/12/19**

Any amendments or alterations following the previous issue is in **RED** so that they can easily be found and read.

Project Contacts

Contract Title & Address	Aspen House Maitland Park Villas Camden London NW3 2EH
Client Name & Address	Bouygues Uk Becket House 1 Lambeth Palace Rd London SE1 7EU Graham Mattin – 07961634272 Email: Graham.mattin@bouygues-uk.com
Principal Contractor	Downwell Newcastle House Oliver Close West Thurrock Essex RM20 3EE Craig White – 07587037216 Email: Craig.white@downwell.co.uk

Principal Designer	***TBC***
Asbestos Removal Contractor	***TBC***
Local Authority	Camden Council 5 Pancras Square London N1C 4AG Tel: 0207 9744444
HSE	Health & Safety Executive 151 Buckingham Palace Rd London Tel: 0207 2151820

Introduction

This Construction Phase Health and Safety Plan had been prepared specifically for the enabling demolition phase of this project in accordance with the CDM 2015. On completion of the demolition phase our role as PC will come to an end.

The plan has been formulated by taking in to consideration the pre-construction information provided by the client, Principal Designer, designers, following surveys and risk assessment of the environment by the operations management team responsible for this project.

The Company's Health, Safety and Environmental (HS&E) Standards contain the core arrangements for managing health and safety in all our operations.

In addition, a management system has been compiled for assisting the project's operations management team in the planning, management of, recording and communicating of relevant health and safety information to provide a safe place of work, safe systems of work and to provide uniformity and consistency in the management of health and safety. Every project will have at least one copy of the Company's Health, Safety and Environmental Standards, with every manager receiving their own personal copy.

Company HS&E Standard – "Construction, Design and Management" details how the Company manages the CDM process. The contents page for the Company Standards and for the health and safety management system documents can be found in Company Health & Safety Policy Document... producing safe systems of work tailored to the project.

We aim to reduce the provision of generic paperwork and to only provide in this Health and Safety Plan project specific paperwork that should help with the communication and risk management of this project. Other information this file makes reference to, but is not project specific, will be clearly identified with the location where it is available, if there is a need to review these documents they will be provided on request.

The aim of this Construction Health and Safety Plan is to provide clear, concise and specific information

required to manage the works and the arrangements for controlling significant project specific site risks.

We are committed to providing a safe place of work and continually review our HS&E Standards and systems to provide clear and relevant information through all stages of the project's life.

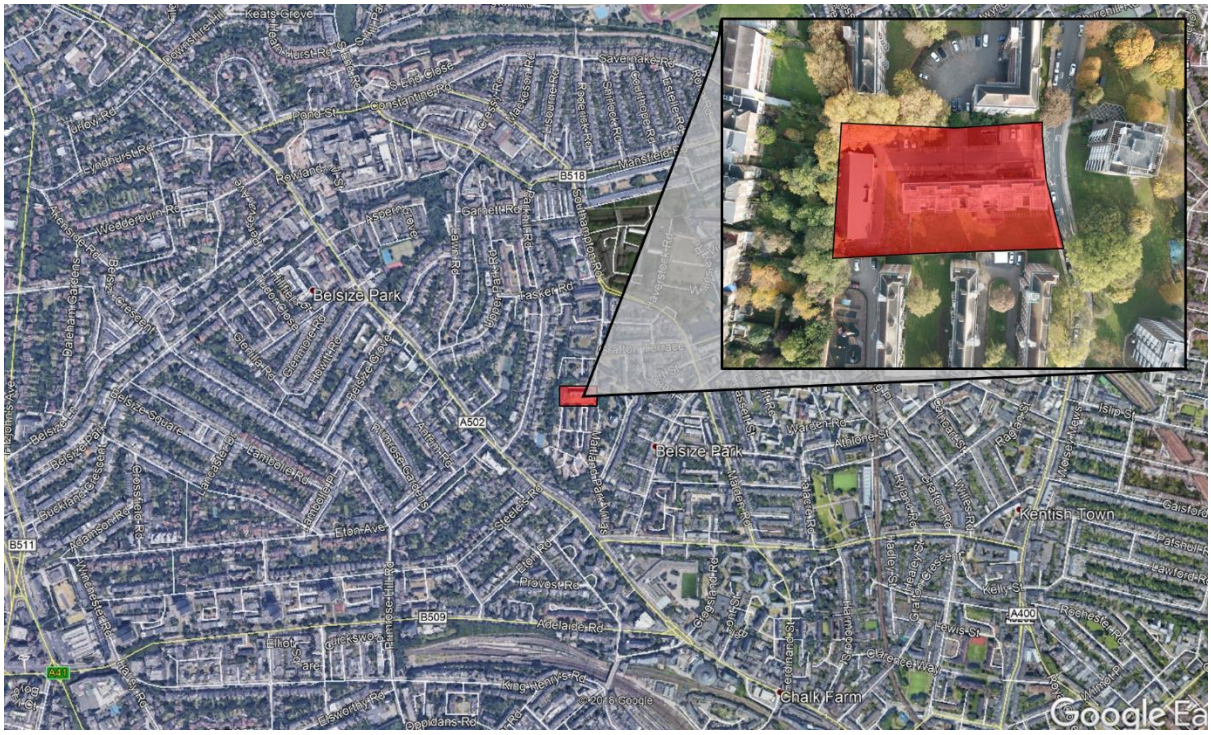
The project team members responsible for the compilation, review and maintenance of this Construction Phase Health and Safety Plan are: Matthew High – 07587 037217 Del Wyer – 07920 752111 and David Goulding – 07342 990510

1. Project Details

1.1 Location and Description of the Project

The project described in this document is made up of a 7-storey residential block, a separate block of single storage garages/storage units and a single storey recreation building. The works involve providing an intrusive demolition and refurbishment survey, other enabling works before demolishing all of the structures on site. The ground slabs and foundations are to be removed and crushed to a certified 6F2 aggregate. The 6F2 material is then to be used for installing a pile matt across the site.

The site is located within a mainly residential area in the London Borough of Camden. The demolition works, and subsequent construction works are part of a regeneration project.



1.2 Scope of the Works

The scope and sequence of works is listed below. This sequence has been chosen as it has been identified to be the most efficient. Each item will be specifically referred to in the methodology section.

- R&D survey throughout buildings
- Investigation works to rear wall of recreation building
- Asbestos removal
- Soft strip
- Scaffolding erection
- Structural demolition of garages/stores
- High reach demolition of apartment block
- Removal of all ground slabs and foundations
- Crushing all concrete & masonry to a certified 6F2 aggregate
- Reduce level dig
- Installation of a pile mat across the site
- Leave the site clean and tidy.

Should the scope of works change, or the sequence be altered, this document will be updated and inducted to all involved.

1.3 Timing of the Works

Contract Period	***TBC***
Site Start Date	***TBC***
Planned Contract Completion	***TBC***
Form F10 (Rev) Date Submitted	***TBC***

The normal hours of work are as follows:

Monday to Friday	08:00-17:00
Saturday	08:00-13:00
Sunday and Bank Holidays	No Working Permitted

1.4 Pre-Construction Information

All pre-construction information (as seen below) is adequate for starting and completing the works to the required specification.

- Structural inspection report – Ramboll – RAM-RP-0001
- Site contours drawing – Ramboll – 31879-MP-CV-300
- Topographical survey – Re-Format – 16101-001
- Noise & Vibration impact assessment – Ramboll
- Various communications between land surveyors and local services providers (BT, LU, BskyB, Thames water, UKPN, Virgin, plus others)
- Ground Investigation Report – Ramboll – Rev0
- Transport Assessment – Ramboll – May 2014
- Mixture of asbestos surveys – GBNS Partnership Ltd/OC Consulting (UK) Ltd
- UXO Survey – 1st Line Defence Ref:1592 2014
- Camden Council Outline Demolition Proposal presentation

1.5 Liaison Between Parties

All topics relevant to the works will be discussed with the main objective aimed at the health and safety of the site together with any breach to the site boundaries.

Daily briefings will be held between Downwell at the start of each shift. During this briefing the upcoming workday will be discussed. At the end of the shift the briefing form is then to be signed off by both the demolition Supervisor.

Downwell Demolition operates a near miss procedure and all of the work force are familiar with the procedures required to operate this procedure in the correct manner and diligence it deserves. In the event of a near miss being reported, and investigation will take place immediately to establish the cause and with immediate respect any necessary control will be implemented to rectify the incident with reviews to ensure that there is no re-occurrence.

2. Safe Management of the Work

2.1 Management Structure, Competence & Responsibilities

A dedicated site Supervisor will control all aspects of the work from commencement to completion. He will be supported by the Contracts Manager (Craig White), Project Director (Matthew High), and SHEQ Manager (Del Wyer) who will be contactable throughout the project and make weekly visits to site and attend progress meetings. In the event that the management structure is to be changed formal notice will be given and the replacement manager will attend site together with the former manager to ensure that all aspects of the project are understood.

The site supervisor will ensure that all practices and procedures are kept up to date together with all training requirements for all personnel on site. Furthermore, they will ensure that all aspects of the Health and Safety file are updated on a continual basis and all plans of work and risk assessments are in place and relayed to all members of staff with the completion of the mandatory registers.

The site supervisor will ensure that all aspects of the work are undertaken in compliance with the plans of works and risk assessments and will carry out toolbox talks with a minimum talk being carried out on a weekly basis on a topic that is relevant to the work being undertaken.

In the event that a major non-conformance is found all works will cease until an investigation has been carried out and all factors have been rectified and all operatives have been made aware of the deficiency and the procedures to ensure that the same occurrence is not repeated. The non-conformance will be reviewed in accordance with our quality policy.

The general health and safety responsibilities are as laid out in the Downwell Health and Safety Policy and the competency of the operations management team are as identified on the Company's competency matrix which can be found in the Company's Health, Safety and Environmental policy

The Company have formally appointed Chris Young to be the Director responsible for this project; Matthew High is the Project Director; Craig White is Contracts Director; David Goulding is the Project Manager; all other key persons are shown at the front of this document.

Issues regarding H&S will be communicated to Del Wyer. He is the projects SHEQ Manager. External H&S advice will be obtained from Prime Safety.

The following table shows the different roles on the site and what the minimum competency level will be for that job role.

Project Management Competencies	
Job Role	Minimum Competency
SHEQ Manager	NEBOSH – CCDO Black card
Project/Contracts Managers	CCDO Black card – level 6 NVQ
Site Supervisors	CCDO – Gold card – SSSTS – Asbestos awareness, First aid
Plant Operators	CPCS – Asbestos awareness
Demolition Operatives	CCDO – Asbestos awareness – Manual handling – Face fit

The following table shows how management will be visible on site.

Management Identification (Hat Colour)	
Job Role	Hat Colour
SHEQ Manager	Black
Project/Contracts Managers	Black
Site Supervisors	Black – Green sticker for first aid
Plant Operators	White
Demolition Operatives	White

2.2 Health & Safety Goals for the Project

The Downwell H&S goals for the project are:

(a) To carry out weekly health and safety inspections and close out any areas for improvement within 2 days.

(b) Complete the project in a safe manner and also completing it within the designated programme.

(c) Zero harm to operatives and the public.

2.3 Health & Safety Monitoring

Copies of all Health and Safety Monitoring carried out on this site by the operations management team, the Company's own management team, the Health, Safety and Environmental Advisor, HS&E Auditor or by a contractor's health and safety team / representative will be presented to the client if they require them to be.

In addition to visiting site on a regular basis the HS&E Advisor will provide health and safety support as requested or deemed necessary.

Fortnightly health & safety audits will be conducted by Downwell with copies of the report issued to the client & Principal Designer.

The project will be provided with up-to-date HS&E Standards and notified of any legal or system changes via communication from the Health, Safety and Environment Department to ensure current legislative and organisation requirements are continually updated.

The health and safety advisor will attend site and carry out a review process once a month a report will be prepared and left on site for action and close out purposes

2.4 Methods of Communication

The project specific methods of effective communication are through prestart induction as recorded on our induction sheet and through toolbox talks as given by our supervisor and contained within our toolbox talk books carried by all supervisors.

Toolbox talks, and method statement briefings will be used as methods of consultation with the workforce and the Bouygues management as a minimum; the company also operates an "open door" Policy on all projects. Toolbox talks, and method statement briefings will be recorded and can be located in the site file.

Daily briefings will be conducted prior to the start of the working day. These briefings must be attended by all contractors working on the site at the time. Details of works to be completed and the current site conditions are to be discussed.

Any major deviations from the documented method of work will be communicated to the project team prior to the work commencing. Enough time will be given to allow discussion and review of the new proposed method of work.

(a) The exchange of health and safety information between contractors

- Site specific induction for all persons who require access to site areas

- Daily task sheets will document and communicate activities on site.
- Project progress meetings (frequency to be agreed with Providence)

2.5 Selection and Control of Contractors

The Company HS&E Standards require that all contractors are evaluated prior to selection, where high risk activities are being undertaken the HS&E advisor will be notified by the Project Co-ordinator to provide assistance in the evaluation process.

All contractors will receive a thorough evaluation of competence. Contractors will be selected across all aspects of intended work which they have potential for participation. Records of contractor evaluations are kept at head office.

All contractors working on the site whilst Downwell are PC, will have they method statements reviewed on a weekly basis. Any changes must be documented in the method statement review log with the Downwell Supervisor making sure that the changes are inducted to the workers completing the works.

2.6 Site Security

At present Camden Council are providing both day and night security on the site. Whilst we are working on site day security will not be required. Security guards will be required in the evenings, weekends and any other dates when the site is shut for work.

The minimum standards for ensuring protection of the public and a secure site are as defined in the standards for demolition BS6187 :2011 will be adopted.

Downwell are responsible for the security of the site during operational hours. The sites security is extremely important. Nobody other than the contractors working on the site are to be permitted to enter the site. The entrance to the demolition area is to be kept closed at all times when not in use. At the start of every shift, especially during structural demolition the building will be checked to ensure that no intruders have gained access through the night.

All areas of the site will be secured when not in use with the appropriate signs displayed at all entrances. The entrance gates will be closed at all times when not in use.

Warning signs will be erected around all areas of the site boundary warning people not to enter site, with a large Multi Board at the site entrance. These signs will address the dangers of entering the site, especially young children who may attempt to enter the site.

2.7 Site Inductions and on-Site Training

All demolition personnel and other contractors on site are required to have a demolition specific site induction. This will be carried out for all persons required to work on site, they shall be recorded using the site induction form, Site specific training requirements i.e. toolbox talks will be recorded on Toolbox Talk instruction sheet. A copy of the site-specific induction for this project and the records of induction and site-specific training carried out can be located in the site file. These records will be maintained securely as part of the project's data protection policy.

The competency levels of persons working on site will be identified prior to the commencement of the project and persons provided with the appropriate training for the tasks to be undertaken. Where additional training is identified during health and safety planning or individual's performance development reviews this will be arranged in conjunction with the Company's Human Resources Department.

Operatives will only be provided with on-site training for specific activities if required. The safety aspects of all operations will be discussed prior to commencing the activity via method statement briefings or toolbox talks. The HS&E Advisor allocated for this project will provide such on site as is necessary to ensure personnel are working to suitable safe systems of work and thus not reducing the likelihood and severity of injury to personnel, visitors and members of the public.

The competency levels for personnel operating equipment, plant etc. whilst working on the site will be checked by the operations management team, identified on the site induction form and copies of any formal training certificates will be kept on site until the work is completed, they can be located in the site file.

The competency levels for persons on this project are in line with the Competency Training Matrix provided in the Company HS&E Standards.

In line with the company standards, all personnel completing works on behalf of Downwell Demolition will have preferred certification to CSCS, CCDO or CPCS standards or other equivalent certification qualification.

2.8 Welfare Facilities and First Aid

Welfare facilities will be provided by Downwell for the duration of the project. These units will be of the self-contained type and will be positioned in a suitable location to the front of the site. Welfare units on site will be diesel powered with all effluent stored within the unit and regularly collected by a specialist waste removal company.

Welfare units on the site will have the following features;

- Adequate space for the number of personnel on site
- Toilet facilities adequate for the number of personnel on site
- Enough seating for all personnel
- Changing areas and clothes storage
- Hot and cold water suitable for washing and drinking
- Means to make warm drinks and heat food.
- Adequate space for the Supervisor of all contractors working on the site to complete their work. This space must be separate from the other demolition workers.

The minimum standards to be complied with are as set out in the health and safety at work act, and the CDM regulations 2015.

The first aid requirements for this project will be specifically risk assessed for the type of work and numbers of persons on the site.

The first aider on site will be: TBC

No. of first aid boxes & size: TBC

Location of first aid boxes: The site office

Resuscitation Equipment: The nearest one will be located with information of its location displayed on site.

The first aid boxes and equipment will be re-filled after each use, visibly checked each week during the weekly inspections and monthly checks carried out. All first aid boxes will be replaced when the use by dates have been exceeded.

2.9 Accident Reporting, Recording and Investigation

The accident reporting, recording and investigation will be in line with the requirements outlined in the Company's HS&E plan. All incidents will be investigated, the person undertaking the investigation and the type of investigation will depend upon the severity or potential severity. The operations management team will report any potential RIDDOR injuries immediately to the project's HS&E Advisor who will provide support and assistance.

The requirement to report all incidents, method of recording and online addresses etc. will be communicated to persons working on the project during the site induction.

Where any accident is reportable to the Health and Safety Executive the employer of the injured person will be responsible for ensuring it is reported, a copy of the F2508 will be available electronically on the site. The information on the form is to be kept confidentially.

Where a contractor does not provide evidence of reporting to the Health and Safety Executive the project's operations management team will report it directly to the Health and Safety Executive on behalf of the contractor.

There is no longer a paper form for RIDDOR reporting, since the online system is the preferred reporting mechanism. Should it be essential for you to submit a report by post, it should be sent to:

RIDDOR Reports
Health and Safety Executive
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

By Telephone

0345 300 9923 (opening hours Monday to Friday 8.30 am to 5 pm).

Investigations will be carried out and risk assessment reviews undertaken following the investigation. Where lessons can be learnt Safety Alerts, Toolbox Talks, Information Sheets or other appropriate media will be used to communicate the information across the Company.

Significant near misses will be treated in the same manner as an accident with appropriate investigations undertaken.

The specific method of near miss reporting for this project is the completion of near-miss cards or verbal instruction via the open-door policy.

Incident information and records of investigations shall be kept in the site file securely for data protection of any individual's who may be named. Incident report forms and incident investigations shall not be released to any third party without formal permission from the Company's senior management team.

2.10 Risk Assessments and Safety Systems of Work

Risk Assessments will be provided for the workplace and for individual operations involved in the project. Method statements and permit to work systems will be introduced as applicable, these will be mandatory for high risk activities. The Company Health, Safety and Environmental plan include the systems to be used for identifying hazards and for recording risks assessments. These shall be completed for risks identified on the project undertaken by our employees. The following major hazards have been identified within the project and will be covered within the method statement and risk assessment document. All hazards identified on site will have the risk associated with reduced as far as reasonably practical prior to arrival to site. Any operatives who are then exposed to the residual risk will be protected using PPE and other protection measures.

Main Hazards

- **Falls from height** – No works to be completed by any open edges. All open edges will be protected using fixed barriers. Scaffolding must only be accessed once it is completed and signed off.
- **Instability of structure** – Adequate exclusion zones to be established within work areas. NFDC publication on Exclusion Zones must be referenced when setting out exclusion zones.
- **Exposure to asbestos** – All asbestos works are to be completed by our licensed asbestos removal contractor. Areas having asbestos works completed must be suitably barriered off. All operatives on site must have asbestos awareness training
- **Moving plant and machinery** – Operatives working on the ground must have keep clear of moving plant and never work behind a working machine. Machine operators are not to move plant without facing in the right direction.

A log of all contractors and risk assessments/ method statements will be kept on site this will be updated as contractors are appointed through the lifetime of the project. The project's operations management team will ensure that all risk assessments and method statements have been briefed to all relevant personnel and keep records of briefings held on site.

Where contractors are used to undertake the works, the operations management team will review the risk assessments and method statements they produce, where the work is identified as high-risk additional support will be provided by the HS&E Advisor. Contractors will not be allowed to work on this project until they have provided a relevant risk assessment / method statement as appropriate and received a positive review back from the operations management team. Method statements and risk assessment reviews will be attached to the document reviewed.

All Risk Assessments and Method Statements will be reviewed by the client and any comments they may have will be actioned as necessary and all documentation amended where required.

The requirements for other risk assessments required by specific legislation are also identified in the Company HS&E Standards and where risks are identified they shall be used.

A "permit to work" shall be issued by the appointed person, the persons issuing and receiving the permit will sign it off and a copy of the permit will be held by both parties, when the work is complete the appointed person will check the work area before closing out the permit. Permits to work include "Hot Cutting" with fire extinguishers positioned. A fire watch will be done at regular intervals and all hot works will cease one hour before the end of the shift, a final check will be carried out prior to leaving the site.

Copies of permits to work will be filed in the site file.

2.11 Site Rules

Site rules for this project are located in the site file on the reverse of your induction form. Ensure these are read and understood before signing your name. A copy of these rules will be issued to all contractors at the pre-start meeting / induction and will be brought to the attention of every person working on site during the site induction. A copy of the site rules will be displayed on the project's health and safety notice board; these will be reviewed throughout the project's duration.

Employees who breach health and safety site rules will be subjected to the disciplinary procedures as laid down in the Company's H & S Policy. Where contractors breach site rules the Project Manager or Site Manager will first issue TWO verbal warnings. If a third breach takes place, a written warning is issued to the offending contractor(s) management personnel and or temporary suspension from site. Any further breach in rules that expose themselves or others will be firmly dealt with by removal from site.

A formal report will then be sent to Downwell Demolition Ltd main offices in West Thurrock to advise relevant Contract Directors of the action taken and causation.

Drugs and Alcohol

Downwell Demolition Ltd operates a 'zeros tolerance attitude to drink and drug abuse and will proceed to take swift and prompt action against those who breach company policy or site rules.

A copy of the 'Drugs & Alcohol' Policy can be found on the site notice board. This policy will also be clear to site personnel during Inductions and safety briefing sessions.

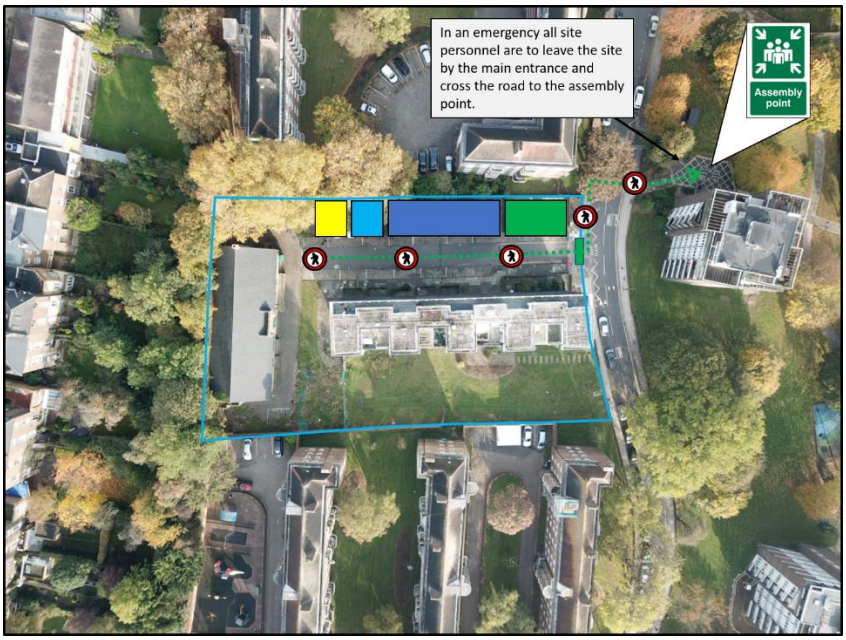
A full list of site rules will be sited within the welfare facilities. They will be updated on a regular basis and will consist of but not limited to the following.

- All PPE must be worn at all times applicable to the tasks being carried out. The minimum requirement for PPE on site will be Hard Hat, Gloves, Safety Boots, safety glasses and Hi Vis Garments. Other PPE task specific will be worn as stipulated with the method stamen and risk assessments produced for the specific item of work.
- All tools must be kept clean and maintained in good working order and be locked away or made safe at the end of the working shift.
- All personnel must be aware of the contents of the method statements, risk assessments and company health and safety policy and the registers should be signed and dated by each member of staff before works commence.

- All operatives must observe a strict hygiene policy and thoroughly wash hands before eating or drinking to eliminate hand/mouth contamination and the possibility of infection due to Weils Disease.
- All staff must be aware of all evacuation procedures and location of assembly points and first aid stations together with positions of alarms and fire points.
- All staff must act in a responsible way at all times on site and ensure their safety and safety to others is paramount at all times. Any horseplay will result in immediate dismissal from site
- The site will be a no smoking site smoking will be allowed in designated areas only.
- Anyone caught either under the influence of alcohol or drugs will be dismissed from site.
- All staff will report any near misses to their site supervisor who will assist in compiling the relevant form
- Staff will report all accidents to the site management however small and all details will be entered within the accident book sited within the site office.
- All staff must be suitably dressed for their work application.
- The site boundary must remain undamaged and be suitable to prevent unauthorised access to the site.
- No one other than trained personnel with permission to do so will operate any plant or equipment.
- All keys must be removed, and doors locked when plant is not being used
- No personnel are to congregate outside the site during break times.
- No parking is permitted outside the site entrance prior to 08:00 in the morning.
- Members of the public must be treated the upmost respect at all times.

2.12 Fire and Emergency Procedures

A fire and emergency plan will be created and included within the induction prior to the start of the works. This emergency plan must include locations for the fire points, where the nearest defibrillator is and where the nearest fire exit is from the site. A separate rescue plan for the scaffolding works will need to be created and issued prior to the erection of the scaffolding. This will be created by the scaffolding contractor.



The plan must also inform every one of the locations of the muster point and the quickest route for getting there. Once at the muster point you should not go back into the site until you have been given the all clear to by the Demolition Supervisor and or the emergency services.

The fire plan must illustrate which fire extinguishers are present on the fire points and which can be used on the different types of fires.

All persons qualified in First Aid must be contained in the emergency plan. Their contact details must be communicated to everyone during the induction, with the location of the first aid box and accident book also included.

In the event of a fire the following procedure must be followed;

- If small the fire can be extinguished with the available extinguishers. Only do so if chance of injury is minimal.
- Leave the area in the safest and most direct route telling everyone to leave the area
- Use the air horns at the fire points to warn people to leave site. Use the following pattern 1,2,3……1,2,3……1,2,3……. In a continuous pattern. If people are in areas likely to have not heard speak to the site manager and get him to call them.
- Make your way to the muster point. The site manager should be the last person there and have the signing in register in his possession.
- Call the fire brigade and inform them of the site address, which is Aspen House, Maitland Park Villas, London, NW3 2EH.
- Wait at the muster point until told return the site by the fire brigade. Never return to the buildings for any personal belongings.

In the event of a non-fire emergency or injury please follow this procedure;

- Assess the incident and check for injured persons
- If the incident involves no injured personnel, then calmly instruct people to stay clear of the area and when possible cordon the area off using fencing.
- If people are injured contact the first aider immediately by phone. The first aider will be the Supervisor.
- If you cannot reach them by phone stay with the injured person and flag somebody else down to go and get the first aider.
- Do not touch the injured person as this could cause further injury. Do move them, however if they are still in danger of being injured.
- Call the emergency services on the telephone and let them know of the injuries having been sustained.

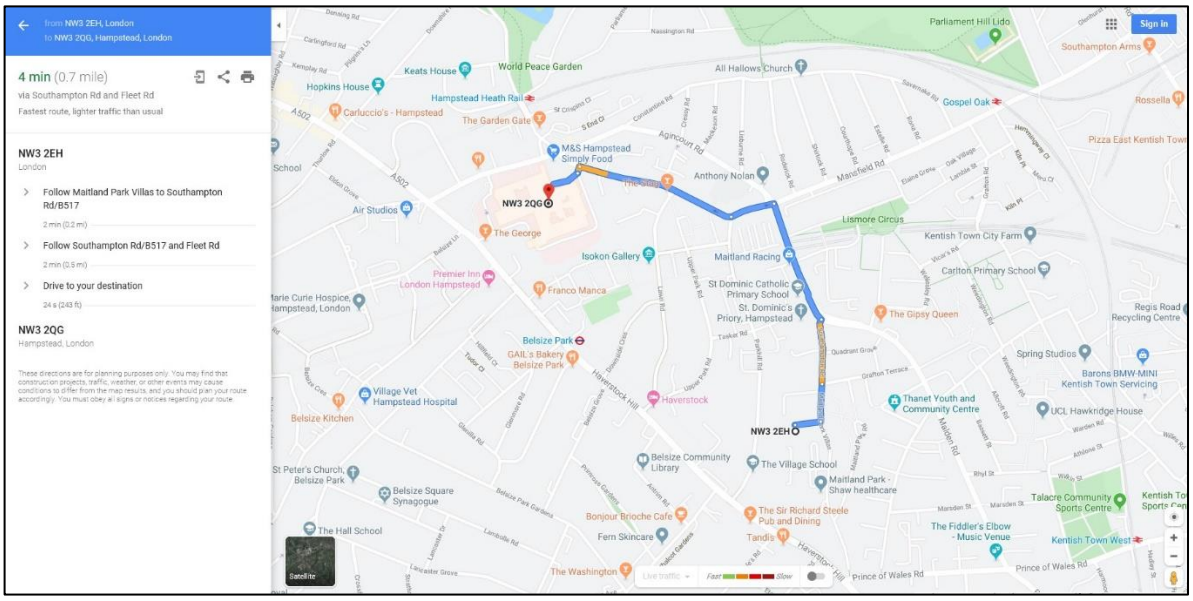
References:

Health and Safety Guidance HS (G) 168. Legislative Requirements: www.opsi.gov.uk –HSAWA 1974. MHSW 199. CDM 2015 regulations and the regulatory Reform (Fire Safety) Order 2005.

If there is a fire within the site and it is small enough to safely fight operatives must use the fire extinguishers from the fire points. At no point must anyone put their own safety at risk.

If the fire is too big to fight operatives must use the air klaxons that are available to raise the alarm and leave the site via the designated route.

Nearest Hospital to the site:



2.13 Delivery, Storage & Removal of Materials

All vehicles servicing the site are to use the main site entrance on Maitland Park Villas. This road is a residential road so all vehicle **MUST** drive in a slow and considerate manner. All vehicles are to stick to the agreed transporation routes as suggexted by Camden. These routes must be printed off and issued to all contractors and suppliers servicing the site. See section 2.19 fo rthese routes.

Vehicles entering the site will be banked in by a trained Banksman. He is responsible for the movement of vehicles which require access & egress to the site. The gate will be kept closed at all times when not being used, the Traffic Marshal will ensure that all site rules and the procedures are adhered to by those entering and leaving the site.

All delivery/collection drivers must wear correct PPE during this time. Drivers are permitted to stay with their vehicle and not walk onto or around the site area. Prior to any driver having to walk around /across the site they will receive a full site induction.

All vehicles entering and leaving the site must do so in a slow and controlled manner ensuring that pathways/kerbs are driven on and always be aware of pedestrians and other road users. Vehicles are not permitted to wait outside the site in the morning causing congestion to the access rd.

No reversing of vehicles on site is permitted without the use of a Banksman. Reversing out onto the road is strictly forbidden.

On the approach to the site the vehicle driver must call the site to let them know they are almost there. Hands free communication devices must be used. This allows the gates to the site to be opened.

After entering with the aid of the Traffic Marshal, they will then be guided into the site, to the point of the delivery or collection.

All equipment and materials must be dropped in the secure deliveries area. The materials must be stacked in a safe way so that they are not at risk of falling onto anyone and stacked in a way that makes the most of the space within the delivery area. At no point, must heavy materials be climbed or sat on as this may cause them to fall, potentially hurting you. If materials are being stored out of the deliveries area, then they must be enclosed within a fenced exclusion zone to prevent being getting too close.

Prior to leaving the site, all vehicles must be checked for loose debris and anything wedged between the wheels must be removed.

Housekeeping

Good house keeping on site is essential to ensure that the access routes to and from the entrances and exits from the site are obstruction free. This includes both plant and equipment storage and waste storage. Agreed access routes and pedestrian paths must be left unobstructed throughout the works.

Combustible waste materials must not be stored close to boundary lines, plant or any areas that are to be retained.

Throughout the day the site is to be checked for the accumulation of debris that could be building up at the site boundary. Any lightweight items that may have blown to the boundary must be bagged up and disposed of.

Plant

All plant will be delivered on a low loader or flatbed lorry. As plant is being unloaded the Banksman is to be present and supervising the plant disembarking the low loader and crossing the threshold into the site. Only CPCS operators can driver the plant from the low loader and into the site.

Approximate Vehicle Movements Table – Aspen House		
Type/Reason	Quantity/ Frequency	Period of Movements
Contractors in small vehicles	8 every day	Throughout programme
Plant deliveries – Large low loader articulated vehicle	8 total of no more than 2 in any one day	1 at the start until asbestos and soft strip has been removed. 3 during the structural demolition and 4 at the end of the project when the plant is removed.
Waste removal – tipper and roro vehicles	70. No more than 10 in any one day.	Spread out throughout the project. Mostly during the soft strip and asbestos removal.
Small tools and equipment deliveries – small vans	10	Throughout project
Welfare deliveries – hiab flatbed	4 in total	At the start and then the end of the project
Delivery Restrictions		
Day/Time	Type	Restriction Details
Mon - Fri	HGV Rigid	Delivers and collection from site are to be restricted between 10:00 and 15:00

Sat	HGV Rigid	Delivers and collections to be scheduled between 10:00 and 13:00
Mon-Fri	HGV Artic	Delivers and collection from site are to be restricted between 10:00 and 15:00
Sat	HGV Artic	Not permitted
Mon-Fri	Small Vans & Cars	Delivers and collections scheduled for after 08:00 and before 15:00. Cars driving to site no restrictions
Sat	Small Vans & Cars	Delivers and collections scheduled for after 08:00 and before 13:00. Cars driving to site no restrictions

2.14 Services

We will be expecting that all services going through the site and that are likely to be affected by the demolition works are to be isolated and cut back to the site boundary prior to the start of any works. Pre-Construction information is on file to show that certain services are not within the site boundary.

At present no isolation information has been issued to us. **At present treat all services as live.** Do not start works until Bouygues have issued the isolation certs.

If there are any services to remain live during the demolition works these must be clearly marked, protected and then included within the site induction.

Should the works be completed during the autumn/Winter seasons the lack of light on site could be an issue. Temporary task lighting is to be used to give adequate light to safely complete the works. These lights are to be 110v lights which can be powered from an external generator.

2.15 Adjacent Land Use

The land surrounding the site is of mixed use but mainly residential and retail. The following map is of the surrounding area and several local services have been identified for consideration.

At the time of writing this document there is evidence of no substantial projects in the immediate area that may affect the running of this project. Should during the implementation of this project and a neighbouring project begin. The strain on local roads will be assessed to ensure that the logistics plans for both sites are not causing too much of a disturbance to residents. Contact details for any neighbouring projects will be collected and meetings arranged to discuss site logistics will be arranged, if required.

2.16 Temporary Works

Temporary works are to be a part of the current scope in this project. The use of scaffolding is included within the project and this is referenced in section 2.28.

The installation of the pile mat is also classified as TW. The design for the pile mat must be checked by the TWC and TWS before the mat is installed. The aggregate that is used for the pile mat must be tested for asbestos content and be graded to ensure that it is the correct material as outlined in the design.

The following procedure will be adopted prior to the implementation of any temporary works.

- Temp works appointment letters to be issued to the TWD, TWC and TWS.
- The works will be scoped out and designed and have RAMS created
- The designs and RAMS will be checked before being issued to the TWC and TWS.
- The works will be installed.
- The works will be signed off by the TWD and a permit to load issued.
- Temporary works are to be inspected daily at the beginning of each shift.

2.17 Preventing Falls

Works at height are being minimalized through the methods used to complete the project.

The scope of works dictates that there is a need to work at height. This will be carried out from MEWPS, all MEWP operators will hold the correct IPAF training for the item of plant being used.

Where working from towers is required to access height, they must be erected by a PASMA trained operative. This trained person must ensure it is erected on flat, sturdy ground and according to the manufacturer's specification.

Where sub-contractors fail to produce a system of work that sufficiently reduces risks to members of the workforce, the Downwell Demolition H&S Advisor, in conjunction the relevant contractor(s) will develop a suitable system of work to ensure the health and welfare of site personnel performing significant works, other personnel and members of the public.

2.18 Maintenance of Plant & Equipment

All plant and equipment will be subject to daily inspection by the operator / user as a minimum. All vehicles on site must have provision of inspection or service before arrival on site. Regular greasing and oiling of plant and equipment is to be completed by the operator during the plants time on site.

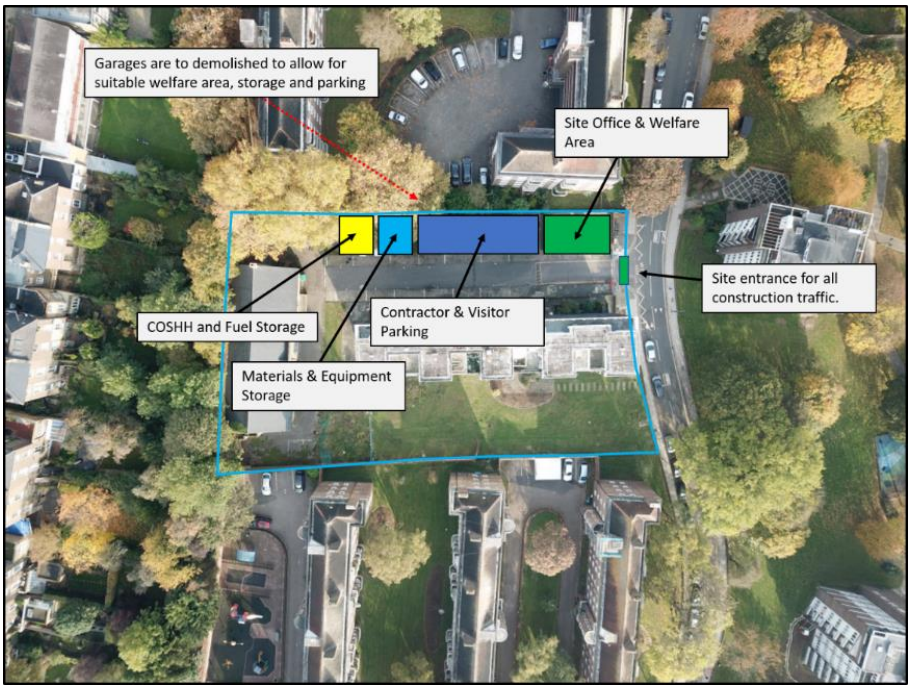
Copies of all inspection sheets will remain in the file on the specific item of plant.

All plant and machine operators will have suitable certification for items of plant intended for use. This includes the 12-monthly thorough examination certificate which will be on site.

Downwell are aware of the NRMM scheme which monitors the emissions of plant and equipment on construction sites. All the plant that is part of the Downwell fleet is checked against the NRMM requirements and only plant that meets the requirement of this site will be used on the project. Plant deliveries for site will be booked to site through the NRMM online portal.

2.19 Traffic Routes, Segregation & Parking

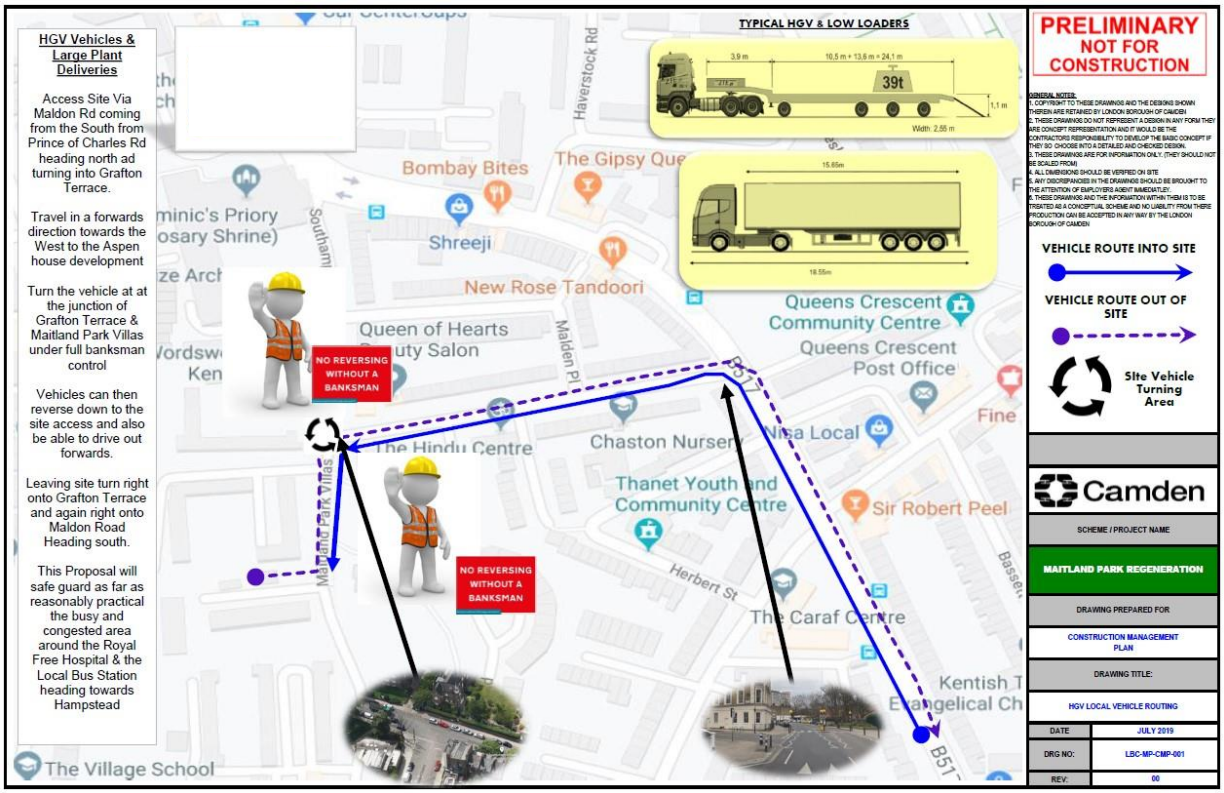
Parking on site is restricted and the demolition manager must be consulted with before bringing a vehicle to site. There are only a few available spaces on site and these need to be managed by the demolition manager.



When walking around site it is advised to use existing hard standings whenever possible. Always give vehicles and plant a wide birth when walking around them. Never walk or drive close to exclusion zones, waste bins or buildings being demolished.

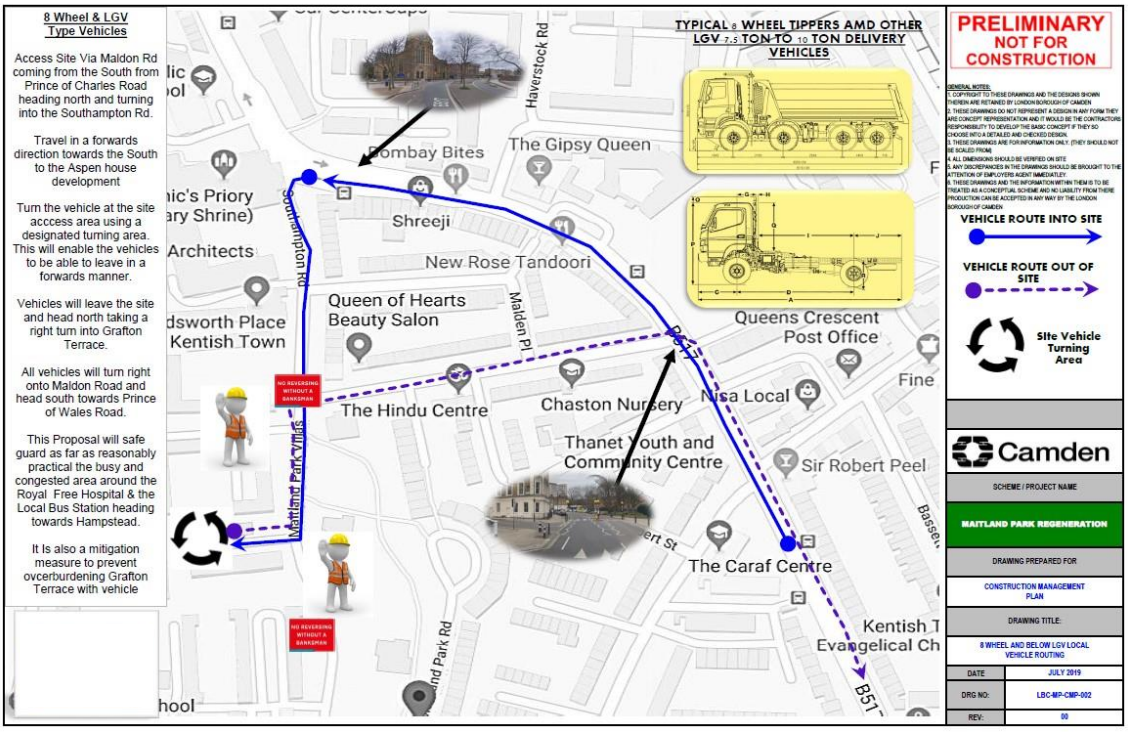
A walkway must be established for the members of the public to use when walking through the alleyway. They need to be kept separate from the construction traffic that will be leaving the site and able to walk through the alley without being at risk from vehicles.

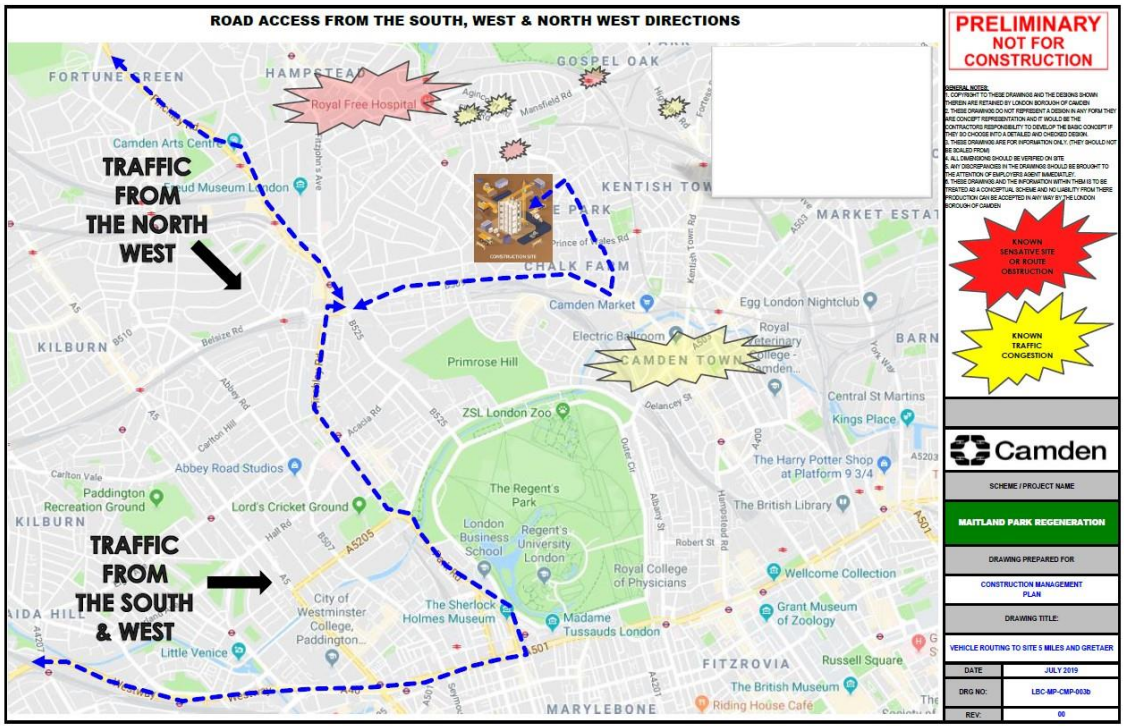
All of Downwell vehicles are FORS/CLOCS compliant. We have achieved our FORS Silver status which means all of our vehicles and their drivers are up to this standard. When using 3rd party hauliers we expect them to have at least the same safety standards as our own vehicles. This will all be verified before the haulier is permitted to start work on the site.



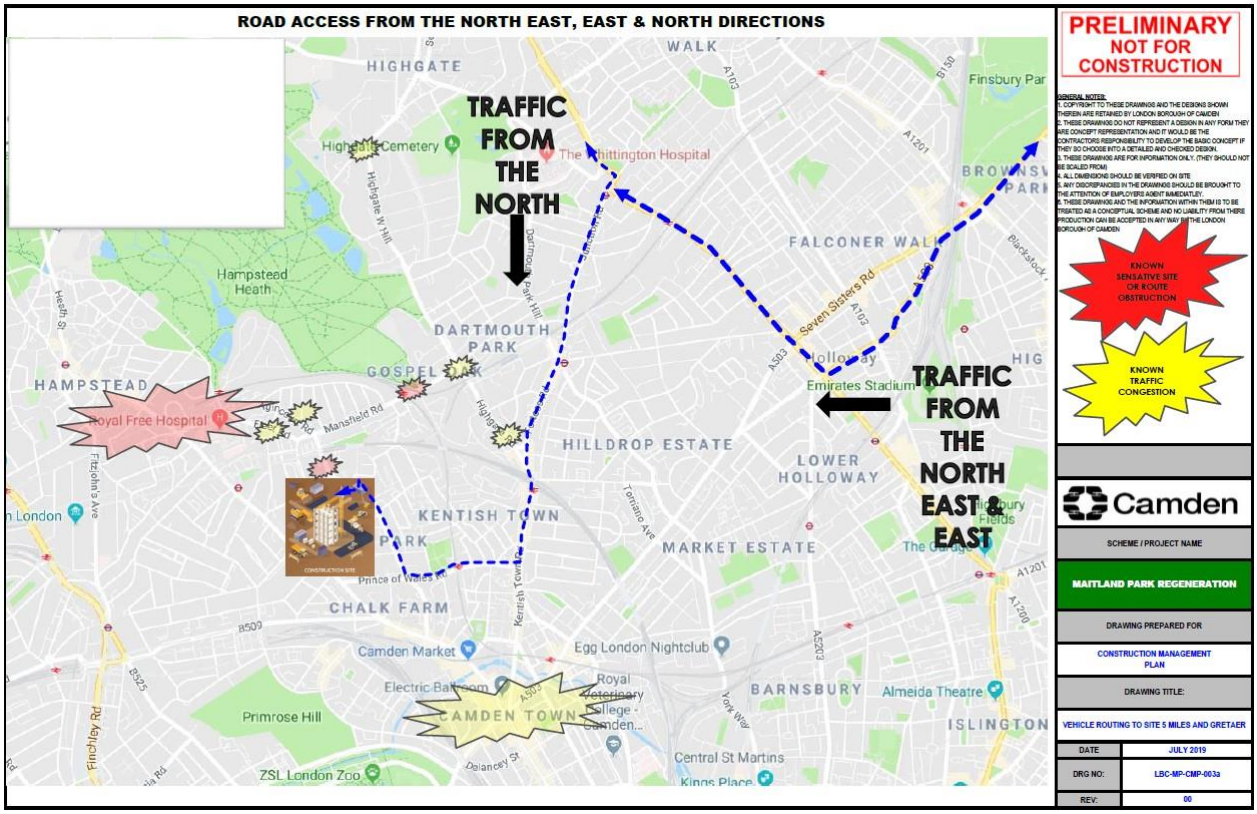
As the demolition phase unfolds areas for parking and lay down areas may change, if and as they do this will be communicated to all site personnel and revised plans placed on display and into the site file. Care sharing and public transport is to be encouraged and communicated to all employees and sub-contractors prior to the start of the works. Only temporary waiting of no longer than 5 minutes will be permitted whilst the site gates are opened in the mornings/evenings etc.

All vehicles servicing the site must ensure they call ahead to the site manager, when driving on the site the vehicles must stick to the sites 5mph speed limit. When driving off the main through road of the site the vehicle must be escorted by a banksman as there may be personnel moving around the site. No reversing on site without a banksman at any time.





All traffic will arrive from a pre-determined route to ensure vehicles only use routes appropriate to their vehicle types. The primary aims of the routing strategy are to prohibit all vehicles associated with the development from using unsuitable roads and to retain all vehicles on the strategic highway network, (SRN/TLRN), for as long as practically possible.



2.20 Waste Management

All waste arising from the works will be separated into the necessary categories and placed into their respective skips for disposal to the necessary recycling centre. All skips will be signed showing their contents. A full waste management plan will be compiled at the start of the project and will be updated as each items of waste are removed. All duty of care documentation will be submitted to the client's representative.

All waste arising from the works will be dealt with in accordance with the Environmental Protection Act 1990. Most waste from the works will be classified as Non-Hazardous although there will be numerous skips of asbestos waste.

All skips will be checked that they are correctly locked and sheeted before leaving site. No materials must be hanging out of the skips or extending up past the top.

The waste must leave in skips via main site entrance into Dollis Avenue. The vehicles must be pre-booked and must be scheduled to site within their agreed time slot. This is important to allow for smooth running of the site and to cause as least disruption to neighbours.

Asbestos waste will be collected by the asbestos removal contractor and disposed of at a licensed facility. All waste notes for this asbestos will be kept on site.

2.21 Permit to Work

A permit to work system will be employed throughout the duration of the works these will include the following operations.

- Permit to demolish (required due the use of scaffolding and because of the instability of the recreational buildings proximity to neighbouring properties).
- Hot works
- Work at height
- Permit to work (required for working in areas where live services are present)

Before any works commence within the above categories the area of works will be inspected to identify any known hazards and identify if it is safe for works to continue. After all controls, have been put into place and all staff are familiar with proposed scope of the works the relevant permit will be raised. It will be raised by the site management and will be signed on by the person supervising the works. At the end of the works or shift the permit will be signed off after a final inspection of the workplace has been inspected by the site management.

2.22 Stability of Structures

The structures on the site are to be demolished in a steady and controlled manner, ensuring that the stability of the structure is maintained throughout and at the end of each shift. No free-standing sections are to be left up or loose debris on high up edges at the end of any shift.

Adequate exclusion zones are to be established around the areas being demolished so that in the unlikely event of collapse, no personnel will be in the area. With the demolition works being close to the Parade and Bridlington Rd additional buffer zone is to be established as the demolition progresses through the building. These buffer zones are to be 3m outside of the hoarding and are to be manned at all times by a Banksman.

Downwell will ensure that all demolition is done in accordance with the agreed demolition method which is outlined in the demolition method statement. This method must not be deviated from without the document being revised and approved by the project director.

2.23 Working at Height

When any working at height is undertaken areas will be delineated using barriers to eliminate the risk of falling objects. The barrier will be suitably signed. All of the floor openings within the site must be boarded over prior to the main demolition team coming to site.

Before any works of this natures are carried out a toolbox talk will be held advising all staff of the areas of works and the type of works being carried out.

Any access to high level ceilings within the building will be undertaken using MEWPs or mobile towers and podiums. MEWPs will only be operated by IPAF trained operatives and Towers will only be erected by PASMA trained operatives.

All scaffolders on site must be working behind a handrail at all times. Harnesses must also be worn and secured to a secure anchorage at all times.

Where working at height is required using a MEWP. The area above the work at height must be checked for over head power cables or other obstructions. The operator of the MEWP must have a valid IPAF training cert for the machine.

2.24 Control of Lifting operations

Any lifting operations will only be conducted in accordance with an accepted lifting plan. This must be provided in adequate time for the document to be inspected before the works can start. This includes the delivery of site cabins, moving attachments around site and unloading items from lorries using the arm of the machine. The cabin provider must provide a lift plan prior to the delivery of the cabins. This plan should outline the method for safely fixing the chains to the cabins without having to climb on then.

All vehicles delivering cabins must be suitably positioned on firm level ground. All non-essential personnel must be asked to clear the area whilst the lifting operations are being completed.

All lifting operations will be conducted in accordance with the Lifting Operations and Lifting Equipment Regulations 1998 and Use of Work Equipment Regulations (PUWER) 1998

2.25 Plant & Equipment

All equipment will be suitable for the tasks being carried out and all test certificates will be available for inspection within the site office. Further copies will be kept within the file on each item of plant.

All plant operators will be trained in accordance with the CPCS (Construction Plant Competency Scheme) or NPORS (National Plant Operators Scheme). All plant operatives will be in possession of their cards with copies within the file situated in the site office. Any new operatives joining the company will have their cards verified with their respective training organisations.

All plant will be switched off when unattended with the keys removed. When machines are being operated the keys must be attached to a lanyard that is then attached to the operator's clothes. This will help to prevent keys being accidentally left in machines as the operator leaves.

All plant will be stored in a central area at the end of each working period and immobilised by removing the isolator switch.

All fuels will be kept in bunded tanks/bowsers which will be kept in a designated area where all refuelling will be undertaken. Spill kits will be available on site and all necessary fire fighting equipment will be sited adjacent to the refuelling areas and shown on the site fire plan.

Any electrical equipment will be pat tested in accordance with the Electricity Regulations. All tools will be inspected daily by a competent person.

All excavators are fitted with rear facing cameras and mirrors that allow the operator to see clearly around them. All drivers are trained not to reverse the machine without first slewing the cab around so they can clearly see where they are going.

If reversing of plant is an essential, then a banksman must be there to accompany the reversing whilst always standing at a safe distance but within view of the operator so that signals can be clearly seen.

2.26 Excavations

Part of the scope of work is to complete a reduced level dig to allow for the pile matt to be installed. The levels for the reduced dig are to be provided by Bouygues. An engineer will be on site to set the

required levels. All muck removed from site will be subject to a full WAC test. This is required to categorize the material as non-hazardous for disposal at the appropriate facility.

When the engineer is on site and within the excavation, he must remain in site of the machine operator at all times and out of the reach of the excavator's arm. He must also never walk behind any machines working on site.

When excavating the foundations great care must be taken to ensure that the excavations do not create necessary risk. Excavation works are to be scheduled so that no excavations are to remain open at the end of the shift.

When leaving excavations open is unavoidable they must be surrounded with Herras fencing and have the edges battered so that should someone fall in it is not vertical drop.

2.27 Confined Spaces

It is not envisaged that any working by Downwell in confined spaces will be required within this project. If any confined space becomes apparent or are uncovered during the works all required monitoring will be carried out and any operative entering the space will have confined space training and the necessary escape equipment where necessary.

Before any confined space is entered until a detailed risk assessment and method statement have been compiled and approved.

No operatives will enter a confined space until a permit to enter a confined space has been raised. Any personnel entering a confined space will be trained in accordance with the confined space regulations 1997. The training will include emergency evacuation procedures.

2.28 Scaffold

Scaffolding is required at the northern end of Aspen House. This scaffolding is required due to the proximity of the building to the site boundary.

A full design for the scaffolding including the wind loadings for the Monarflex is to be issued and included within the TWD file for the project. This design is to be passed onto the TWC and TWS prior to the installation of any scaffolding.

The scaffolding will extend the full height of the northern elevation with an 2m return onto the east and west elevations. This scaffolding will be fully boarded and be encapsulated with flame retardant Monarflex. The Monarflex is required to prevent small fragments and dust leaving the footprint of the building

The scaffolding must be inspected and tagged before the building can be demolished. The scaffolding must also be checked and tagged weekly, following any adaptions or following any adverse weather.

2.29 PPE Maintenance

The site will be a mandatory PPE site with the minimum requirement of Hard Hats, Safety Footwear, Hi Vis Vests and Gloves. All PPE will be issued to each and every operative and each item issued will be documented in the PPE issue register.

All operatives will wear the above equipment with the addition of any other PPE appropriate to the tasks being carried out and listed within the method statement and risk assessments i.e.: - Ear protection, Eye Protection, respirators and Fall Arrest Equipment.

All PPE will be of the correct type for the task being carried out and the relevant BS-EN number will be imprinted on each item of equipment.

Any operative found not to be complying with the company requirements or any applicable legislation will be dealt with in accordance with our disciplinary procedures as listed within our company health & safety policy.

When any breach of PPE regulations occurs a toolbox, talk will be held containing detailed requirements of PPE for the particular tasks being undertaken. The person/s involved in the breach of regulations will be dealt with as appropriate.

All equipment required to safely complete the works will be issued free of charge.

2.30 Asbestos

All identified asbestos containing materials will be removed from the site prior to the demolition works commencing. The ACM identified in the surveys are of the licensed and non-licensed category. They will be completely removed prior to the start of any intrusive or structural demolition works.

All clearance certs and hazardous waste notes will be contained within the site file and issue to Bouygues at the end of the project.

All Downwell operatives have received training to recognise ACM's, should any additional ACM's be located within the buildings during demolition, work will cease, and the Site Manager notified, an asbestos surveyor will be called to site, and a sample taken for testing to confirm, prior to works in that area continuing.

Should anyone become accidentally exposed to asbestos fibres the following procedure must be adopted.

- Stop work move away from the immediate area but do not go to the welfare or other areas where other people are.
- Phone or call for assistance.
- The area must be cordoned off and warning signage displayed.
- Instruct the people what has happened and not to approach you (this is key to reduce the likelihood of exposing others)
- Ask the help to bring some disposable overalls, an FFP3 disposable mask and some asbestos waste bags.
- The exposed person must remove all clothing and place it inside the asbestos waste bag.
- The person assisting must call for asbestos analyst and for a decontamination unit to be delivered to site.
- The asbestos analyst must monitor the area to identify the type of asbestos present and conduct background air monitoring.
- The exposed operative must clean themselves thoroughly inside the decontamination unit.
- The exposed person must then seek medical advice.
- If the analyst confirms that it was asbestos that was disturbed, the incident must be reported to the Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR) Regulations.

2.31 Manual Handling

Manual handling will be encountered on this site and will be assessed within the method statement. Heavy lifting must be a last resort and mechanical lifting must be the preferred method for moving heavy items.

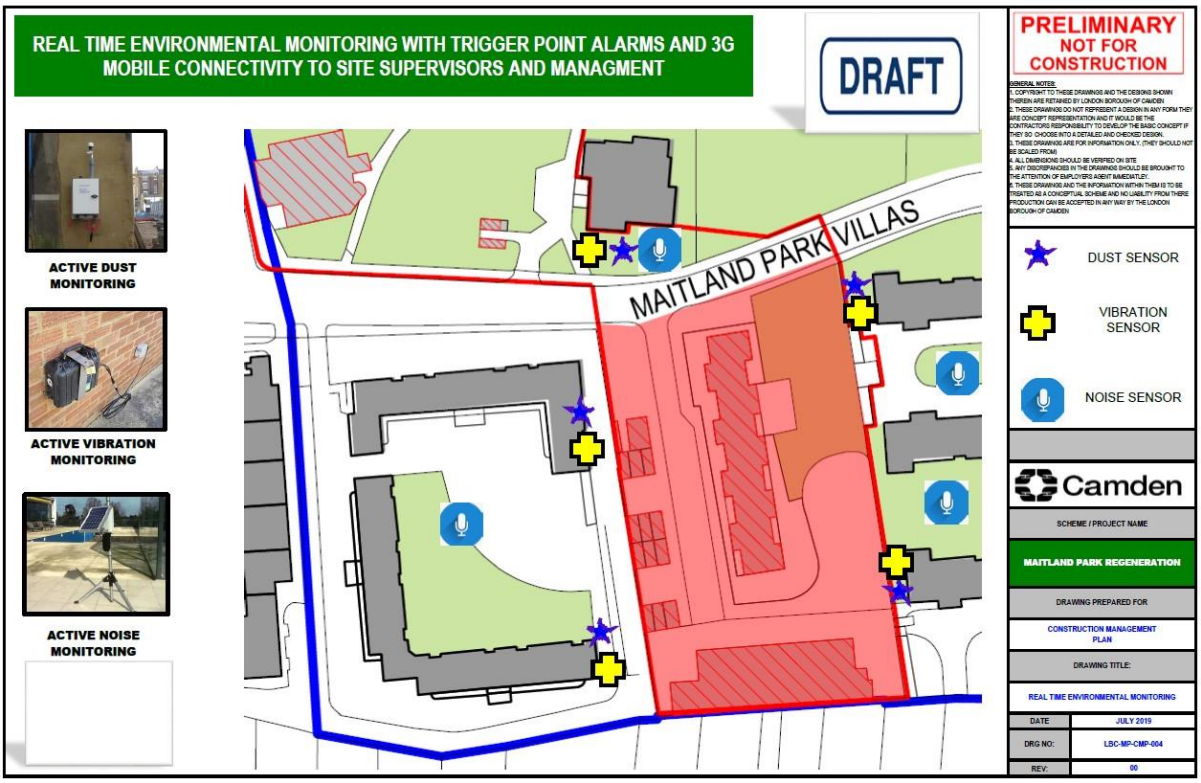
In the event that the manual handling cannot be avoided team lifting will be incorporated.

Where lifting in excess of 20kg cannot be avoided specific risk, assessments will be compiled. All staff will be trained in manual handling.

2.32 Noise

Downwell demolition will minimise noise as far as possible by using plant which is well maintained with silencers which give the best noise reduction. When plant is idle, it will be switched off. All generators will be of the silenced type.

No construction vehicles will be permitted to wait outside the site with their engines running, with exception to those vehicles waiting for the Traffic Marshal to open/close the entrance gate. If there is a delay to access/egress the site entrance the driver will be told and will then switch off the engine.



When loading bins, material must be lowered in at the start to ensure that there is a layer of material at the bottom to reduce the noise from dropping subsequent layers on top. As the layers of material are placed in the bin they may need to be compacted. This must only be done by gradually lowering the arm of the excavator into the bin and pressing down. The operator must not bang down on the bin from a great height.

To help reduce the noise when using breakers to breakers the foundations in the ground noise barrier enclosures will be erected using Herras fence panels covered in noise reduction quilts. These barriers will help to ensure noise is reduced in areas close to boundaries with residential properties.

Excessive noise signs will be posted warning of the activity and the requirement of mandatory hearing protection**.**

Strategically placed dust monitoring devices will be placed within the site boundary as set out in the Camden presentation. The equipment will monitor noise levels and notify the project team and other key personnel who require the readings, should levels exceed those set by the local authority/EA suggested levels. If levels exceed then the current work activities will cease, and the incident will be investigated? Work methods and protection measures can then be adapted to try and ensure that an exceeded level does not happen again.

2.33 Dust

If exposure to dusty works cannot be avoided, then adequate PPE must be provided to personnel on site. For all respiratory equipment used on site a valid face fit test must have been completed. This can be provided by the Downwell SHEQ department. Only respiratory equipment with a minimum value of FFP3 is to be used.

To help prevent dust from the demolition works and crushing water is to be used to help suppress this dust. Water will be sprayed onto the works to keep the areas dampened. The dust suppression techniques will vary as the works. At height demolition works will have hoses fed up though te arms of the machines or by using a hose attached to the basket of a MEWP. For medium to low level dust mist spraying units (dust boss) will be used to spray a fine water mist at the works. When working on the ground water hoses/moto fog will be used to keep the ground and stockpiles of concrete damp and prevent dust from blowing off the ground of the stockpiles.

Where stockpiles of material are being left on site, they must be kept dampened to prevent the wind from blowing off the stockpile.

Strategically placed dust monitoring devices will be placed within the site boundary as set out in the Camden presentation. The equipment will monitor noise levels and notify the project team and other key personnel who require the readings, should levels exceed those set by the local authority/EA suggested levels. If levels exceed then the current work activities will cease, and the incident will be investigated? Work methods and protection measures can then be adapted to try and ensure that an exceeded level does not happen again.

2.34 Vibration

Excessive vibration is unlikely to be a factor for this project. To help minimise the vibration passed through an element of hand separation is to be completed.

When loading materials into bins/lorries the material must be gradually lowered in and not dropped from height. Once a layer of material is in the bottom of the bin this will act as a cushion for the remaining material to be loaded in.

As bins get full, they may need to be compacted down using the attachment of the excavator. This is to be done carefully by pressing down on the contents of the bin and not hitting it from height.

Excessive plant movements must be avoided when working close to the boundary lines with neighbouring properties. To help reduce the impact of vibrations travelling through the ground where possible machines are to sit on a bed or demolition debris to act a s a cushion.

(Control of Vibration at Work Regulations 2005. The exposure limit value ELV is a daily exposure of 5m/s2 A(8).) An operative rotation system will also be employed.

Strategically placed dust monitoring devices will be placed within the site boundary as set out in the Camden presentation. The equipment will monitor noise levels and notify the project team and other key personnel who require the readings, should levels exceed those set by the local authority/EA suggested levels. If levels exceed then the current work activities will cease, and the incident will be investigated? Work methods and protection measures can then be adapted to try and ensure that an exceeded level does not happen again.

2.35 Control of Substances Hazardous to Health

A full and comprehensive COSHH assessment will be included within the RAMS document for the project. This will detail the coshh items identified on the site, how you can protect yourself from them and how they are to be safely handled and stored.

Upon taking possession of the site, Downwell operatives will collect any drums or containers of chemicals and place them in a secure storage area to be agreed by the Demolition Supervisor. All containers will be placed on a drip tray suitable to carry 110% of the estimated volumes. This area will be suitably signed with current legislative compliant warning signs with spill kits and suitable means of fire fighting equipment local to the store in the way of a Fire point. This fire point will contain a means of raising the alarm and suitable extinguishing aids.

Once collected into the compound an external licenced removal company will attend site to ascertain the volumes and contents of the containers for which COSHH assessments can then be compiled and all items can then be removed to a licensed disposal facility

For the demolition works in general, COSHH assessments will be complied before any of the works commence. The materials that will be brought to site are limited ranging from fuels, oils, oxygen, and propane. For all materials on site there will be a technical data sheet present within the site office.

Where possible non-toxic agents will be used in the welfare so to reduce the exposure to operatives during the contract.

All bowsers containing fuel will be of the double bunded type with locking nozzles. A Dedicated refuelling area will be set up in the appropriate work sites. All refuelling areas will be fenced off. Spill kits will be present in all areas.

Hot cutting is unlikely to be required with most works being undertaken by mechanical means, any gas bottles will be stored in a designated are delineated using Heras fencing. Oxygen and propane will

be store separately. There will be a requirement of Propane to fuel the heating systems within the welfare units and the hot water within the decontamination units.

All gas bottles will be stored in an upright position and all storage areas will be adequately signed.

2.36 UV Rays

Depending on the time of year that the works start will depend on what precautions have to be taken in regard to UV rays. Excessive exposure to the sun's rays during the workday can go unnoticed and the people on site must be encouraged to wearing sunscreen. Excessive rays could be expected from the sun during this period, sun blocks will be available and should be applied if working outside in the sun for long periods.

Operatives should be discouraged from wearing short sleeves and from working outside for long periods of time.

2.37 Contaminated Land

At present no contaminated land has been identified. There are ground investigations to be completed. Once the results of these investigations have been issued, we will update this section if required to.

Should any hazardous materials be found during the excavation works the following procedures shall be followed:

- works should stop;
- The area made safe and all personnel cleared from the area;
- signage erected to the effect of 'Do Not Enter Hazardous Substances';
- The Site Supervisor notified immediately, followed by other site workers and the client
- Should the contamination give rise to an immediate or significant risk of harm to the environment or human health, mitigation measures shall be implemented. This shall only be done if it is safe to do so and there is no risk to staff or public safety.

The following may be undertaken:

- Protection of surface water course - through spill kits, bunding or the creation of a sump;
- Everyone on site will be required to wear disposable overalls, steel toed wellington boots (If asbestos, FFP3 masks also)
- Damping down and/or sheeting to reduce wind-blown dust;
- Covering with soils (or suitable medium) to reduce volatilisation of contaminants.

Following identification and instruction we will implement the following:

- Methodology developed for sampling of the material;
- Action plan prepared on dealing/handling the impacted soil/water;
- Development of strategy for removal and consideration of either treatment or direct removal from site;

Material being removed from the site shall be assessed and classified as either hazardous, non-hazardous or inert based on agreed plan.

2.38 Design, Work Methods & Sequence

The demolition method is to be checked weekly by the Demolition Supervisor so that it remains an accurate account of the works on site. If the work method or sequence is required to be altered to suit the site conditions, then the demolition method statement must be revised.

The new revision must then be issued to the site team where everyone completing the works can be inducted.

All changes must be trackable and clearly visible in the new revision. The author must also sign their name on the revision and get the changes approved by a Downwell Director.

2.39 Trees

There is information in the preconstruction documents regarding the removal of several trees during the scheme. These are not currently within our package.

All workers and machine operators are to be informed not to remove any trees or bushes without notifying the Bouygues prior to their removal.

2.40 Unexploded Ordnance (UXO)

A UXO survey was completed by 1st Line defence in 2014 and the summary of the assessment is as follows.

1st Line Defence believes that there is a **Low Risk** from UXO across the majority of the site. However, one area is considered to have an elevated Medium level of risk (see Risk Map, Annex P). This is due to damage during WWII, reducing frequency of access and which therefore may have made it unlikely that a UXO would have been noticed. No significant structure has since been constructed on this portion of land, which might have further mitigated with risk of UXO. This area is therefore considered to be of **Medium Risk**.

The following risk mitigation measures are recommended to support the proposed works at the Maitland Park site:

All works – Low and Medium Risk areas

Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works

Shallow intrusive works in Medium Risk area (trial pits, open excavations, shallow foundations etc.)

Unexploded Ordnance (UXO) Specialist Presence on Site to support shallow intrusive works

2.41 Ecology

There is no ecology works being completed on the site. Workers are asked to be vigilante when working on the site. Should any species of animals be found to be nesting on site, works should stop and the Sie Supervisor

2.42 Resident Liaison

As we are PC on site, we will be handling all aspects of the community liaison. We will adopt the following practices to ensure that the impression of the site is a positive one and that our works affect the surrounding neighbours as least as possible.

- Downwell are aware that issues regarding pollution and dust migration. The requirement in reducing the noises omitted during the works was a great factor in deciding the demolition methods to use.
- We will issue the programme of works to all properties on the boundary of the site that are affected by the works.
- Prior to the start of the demolition works a resident's letter will be drafted. Checked off by Bouygues and Camden Council before be letter dropped to a selected area around the sit
- Downwell will maintain on site, a system for recording any incidents and any ameliorative action taken.
- Vehicles leaving the site will be checked for loose debris and have their wheels cleaned if excessively dirty. The roads surrounding the site will be regularly checked for debris and dirt. If identified this will be cleaned at the earliest convenience. Run-off water is to be allowed to disperse down the surface water drainage that has had a filter cover placed over it to prevent soil/dirt from entering the drain.
- No vehicles will be permitted to idle outside the site during the early hours of the morning. Drivers will be instructed to come to site within the below working hours. Any drivers that come to site must not be allowed to block access to neighbouring properties.
- During breaks the workers will not be permitted to congregate outside the neighbouring properties. Shouting, swearing and other nuisance behaviour will not be tolerated by our staff.
- The working hours on site will be 08:00 – 18:00 Monday-Friday and Saturday 08:00 – 13:00.

In the event of a complaint from a neighbour or a member of the public in relation to any site activity, they will be given the Site Managers details.

Should complaints about odour, noise, dust or vibration be received, they will be addressed directly by Downwell to enable results at the time of the complaint to be reviewed, and where appropriate immediate actions employed to rectify the problem.

Records will be kept of all complaints, including details of any actions taken.

2.43 Rodent Control

Prior to the start of the project the area will be assessed to check for evidence of rodents. If the area is deemed to have a rodent issue This could affect the surrounding residents once the building is being demolished as the rodents will be forced to flee to the surrounding areas.

A specialist contractor will be approached to lay strategically placed traps around the perimeter of the site. These traps will be monitored and emptied as required.

The presence of rodents can cause a health hazard to workers. Leptospirosis is a disease that is closely linked to rats. Gloves are to be worn at all times whilst on site. Strict hygiene must be adopted by everyone on site with hands being thoroughly washed prior to eating, drinking and smoking.

If you feel yourself becoming ill with flu like symptoms it is extremely important that you go to the doctors and mention you may have been in contact with rodent waste.

2.44 Concrete Crushing

All of the concrete and masonry created during the demolition is to remain on site. Prior to the crusher coming to site the local authority must be informed of the intention of crushing on site.

The crusher is to be position as centrally to the site as possible and away from any residential boundaries.

It is firstly to be sorted and cleaned so that no other waste arisings are present this will help to ensure that the crushed material is as clean as possible.

An adequate water supply needs to be available in advance of the start of the crushing. It must be adequate enough to be fed into the crusher and to dampen both the stockpile of material and the finished aggregate as it is being moved about. An excavator with bucket attachment is to position itself on the stockpile of broken concrete. This machine will gradually load the hopper of the crusher in a slow and controlled manner making sure that no other waste streams go into the hopper which could cause it to jam.

An exclusion zone is to be established around the crushing works. This exclusion zone is to be established out of Herras fencing and must prevent site personnel from being able to get too close to the crushing operations. The fencing is to start at the hopper and go around the crusher and the side belts where metal and other materials are separated. The fencing must be far enough away from the side of the crusher that it contains any materials removed via the side belts.

Even with the water being used to suppress the dust the area may still be dusty. The crusher operator and anyone else in the area must wear a minimum of an FFP3 face mask (with face fit test) All workers in the area must wear hearing protection at all times during the crushing works. This includes the plant operators.

All of the crushed 6F2 aggregate is to be stockpiled within the site grounds.

2.45 Reduced Dig

Prior to installing the pile mat a large area is to have a reduced level dig completed. All of the muck that is dug up is to be removed from site. Prior to removing this waste from site, the material must have had a full WAC analysis completed to the determine the category for the material.

Once determined the area is to be marked out by an engineer with an engineer being on site to check the depths as the material is removed.

The waste is to be dug up and loaded directly into the 20yd tippers and removed from site. Adequate wheel washing facilities must be on site as this time which will wash the lorries wheels and collect the waste water so that local drainage does not become blocked.

DOWNWELL GROUP
Enabling Solutions

Acknowledgment Sheet

Project Name & Number	Aspen House - DD19-0033-P
Project Start Date	
RAMS Inducted by	
Document Name & Revision	

By signing below, I confirm that I have been given the required information to complete the works on site in a safe manner and am aware of all the requirements on site to protect mine and everyone else on sites safety.

First Name	Last Name	Signature	Date

Appendix 3 – Noise and Vibration Impact Assessment (2014)

Maitland Park Estate

NOISE AND VIBRATION IMPACT ASSESSMENT

July 2014

Camden

RAMBOLL

Intended for
EC Harris and London Borough of Camden

Document type
Report

Date
May 2014

MAITLAND PARK
NOISE AND VIBRATION IMPACT ASSESSMENT

RAMBOLL

MAITLAND PARK
NOISE AND VIBRATION IMPACT ASSESSMENT

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CONTENTS

1.	**INTRODUCTION**	**1**
1.1	Site Description	1
1.2	Scope of Assessment	2
2.	**RELEVANT POLICY, GUIDANCE AND LEGISLATION**	**4**
2.1	The National Planning Policy Framework	4
2.2	Noise Policy Statement for England 2010	4
2.3	London Borough of Camden Core Strategy 2010 Policy DP28 – Noise and Vibration	4
2.4	The London Plan (2011) and Revised Early Minor Alterations to the London Plan (2013)	6
2.5	The London Plan: Housing Supplementary Planning Guidance (2012)	6
2.6	BS5228: 2009 'Code of practice for noise and vibration control on construction and open sites'	7
2.7	BS4142:1997 Method for rating industrial noise affecting mixed residential and industrial Areas	7
2.8	BS8233:1999 Sound insulation and noise reduction for buildings – Code of practice	8
2.9	World Health Organisation Guidelines	8
3.	**METHODOLOGY**	**10**
3.1	Consultation with London Borough of Camden	10
3.2	Assessment of Demolition and Construction Noise and Vibration	10
3.3	Noise Surveys	11
3.4	Operational Noise Assessment - Site Suitability for Residential Development	13
3.5	Operational Noise Assessment - Road Traffic Noise	14
3.6	Operational Noise Assessment – Plant Noise Assessment	14
3.7	Operational Noise Assessment – Internal and External Amenity	14
4.	**NOISE SURVEY RESULTS**	**15**
4.1	LT1 – Flat 1 Aspen House Balcony	15
4.2	ST1 – Aspen House Garages	16
4.3	ST2 – West of Maitland Park Site Next to Gym	16
4.4	ST3 – South of Maitland Park Site Next to Aspen House	16
4.5	ST4 – Centre of Site Next to Maitland Park Villas	17
4.6	ST5 – Junction of Maitland Park Villas and Grafton Terrace	17
4.7	ST6 – North-Eastern Corner of Maitland Park site	17
5.	**DISCUSSION**	**18**
5.1	Assessment of Demolition and Construction Noise and Vibration	18
5.2	On-site Construction Activities	18
5.3	Operational Noise Assessment - Site Suitability for Residential Development	20
5.4	Operational Noise Assessment - Road Traffic Noise	20
5.5	Operational Noise Assessment – Plant Noise Assessment	21
5.6	Operational Noise Assessment – Internal Noise Levels	22
5.7	Operational Noise Assessment – Noise Levels in Outdoor Amenity Spaces	23

6.	**MITIGATION**	**1**
6.1	Demolition and Construction Noise	1
6.2	Operational Noise Assessment - Site Suitability for Residential Development	2
6.3	Operational Noise Assessment - Road Traffic Noise	3
6.4	Operational Noise Assessment – Plant Noise Assessment	3
6.5	Operational Noise Assessment – Internal Noise Levels	3
6.6	Operational Noise Assessment – Noise Levels in Outdoor Amenity Spaces	4
6.7	Cumulative Noise Assessment	4
8.	**CONCLUSIONS**	**5**

TABLES

Table 1	Noise levels on residential sites adjoining railways and roads at which planning permission will not be granted (Table A of DP28)	5
Table 2	Noise levels on residential streets adjoining railways and roads at which attenuation measures will be required (Table B of DP28)	5
Table 3	Vibration levels on residential streets adjoining railways and roads at which planning permission will not be granted (Table C of DP28)	6
Table 4	Noise levels from plant and machinery at which planning permission will not be granted (Table E of DP28)	6
Table 5	Indoor ambient noise design levels (Table 5 of BS8233)	8
Table 6	Guideline values for community noise in specific environments	9
Table 7	Distances at which vibration may just be perceptible	11
Table 8	Description of nearest noise sources and noise sensitive receptors to the Maitland Park site	13
Table 9	Noise Levels at monitoring position LT1	16
Table 10	Noise Levels at monitoring position ST1	16
Table 11	Noise Levels at monitoring position ST2	16
Table 12	Noise Levels at monitoring position ST3	16
Table 13	Noise Levels at monitoring position ST4	17
Table 14	Noise Levels at monitoring position ST5	17
Table 15	Noise Levels at monitoring position ST6	17
Table 16	Predicted Construction Activities	19
Table 17	Construction Activities & Corresponding Noise Levels at Various Distances	19
Table 18	Daytime, evening and night-time average noise levels at Kiln Place	20
Table 19	Daytime and night-time rating levels at the nearest sensitive receptors	21

FIGURES

Figure 1	Site boundary of Maitland Park	2
Figure 2	Noise monitoring locations	11
Figure 3	Nearest noise sources and noise sensitive receptors to the Maitland Park site	13
Figure 4	Predicted noise levels at the nearest noise sensitive receptors due to MUGA activity noise	23

APPENDICES

Appendix 1
Acoustic Terminology

Appendix 2
Consultation with LB Camden

1. INTRODUCTION

1.1.1 Ramboll UK Limited has been appointed by EC Harris and the London Borough of Camden (LB Camden) to undertake a noise and vibration impact assessment of the proposed development at Maitland Park, Camden, London.

1.1.2 This report has been prepared by Ramboll solely for the benefit of EC Harris and LB Camden. It shall not be relied upon or transferred to any third party, without the prior written authorisation of Ramboll. Any liability arising out of the use by EC Harris and LB Camden, or any third party of this report for purposes not wholly connected with the above shall be the responsibility of EC Harris and LB Camden, and such third party who shall indemnify Ramboll against all claims, costs, damages and losses arising out of such use.

1.1.3 Ramboll has endeavoured to assess all information provided to them during this assessment. The report summarises information from a number of external sources and cannot offer any guarantees or warranties for the completeness or accuracy of information relied upon. Information from third parties has not been verified by Ramboll unless otherwise stated in this report.

1.1.5 Refer to Appendix 1 for noise terminology.

1.1 Site Description

1.1.6 The site is intersected by Maitland Park Villas Road, and is partially bounded by Grafton Terrace to the north and Maitland Park Road to the east.

1.1.7 Residential receptors surround the site in all directions (see Figure 1).

1.1.8 Maitland Park is an existing social housing estate and gymnasium. The gymnasium was constructed in the 1930s, and the residential blocks were built between the 1950s and the 1970s.

1.1.9 The development proposals include improvements to the estate for new housing, community accommodation and improved landscaping.

Figure 1 Site boundary of Maitland Park

1.2 Scope of Assessment

1.2.1 The scope of the assessment undertaken within this report is as follows:

- Consultation with the Environmental Health Officer at the London Borough of Camden regarding the details of the methodology and scope of the assessment;
- Detailed review of relevant regional and national noise policy and legislation, in particular LB Camden's Core Strategy Policy *DP28 – Noise and vibration*;
- Collection of baseline data to establish the existing background noise levels at the proposed development site. This is to include unattended noise monitoring, over the weekend and weekdays, at a location representative of the noise climate experienced by the nearest sensitive receptors, and additional attended monitoring at a number of locations around the site;
- Assessment of the site suitability for residential development in accordance with the guidance of LB Camden's Core Strategy Policy *DP28 – Noise and vibration*;

- A qualitative assessment of road traffic noise will be provided;
- BS5228:2009 *Code of practice for noise and vibration control on construction and open sites (Part 1: Noise and Part 2: Vibration)* assessment of noise and vibration effects arising during the construction phase;
- BS4142:1997 *Method for rating industrial noise affecting mixed residential and industrial areas* assessment to establish the impact of fixed plant associated with the proposed development on the nearest noise sensitive receptors and to determine whether the predicted noise levels will give rise to complaints;
- BS8233:1999 *Sound insulation and noise reduction for buildings – Code of Practice* assessment, to include World Health Organisation (WHO) Guidelines, of the suitability of the site for residential development, including any necessary mitigation measures to reduce noise from all external sources to 'good' standard levels for internal and external residential amenity. Recommendations for the design of building envelopes will also be made; and
- Conclusions.

2. RELEVANT POLICY, GUIDANCE AND LEGISLATION

2.1 The National Planning Policy Framework

2.1.1 The National Planning Policy Framework (NPPF) adopted in 2012 in England outlines the Government's planning policies and requirements for the planning system. The NPPF forms a material consideration in planning decisions and hence must be complied with for planning permission to be granted.

2.1.2 Regarding noise, paragraph 109 of the NPPF states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of noise pollution.

2.1.3 Hence the planning system should seek to:

- Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of planning conditions;
- Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

2.1.4 To achieve these aims the NPPF refers to the Noise Policy Statement for England 2010.

2.2 Noise Policy Statement for England 2010

2.2.1 The Noise Policy Statement for England (NPSE) sets out the long term vision of Government noise policy; 'To promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.'

2.2.2 The NPSE outlines three aims for the effective management and control of environmental, neighbour and neighbourhood noise:

- Avoid significant adverse impacts on health and quality of life;
- Mitigate and minimise adverse impacts on health and quality of life; and
- Where possible, contribute to the improvement of health and quality of life.

2.2.3 The guidance states that it is not possible to have a single objective noise-based measure that defines 'Significant Observed Adverse Effect Level (SOAEL)' that is applicable to all sources of noise in all situations and that not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.

2.3 London Borough of Camden Core Strategy 2010 Policy DP28 – Noise and Vibration

2.3.1 LB Camden's Core Strategy (2010) recognises the effects that noise and vibration can have on amenity and health and therefore quality of life.

2.3.2 Policy DP28 seeks to ensure that noise and vibration is controlled and managed, preventing planning permission being obtained for:

- Developments which are likely to generate noise pollution; or
- Developments which are sensitive to noise in locations with noise pollution, unless attenuation measures are provided.

2.3.3 Where developments sensitive to noise are proposed close to an existing noise source, the Council requires an acoustic report to ensure compliance with *Planning Policy Guidance (PPG) 24: Planning and noise*, although this guidance is now superseded.

2.3.4 Where developments are proposed close to an existing source of vibration, the Council sets out limits for vibration levels which refer to guidance in BS6472-1:2008 '*Guide to evaluation of human exposure to vibration in buildings – Vibration sources other than blasting'*.

2.3.5 *DP28* sets out Noise and Vibration Thresholds which include an evening period in addition to the day and night standards contained in *PPG24*, and these thresholds are presented in Tables 1 to 4 below. It is not stated within the guidance whether the guideline noise levels are free-field or façade noise levels.

Noise description and location of measurement	**Period**	**Time**	**Sites adjoining railways**	**Sites adjoining roads**
Noise at 1m external to a sensitive façade	Day	0700-1900	74 dB $L_{Aeq,12h}$	72 dB $L_{Aeq,12h}$
Noise at 1m external to a sensitive façade	Evening	1900-2300	74 dB $L_{Aeq,4h}$	72 dB $L_{Aeq,4h}$
Noise at 1m external to a sensitive façade	Night	2300-0700	66 dB $L_{Aeq,8h}$	66 dB $L_{Aeq,8h}$

Table 1 Noise levels on residential sites adjoining railways and roads at which planning permission will not be granted (Table A of DP28)

Noise description and location of measurement	**Period**	**Time**	**Sites adjoining railways**	**Sites adjoining roads**
Noise at 1m external to a sensitive façade	Day	0700-1900	65 dB $L_{Aeq,12h}$	62 dB $L_{Aeq,12h}$
Noise at 1m external to a sensitive façade	Evening	1900-2300	60 dB $L_{Aeq,4h}$	57 dB $L_{Aeq,4h}$
Noise at 1m external to a sensitive façade	Night	2300-0700	55 dB $L_{Aeq,8h}$	52 dB $L_{Aeq,8h}$
Individual noise events several times an hour	Night	2300-0700	>82 dB L_{Amax} (S time weighting)	>82 dB L_{Amax} (S time weighting)

Table 2 Noise levels on residential streets adjoining railways and roads at which attenuation measures will be required (Table B of DP28)

Vibration description and location of measurement	**Period**	**Time**	**Vibration levels**
Vibration inside critical areas such as a hospital operating theatre	Day, evening and night	0000-2400	0.1 VDV $ms^{-1.75}$

Vibration inside dwellings	Evening	0700-2300	0.2 VDV $ms^{-1.75}$
Vibration inside dwellings	Night	2300-0700	0.13 VDV $ms^{-1.75}$

Table 3 Vibration levels on residential streets adjoining railways and roads at which planning permission will not be granted (Table C of DP28)

Noise description and location of measurement	Period	Time	Noise level
Noise at 1m external to a sensitive façade	Day, evening and night	0000-2400	5 dB(A)<L_{A90}
Noise that has a distinguishable discrete continuous note (whine, hiss, screech, hum) at 1m external to a sensitive façade	Day, evening and night	0000-2400	10 dB(A)<L_{A90}
Noise that has a distinct impulses (bangs, clicks, clatters, thumps) at 1m external to a sensitive façade	Day, evening and night	0000-2400	10 dB(A)<L_{A90}
Noise at 1m external to sensitive façade where L_{A90}>60 dB	Day, evening and night	0000-2400	55 dB L_{Aeq}

Table 4 Noise levels from plant and machinery at which planning permission will not be granted (Table E of DP28)

2.4 The London Plan (2011) and Revised Early Minor Alterations to the London Plan (2013)

2.4.1 The London Plan (Mayor of London, 2011) and Revised Early Minor Alterations to the London Plan (2013), is the spatial development strategy for Greater London. The main purpose of the London Plan is to ensure that all of the individual plans produced by the London boroughs work together to meet the priorities that are agreed for the whole of the London region.

2.4.2 Policy 7.15 *"Reducing noise and enhancing soundscapes"* states that "development proposals should seek to reduce noise by:

- Minimising the existing and potential adverse impacts of noise on, from, within, or in the vicinity of, development proposals;
- Separating new noise sensitive development from major noise sources wherever practicable through the use of distance, screening, or internal layout in preference to sole reliance on sound insulation; and
- Promoting new technologies and improved practices to reduce noise at source".

2.5 The London Plan: Housing Supplementary Planning Guidance (2012)

2.5.1 The London Plan: Housing Supplementary Planning Guidance (Mayor of London, 2012) was published in November 2012.

2.5.2 Section 2.3.26 of the guidance states that "in exceptional circumstances, where site constraints make it impossible to provide private open space for all dwellings, a proportion of dwellings may instead be provided with additional internal living space equivalent to the area of the private open space requirement. This area must be added to the minimum GIA and minimum living area of the dwelling, and may be added to living rooms or may form a separate living room. Enclosing balconies as glazed, ventilated winter gardens will be considered acceptable alternative to open balconies for all flats and this solution is recommended for all dwellings exposed to NEC noise category C or D" of PPG24.

2.5.3 Section 2.3.28 refers to policy 3.5 of The London Plan and states that the design of new housing developments is required to consider elements that enable the home to become a comfortable place of retreat. Noise is thus considered in this policy.

2.5.4 Standard 5.2.1 states that "developments should avoid single aspect dwellings that are north facing, exposed to noise levels above which significant adverse effects on health and quality of life occur, or contain three or more bedrooms".

2.5.5 Standard 5.3.1 refers to policy 7.15 of The London Plan and states that "the layout of adjacent dwellings and the location of lifts and circulation spaces should seek to limit the transmission of noise to sound sensitive rooms within dwellings". Noise from activities in the street and adjoining properties can cause stress, sleep disturbance and friction between neighbours. "All dwellings should be built with acoustic insulation and tested to current Building Regulations standards. However, acoustic insulation should not be relied upon as the only means of limiting noise and the layout and placement of rooms within the building should be considered at an early stage in the design process to limit the impact of external noise on bedrooms and living rooms. The impact of noise should also be considered in the placement of private external spaces."

2.6 BS5228: 2009 'Code of practice for noise and vibration control on construction and open sites'

2.6.1 BS5228: 2009 *'Code of practice for noise and vibration control on construction and open sites'* gives recommendations for basic methods of noise and vibration control relating to construction work. It also provides guidance concerning methods of predicting and measuring noise and vibration and assessing its impact on those exposed to it. The prediction method considers the noise emission level of the plant, the separation distance between the source and the receiver and the effect of the intervening topography and structures.

2.6.2 The DoE Advisory Leaflet (AL) 72 Noise control on building sites is referenced within BS5228. It provides guidance on fixed limits for construction noise:

"Noise from construction and demolition sites should not exceed the level at which conversation in the nearest building would be difficult with the windows shut. Noise levels, between 07.00 add 19.00hours, outside the nearest window of the occupied room closest to the site boundary should not exceed:

- *70 decibels (dBA) in rural, suburban and urban areas away from main road traffic and industrial noise;*
- *75 decibels (dBA) in urban areas near main roads in heavy industrial areas.*

2.6.3 These limits are for daytime working outside living rooms. When working outside the normal hours say between 19.00 and 22.00 the allowable noise levels from building sites will be less: such as the reduced values given in the contract specification or as advised by the Environmental Health Officer (a reduction of 10dB(A) may often be appropriate). Noisy work likely to cause annoyance locally should not be permitted between 22.00 hours and 07.00 hours."

2.7 BS4142:1997 Method for rating industrial noise affecting mixed residential and industrial Areas

2.7.1 British Standard BS4142:1997 '*Method of rating industrial noise affecting mixed residential and industrial areas'* can be used to assess whether noise sources of an industrial nature are likely to give rise to complaints from people residing in nearby dwellings.

2.7.2 The standard describes a method for assessing whether the noise levels from factories, or industrial premises, or fixed installations, or sources of an industrial nature in commercial premises is likely to give rise to complaints from people residing in the affected building. The method is not suitable for

assessing the noise measured inside buildings or when the background and rating noise levels are both very low[1].

2.7.3 The procedure in BS4142:1997 for assessing the likelihood of complaint is to compare the predicted noise level from the source in question, the "specific noise level", with the background noise level. The likelihood of noise provoking complaints is assessed by subtracting the background noise level from the rating noise level. BS4142:1997 states:

"A difference of around +10dB or higher indicates that complaints are likely. A difference of around +5dB is of marginal significance. A difference of -10dB is a positive indication that complaints are unlikely."

2.7.4 The standard also notes that "The greater the difference, the greater the likelihood of complaints."

2.7.5 The following definitions apply:

i. Specific noise level $L_{Aeq,T}$: The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source over a given reference time interval;

ii. Rating level L_{Ar}: The specific noise level plus any adjustment for the characteristic features of the noise; and

iii. Background noise level L_{A90}: The A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90% of a given time interval.

2.8 BS8233:1999 Sound insulation and noise reduction for buildings – Code of practice

2.8.1 Guidance on the acceptable noise levels for living rooms and bedrooms within residential buildings is given in BS8233:1999 *'Sound insulation and noise reduction for buildings – Code of Practice'*. Advice is given on the design range of internal noise levels, depending on the use of each room and the sensitivity to noise of the operations expected to be conducted in the rooms. An extract of the design levels is reproduced in Table 5.

Criterion	Typical situation	Design Range $L_{Aeq,T}$ dB
Reasonable resting/sleeping conditions	Living rooms	30
	Bedrooms[a]	30
[a] For a reasonable standard in bedrooms at night, individual noise events (measured with F time-weighting) should not normally exceed 45 dB L_{Amax}.		

Table 5 Indoor ambient noise design levels (Table 5 of BS8233)

2.8.2 Section 7.6.1.2 of BS8233 suggests that the steady noise level within external residential amenity areas should not exceed 50 dB $L_{Aeq,T}$ and 55 dB $L_{Aeq,T}$ should be regarded as the upper limit.

2.9 World Health Organisation Guidelines

2.9.1 The World Health Organisation (WHO) published their 'Guidelines for Community Noise' in 1999. The guidance sets out appropriate noise levels for different scenarios to ensure that communities are not subjected to unacceptable levels of noise. It should be noted that the WHO guidelines, although widely references in the UK, have no legal status.

2.9.2 The guidelines are presented in Table 6.

[1] For the purposes of this standard, background noise levels below about 30 dB and rating levels below about 35 dB are considered to be very low.

Specific Environment	Critical Health Effect(s)	L_{Aeq} [dB(A)]	Time Base [hours]	L_{Amax} fast [dB]
Outdoor living area	Serious annoyance, daytime and evening	55	16	-
	Moderate annoyance, daytime and evening	50	16	-
Dwelling, indoors	Speech intelligibility and moderate annoyance, daytime and evening	35	16	-
Inside bedrooms	Sleep disturbance, night-time	30	8	45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60

Table 6 Guideline values for community noise in specific environments

2.9.3 The façades of residential buildings will provide some degree of sound attenuation of outdoor noise levels, which will affect the internal noise levels experienced by occupants. This attenuation is at a minimum when windows are open in the façade of the occupied room. The WHO guidelines indicate that a façade with an open window will provide approximately 15 dB(A) attenuation. However, other sources suggest that this is an upper value and sound attenuation is generally in the range of 10 to 15 dB(A) depending upon the exact situation.

3. METHODOLOGY

3.1 Consultation with London Borough of Camden

3.1.1 The Environmental Health Officer (EHO) at LB Camden was consulted regarding the assessment methodologies and criteria that have been used for the purpose of the assessments contained in this report. The criteria as adopted in this report are as agreed on 26 February 2014 and 28 March 2014. Evidence of email correspondence is provided in Appendix 2. An appropriate construction noise threshold level was confirmed via telephone conversation on 28 March 2014.

3.2 Assessment of Demolition and Construction Noise and Vibration

Construction Noise

3.2.1 Proposed demolition and construction works on the Site would involve the use of a variety of working methods, and operations would vary across the Site throughout the development period. Therefore, noise levels from the works are likely to vary significantly over time as the distance from the noise sources and the type of construction activity vary relative to the sensitive receptors.

3.2.2 The exact working methodology and plant to be employed on Site for the demolition and construction work have not been established at this stage in the design. This level of detail will only be available when specialist demolition and civil engineering contractors are engaged as part of the scheme.

3.2.3 However, following best practice, an estimate of the expected noise levels over a representative period during the construction phase was undertaken using a prediction of the construction methods to be used and noise emission data for plant obtained from BS5228:2009. The assessment assumed that all plant would operate for each phase of work, at a given location within the Site.

3.2.4 Construction noise predictions were based on the methodology contained within BS5228:2009-1. This enabled predictions to be made of the noise emissions from the construction activities for given distances from the Site boundary.

3.2.5 A daytime 10 hour construction noise limit of 65dB L_{Aeq} was considered as the basis for identifying potentially significant construction impacts in accordance with the ABC method of BS5228:2009; in line with the consultation undertaken with LB Camden.

3.2.6 The following development stages were considered:

- Use of contractor's compound;
- Demolition of existing site buildings;
- Earthworks and site preparation;
- Building substructure works - CFA piling;
- Building substructure works - pile caps / ground beams; and
- Building superstructure works.

3.2.7 As noted during the consultations with LB Camden, noisy construction work would only be undertaken within daytime hours, between 08.00 and 18.00, Monday to Friday and 08.00 and 13.00 on Saturdays. No work should be undertaken on Sundays or Bank Holidays. If work is required to extend into other periods beyond the core daytime hours, reduced threshold noise levels would apply and separate authorisation would be secured with LB Camden.

Construction Vibration

3.2.8 Certain construction activities can produce a significant amount of ground-borne vibration, which has the potential to cause concern at nearby sensitive receptors. There is no accepted method for predicting the vibration at a sensitive receptor due to the ground-borne vibration from construction plant. However, it is possible to provide an estimate based on historical measurements provided within

BS5228 and therefore provide some guidance on the likely levels that might be generated during the construction period.

3.2.9 BS5228 suggests that for the majority of people, vibration levels between 0.14 and 0.3 mms^{-1} PPV are just perceptible. Table 7 details the distances at which certain activities give rise to a just perceptible level of vibration. These figures are based on historical field measurements to inform BS5228. The distances provided in Table 7 have been used to assess if vibration from construction activities would result in an impact on surrounding properties.

Construction activity	Distance from activity (m)
Heavy vehicles (e.g. dump trucks)	5-10
Excavation	10-15
Hydraulic breaker	15-20
Driven piling	50-100

Table 7 Distances at which vibration may just be perceptible

3.3 Noise Surveys

3.3.1 Noise surveys were undertaken to establish the existing noise climate around the Maitland Park site against which the assessment of construction and operational noise effects has been determined.

3.3.2 Unattended monitoring was carried out from Wednesday 12 March 2014 to Thursday 20 March 2014 at one location that is noted as monitoring position LT1 on Figure 2.

3.3.3 Short-term attended noise monitoring was undertaken on Wednesday 12 March 2014 at six locations as indicated on Figure 2 as ST1-ST6. Measurements were 15 minutes in duration at each location.

Figure 2 Noise monitoring locations

3.3.4 The surveys were carried out using Type 1 Sound Level Meters (SLM). The following equipment was used on site:

i. 1 No. Nor140 Sound Analyser, Type 1, serial number 1404236;

ii. 1 No. GRAS-40AF microphone with windshield, serial number 102631;
iii. 1 No. Norsonic 1251 Sound Calibrator, serial number 32853;
iv. 1 No. 01dB DUO Sound Level Meter, Type 1, serial number 10515;
v. 1 No. 01 dB Acoustic Calibrator, serial number 50441973;
vi. 1 No. 01 dB Outdoor Microphone Kit;
vii. 2 No. Heavy duty tripods; and
viii. 1 No. Outdoor weather protection kit (peli case) containing batteries.

3.3.5 The attended measurements were taken under free field conditions i.e. >3.5m away from reflecting surfaces unless otherwise stated, and were undertaken at a height of 1.5m above local ground level.

3.3.6 The unattended measurements were taken at a height of 1.5m above floor level on the Ground Floor balcony of Flat 1, Aspen House.

3.3.7 Each SLM had been calibrated to traceable standards within the preceding two years and the calibrator within the previous 12 months; calibration certificates are available upon request.

3.3.8 Each SLM was field calibrated once it was set up in the measurement position and on completion of the survey. No significant drift in the calibration was recorded at any time during the survey.

3.3.9 At each measurement location, a comprehensive suite of noise level metrics were recorded. The following noise level indices are relevant to this assessment:

i. $L_{Aeq,T}$ The A-weighted equivalent continuous noise level over the measurement period;
ii. L_{A90} The A-weighted noise level exceeded for 90% of the measurement period. This parameter is often used to describe background noise;
iii. L_{AFmax} The maximum A-weighted noise level during the period, with a fast time weighting; and
iv. L_{ASmax} The maximum A-weighted noise level during the period, with a slow time weighting.

3.3.10 Other metrics were measured and are available for further analysis if required; e.g. L_{AFmin}, L_{peak}, L_{A1}.

3.3.11 The weather conditions during the surveys were dry, with wind speeds mostly below 5m/s in variable direction. Periods of wind speeds in excess of 5m/s were experienced from Friday 14 March 2014 to Wednesday 19 March 2014.

3.3.12 Figure 3 shows the nearest noise sensitive receptors to the site; as indicated by R1-R13. The nearest permanent noise sources to the site are indicated as S1 and S2. Other noise sources were experienced during the baseline noise surveys, but are not shown on Figure 3 due to the temporary nature of these sources.

3.3.13 Table 8 provides a description of the noise sources and receptors identified, and an approximate distance from the site boundary.

Figure 3 **Nearest noise sources and noise sensitive receptors to the Maitland Park site**

Reference	Description	Approximate distance from the site boundary (m) (at closest point)
S1	Maitland Park Villas	0
S2	Grafton Terrace	0
R1	Alder House	10
R2	Hornbeam House	5
R3	Residents at Parkhill Road	25
R4	Oak House	5
R5	Chestnut House	5
R6	Beech House	5
R7	Rowan House	40
R8	Residents at Maitland Park Road	7
R9	Whitebeam House	0
R10	Residents off Grafton Terrace	5
R11	TRA Hall	0
R12	The Lord Southampton/ residents at Grafton Terrace	17
R13	Fraser Regnart Court	17

Table 8 **Description of nearest noise sources and noise sensitive receptors to the Maitland Park site**

3.4 Operational Noise Assessment - Site Suitability for Residential Development

3.4.1 The assessment of the Site's suitability for residential use, in terms of noise, will be determined by using the guidelines contained within Camden Policy DP28: Noise and Vibration, and the NPPF as agreed with the LB Camden.

3.5 Operational Noise Assessment - Road Traffic Noise

3.5.1 A qualitative assessment of road traffic noise will be provided as traffic data is not available to produce a quantitative assessment in accordance with the methodology of CRTN, as traffic flows around the site are not deemed to be significant.

3.6 Operational Noise Assessment – Plant Noise Assessment

3.6.1 The type, quantity and location of fixed mechanical and electrical (M&E) plant associated with the Proposed Development has not been finalised at this stage in the design and hence it is not possible to fully quantify the building services plant noise impact at the nearest noise sensitive receptors.

3.6.2 The noise levels from M&E plant should be considered once details of the plant are known and it is therefore suggested that noise emissions from plant associated with the Proposed Development is controlled via a suitably worded planning condition.

3.6.3 However, in accordance with the methodology contained within BS4142:1997, rating noise levels ($L_{A,r}$ dB) at the surrounding noise sensitive premises have been provided based upon the lowest measured daytime and night-time noise levels from the baseline survey, and the assessment criteria stipulated by the LB Camden.

3.7 Operational Noise Assessment – Internal and External Amenity

3.7.1 Based upon the external building façade noise levels, recommendations will be made for appropriate glazing build-ups in order to achieve the 'good ' criteria of BS8233:1999 and the WHO Guidelines for Community Noise.

3.7.2 The noise levels as measured during the baseline noise survey will be assessed against the BS8233:1999 guidance for noise levels in external amenity spaces, including balconies.

4. NOISE SURVEY RESULTS

4.1 LT1 – Flat 1 Aspen House Balcony

4.1.1 A summary of the noise levels as measured at the balcony of Flat 1 Aspen House on the Maitland Park site during the survey is presented following in Table 9.

Date	Time Period	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB	Lowest $L_{A90,15min}$ dB (time occurring)
Wednesday 12/03/2014	Daytime* (10.45 - 19:00)	55.0	84.6	43.7	42.1 (13.30-13.45)
	Evening (19:00 - 23:00)	47.3	78.2	40.6	39.7 (22.45-23.00)
	Night time (23:00 - 07:00)	45.7	72.0	39.4	36.8 (01.45-02.00)
Thursday 13/03/2014	Daytime (07:00 - 19:00)	51.9	80.7	42.6	40.3 (14.15-14.30)
	Evening (19:00 - 23:00)	47.6	70.8	40.3	38.6 (21.45-22.00)
	Night time (23:00 - 07:00)	44.7	70.8	39.8	38.2 (23.00-23.15)
Friday 14/03/2014	Daytime (07:00 - 19:00)	50.7	78.1	41.8	40.3 (11.45-12.00)
	Evening (19:00 - 23:00)	47.3	79.9	38.0	36.3 (22.00-22.15)
	Night time (23:00 - 07:00)	44.6	69.4	38.0	36.3 (03.30-03.45)
Saturday 15/03/2014	Daytime (07:00 - 19:00)	49.6	79.2	41.8	38.6 (07.00-07.15)
	Evening (19:00 - 23:00)	48.3	78.1	40.2	39.1 (21.30-21.45)
	Night time (23:00 - 07:00)	45.5	74.5	38.1	36.8 (04.00-04.15)
Sunday 16/03/2014	Daytime (07:00 - 19:00)	48.9	81.9	40.8	38.1 (08.30-08.45)
	Evening (19:00 - 23:00)	47.6	79.1	39.0	37.0 (22.45-23.00)
	Night time (23:00 - 07:00)	41.8	75.2	36.6	34.9 (02.45-03.00)
Monday 17/03/2014	Daytime (07:00 - 19:00)	54.1	80.4	41.7	39.3 (13.00-13.15)
	Evening (19:00 - 23:00)	47.1	80.8	39.1	37.7 (22.45-23.00)
	Night time (23:00 - 07:00)	43.4	76.5	36.3	34.5 (02.15-02.30)
Tuesday 18/03/2014	Daytime (07:00 - 19:00)	53.3	82.5	43.5	40.3 (07.00-07.15)
	Evening (19:00 - 23:00)	50.2	84.8	40.6	38.8 (22.30-22.45)
	Night time**	43.3	68.1	38.1	36.4

Date	Time Period	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB	Lowest $L_{A90,15min}$ dB (time occurring)
Wednesday 19/03/2014	(23:00 - 07:00)				(02.00-02.15) (03.15-03.30)
	Daytime (07:00 - 19:00)	59.0	92.3	43.8	41.0 (13.30-13.45)
	Evening (19:00 - 23:00)	48.0	71.6	42.6	41.9 (20.15-20.30)
Thursday 20/03/2014	Night time** (23:00 - 01:00)	46.9	69.0	41.8	41.0 (00.55-01.00)

* Readings taken from 10.45 to 19.00 only, not full daytime measurements
** Readings taken from 23.00 to 01.00 only, not full night-time measurements

Table 9 Noise Levels at monitoring position LT1

4.2 ST1 – Aspen House Garages

4.2.1 A summary of the noise levels as measured at noise monitoring location ST1 is provided following in Table 10.

Time of measurement	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB
12.10-12.25	58.2	75.6	42.6

Table 10 Noise Levels at monitoring position ST1

4.2.2 The dominant noise sources at this location included road traffic, an overhead circling helicopter and birdsong. Other noise sources included pedestrian conversation, distant sirens and distant construction noise.

4.3 ST2 – West of Maitland Park Site Next to Gym

4.3.1 A summary of the noise levels as measured at noise monitoring location ST2 is provided following in Table 11.

Time of measurement	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB
12.30-12.45	52.3	63.2	43.6

Table 11 Noise Levels at monitoring position ST2

4.3.2 The dominant noise sources at this location included road traffic and construction noise. Other noise sources included pedestrian conversation, distant sirens and birdsong.

4.4 ST3 – South of Maitland Park Site Next to Aspen House

4.4.1 A summary of the noise levels as measured at noise monitoring location ST3 is provided following in Table 12.

Time of measurement	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB
13.22-13.37	52.5	72.9	45.9

Table 12 Noise Levels at monitoring position ST3

4.4.2 The dominant noise sources at this location included plant extract noise from Aspen House, construction noise and road traffic. Other noise sources included pedestrian conversation, distant sirens and birdsong.

4.5 ST4 – Centre of Site Next to Maitland Park Villas

4.5.1 A summary of the noise levels as measured at noise monitoring location ST4 is provided following in Table 13.

Time of measurement	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB
13.47-14.02	50.8	67.6	41.7

Table 13 Noise Levels at monitoring position ST4

4.5.2 The dominant noise sources at this location included road traffic and construction noise. Other noise sources included pedestrian conversation, distant sirens and birdsong.

4.6 ST5 – Junction of Maitland Park Villas and Grafton Terrace

4.6.1 A summary of the noise levels as measured at noise monitoring location ST4 is provided following in Table 14.

Time of measurement	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB
13.19-13.34	55.1	73.7	44.6

Table 14 Noise Levels at monitoring position ST5

4.6.2 The dominant noise sources at this location included road traffic and construction noise. Other noise sources included pedestrian conversation, a car radio and car door slams.

4.7 ST6 – North-Eastern Corner of Maitland Park site

4.7.1 A summary of the noise levels as measured at noise monitoring location ST6 is provided following in Table 15.

Time of measurement	Average $L_{Aeq,T}$ dB	Maximum $L_{AF(Max)}$ dB	Average $L_{A90,T}$ dB
13.35-13.50	57.3	72.2	44.6

Table 15 Noise Levels at monitoring position ST6

4.7.2 The dominant noise sources at this location included road traffic and construction noise. Other noise sources included pedestrian conversation and activity, and car door slams.

5. DISCUSSION

5.1 Assessment of Demolition and Construction Noise and Vibration

Construction Noise

5.1.1 At this stage in the design, it is understood that the proposed development buildings will comprise the following construction methods:

- **Substructure** – Foundation solution is expected to comprise continuous flight auger piles, with reinforced concrete pile caps and ground beams (to be verified).
- **Superstructure** – Reinforced concrete framed structure.

5.1.2 The construction activities associated with this development that have the potential to cause noise impacts are listed below:

- Use of contractor's compound;
- Demolition of existing site buildings;
- Earthworks and site preparation;
- Building substructure works - CFA piling;
- Building substructure works - pile caps / ground beams; and
- Building superstructure works.

5.2 On-site Construction Activities

5.2.1 Exact details of the construction methods and plant to be employed on site have not been finalised. However, in accordance with industry best practice, an estimate of the expected noise levels over a representative period has been prepared to provide initial guidance on the magnitude of the noise impact on the surrounding noise sensitive receptors. The assessment assumes that all plant would operate for each phase of work, at the closest point to each sensitive receptor without any mitigation measures in place.

5.2.2 Table 16 presents typical items of plant likely to be used during the various phases of demolition and construction works at the site. It should be noted that the types of plant and estimated time periods that they will be operational during the construction activities has been based on experience of similar developments. This enables an indication to be provided of the noise levels that would affect the surrounding noise sensitive receptors during the construction period.

Activity	Plant	Est.% on time	Noise level at 10m (dB)*	Overall noise level per Activity at 10m (L_{Aeq} dB)
Contractor's compound	Generator	100	66	**72**
	Telescopic handler	10	69	
	Lorry pulling up	25	64	
Demolition	Pulverizer mounted on excavator	80	79	**83**
	Dozer	50	79	
	Wheeled mobile crane	50	67	
	Gas cutter	20	72	
	Lifting platform	30	65	
	Generator	100	62	
	Lorry pulling up	25	64	
Earthworks & site preparation	Dozer	50	74	**76**
	Tracked excavator	80	72	
	Lorry pulling up	30	65	
Substructure works (CFA piling)	CFA piling - Crawler mounted rig	80	79	**80**
	Tracked excavator (inserting cage)	30	69	
	Concrete pump	30	73	
	Lorry pulling up	30	65	
Substructure works (pile caps / ground beams)	Tracked excavator	50	70	**77**
	Lorry pulling up	20	63	
	Concrete mixer truck + pump	20	71	
	Poker vibrator (x2)	20	71	
	Compressor	50	69	
Superstructure works	Lorry pulling up	15	62	**81**
	Wheeled mobile telescopic crane	20	71	
	Lifting platform	20	60	
	Telescopic handler	15	71	
	Caged material hoist	50	68	
	Concrete mixer truck + pump (x2)	30	76	
	Poker vibrator (x3)	20	76	
	Vibratory tamper	20	56	
	Power float	20	65	
	Compressor for power tools	50	71	

** Noise level accounts for number of plant items and estimated percentage on-time*

Table 16 Predicted Construction Activities

5.2.3 Table 17 shows the noise levels (dB) at various distances from the activities presented in Table 16 by estimating the noise reduction with distance from the source, assuming 6dB reduction per doubling of distance. A +3dB building façade correction factor has been applied in accordance with BS5228.

Construction Activity	Distance to Receptor (m)				
	10	20	30	40	50
Contractor's compound	75	69	65	63	61
Demolition	86	80	76	74	72
Earthworks	79	73	69	67	65
Substructure works - CFA piling	83	77	74	71	69
Substructure works - pile caps / ground beams	80	74	70	68	66
Superstructure works	84	78	74	72	70

Table 17 Construction Activities & Corresponding Noise Levels at Various Distances

5.2.4 Table 17 identifies the distances from the construction activities where the 65dB $L_{Aeq,T}$ threshold criteria will be exceeded. It can be seen that most demolition and construction activities are expected to give rise to noise levels that will exceed the 65dB $L_{Aeq,T}$ threshold criteria at a distance of 50m from the site.

5.2.5 Due to the proximity of the surrounding residential properties in all directions, as presented in Table 8, there is potential for the construction works to result in adverse impacts if the key noise producing activities are not adequately mitigated.

5.2.6 Based on the factors outlined above, mitigation measures will be required to control noise arising from the proposed construction works. Mitigation measures are discussed in Section 6 of the report.

Construction Vibration

5.2.7 With reference to Table 7, and the distances to the surrounding vibration sensitive receptors, there is potential for certain construction activities to give rise to a perceptible level of vibration at the nearest sensitive receptors in all directions.

5.2.8 For the majority of on-site construction activities, the effects of vibration are only likely to be apparent when the works are being undertaken at the closest point to the receptor. However, the exception to this is the proposed CFA piling which may give rise to a perceptible level of vibration during operation.

5.2.9 Construction activities that have the potential to result in vibration impacts will need to be effectively managed so that where practicable, they are undertaken away from sensitive receptors. Where the works cannot be sited in less sensitive locations, the use of alternative techniques and/or smaller plant items which generate lower levels of vibration will be adopted.

5.2.10 It should be noted that the vibration criteria used for the assessment is based on the likelihood of perceptibility, rather than causing damage to property.

5.2.11 Vibration mitigation measures are discussed in Section 6.

5.3 Operational Noise Assessment - Site Suitability for Residential Development

5.3.1 From the unattended noise survey results as presented in Table 9, the average daytime, evening and night-time noise levels in terms of L_{Aeq} are presented following in Table 18.

Daytime average $L_{Aeq12hr}$ dB	Evening average L_{Aeq4hr} dB	Night-time average L_{Aeq8hr} dB
54	48	45

Table 18 Daytime, evening and night-time average noise levels at Kiln Place

5.3.2 The noise levels in Table 18 have been assessed against the criteria in DP28 for sites adjoining railways and roads.

5.3.3 It can be seen that the noise levels in Table 18 do not exceed the noise levels on residential streets adjoining railways and roads at and above which attenuation measures will be required.

5.3.4 The threshold for individual noise events of >82 dB L_{Amax} (slow weighting) during night-time periods was not exceeded at any point throughout the duration of the baseline noise survey.

5.4 Operational Noise Assessment - Road Traffic Noise

5.4.1 The Maitland Park site is accessed via Grafton Terrace and Southampton Road. The road immediately adjacent to the site is Maitland Park Villas, which is only accessed from Grafton Terrace and Southampton Road. No access is available from the Prince of Wales Road to the South of the site and so Maitland Park Villas has very low traffic lows.

5.4.2 Vehicle movements on Maitland Park Villas are only required for access to residential properties and typically travel as low speeds. Given this, and that the site already comprises residential use, no significant increase in road traffic noise is expected.

5.4.3 Traffic flows on Grafton Terrace are also travelling at low speeds due to traffic calming restrictions and low speed limits, and it was noted during the baseline noise surveys that traffic flows on this road were limited. Given this, and that the site already comprises residential use, no significant increase in road traffic noise is expected.

5.5 Operational Noise Assessment – Plant Noise Assessment

5.5.1 BS4142:1997 considers the background noise to be measured using the L_{A90} metric. Based on the survey results undertaken at measurement position LT1 which was sited in the locality of the nearest residential receptors the relevant background noise levels are as follows:

- Lowest $L_{A90,15min}$ background noise level during the daytime period = 38 dB
- Lowest average $L_{A90,15min}$ background noise level during the daytime period = 41 dB
- Lowest $L_{A90,15min}$ background noise level during the night-time period = 35 dB
- Lowest average $L_{A90,15min}$ background noise level during the night-time period = 36 dB

5.5.2 The levels presented are deemed to be representative of the noise levels experienced at the nearest sensitive receptors. The duration of the background noise level is not defined in the standard but a representative period should be chosen based on the site conditions.

5.5.3 Based upon the lowest background noise levels ($L_{A90,15min}$) measured during the baseline noise survey at LT1, the rating level (L_{Ar} dB) as per BS4142:1997 can be calculated as shown in Table 19. The rating noise levels are designed to -5 dB (A) below the background noise level, in accordance with the consultation undertaken with LB Camden.

Daytime rating level $L_{Ar,\ 1hour}$ dBA	Night-time rating level $L_{Ar,5mins}$ dBA
33-36	30-31

Table 19 Daytime and night-time rating levels at the nearest sensitive receptors

5.5.4 Section 1 of BS4142:1997 states that background noise levels below about 30 dB and rating levels below about 35 dB(A) are considered to be very low.

5.5.5 Provided that the noise emissions from all of the M&E plant are within the calculated rating noise level above for the appropriate period then noise emissions from plant can be deemed to be adequately controlled.

5.5.6 A +5dB(A) acoustic feature correction must be applied to the rating level if one or more of the following features occur, or are expected to be present for new or modified noise sources:

- The noise contains a distinguishable, discrete, continuous note (whine, hiss, screech, hum, etc.);
- The noise contains distinct impulses (bangs, clicks, clatters, or thumps); and/or
- The noise is irregular enough to attract attention.

5.5.7 If the acoustic feature correction is applied, the rating noise levels presented must be reduced by 5 dB(A).

5.5.8 The operational hours of the plant to be installed is not known at the time of writing. Therefore daytime and night-time criteria have been defined. If the night-time criterion is satisfied, the daytime criterion will be met.

5.6 Operational Noise Assessment – Internal Noise Levels

5.6.1 In terms of absolute noise levels, BS8233:1999 specifies that (L_{Aeq}) noise levels should be between 30-40 dB(A) for good to reasonable resting/sleeping conditions within living rooms and 30-35 dB(A) for bedrooms. In accordance with BS8233:1999 and the WHO Guidelines for Community Noise, a level of 45 dB L_{AFmax} in bedrooms should not be exceeded.

5.6.2 These are internal noise levels and therefore with 10-15 dB(A) of attenuation that would be provided with an 'open window' arrangement, this gives an external façade design level between 45-55 dB $L_{Aeq,16hr}$ for living rooms and 45-50 dB $L_{Aeq,16hr}$ for bedrooms.

5.6.3 It can be seen that from Table 9 that the daytime façade noise levels are expected to be greater than 50 dB L_{Aeq} and therefore a natural ventilation strategy based purely on opening windows would not be sufficient to control internal ambient noise levels to achieve the 'good' criterion of BS8233:1999. Refer to Section 6.5 for mitigation measures.

TRA Hall

5.6.4 The TRA Hall at the northern site boundary (at the junction of Grafton Terrace and Maitland Park Villas) has the potential to give rise to negative impacts at the nearest noise sensitive receptors if noise egress is not adequately controlled.

5.6.5 It is proposed that there will be residential development above the TRA Hall, and therefore these future residential receptors are expected to be the worst affected by any noise from activity in the hall.

5.6.6 Assuming that the internal noise level in the TRA Hall is 85 dB(A) for amplified music, the floor slab that separates the hall from the residential properties (if directly above) should have a sound insulation performance of approximately R_w 60 dB (allowing a 5dB contingency to allow noise ingress from other sources) in order for the BS8233:1999 'good' criterion to be achieved. Recommended mitigation measures in order to achieve this criterion are discussed in Section 6. However it is not expected that amplified music will be a regular occurrence in the TRA Hall and is more likely to be used for amplified speech, which may allow reduced sound insulation performance to be required.

5.6.7 Noise egress from the TRA Hall should not exceed approximately 60 dB L_{Aeq} at the ground floor façade of the TRA Hall in order to achieve a façade noise level of 45 dB L_{Aeq} (allowing opening windows) at the façade of the nearest noise sensitive receptor at Grafton Terrace, and above the TRA Hall. Assuming an internal noise level in the TRA Hall of 85 dB(A) for amplified music, if the building envelope can provide a sound insulation performance of R_w 30dB then the noise level threshold of 60 dB L_{Aeq} will not be exceeded; thus allowing internal ambient noise levels to be achieved.

Multi-Use Games Area

5.6.8 A Multi-Use Games Area (MUGA) is proposed to the south-eastern site boundary; as depicted in red on Figure 1.

5.6.9 Noise from games activities on the MUGA has the potential to increase the noise levels as experienced by the nearest sensitive receptors and may provide disturbance to existing and future residential receptors.

5.6.10 It is expected that existing residential properties have openable windows. In order to achieve the BS8233:1999 'good' criterion for internal ambient noise levels, as discussed in Section 6.6.2, the façade noise levels at existing properties should not exceed 45 dB $L_{Aeq,}$

5.6.11 Assuming a worst case scenario, in order to achieve a façade noise level of 45 dB L_{Aeq} at the façade of the nearest sensitive receptor off Grafton Terrace, a noise level of 78 dB L_{Aeq} cannot be exceeded at the closest point of the site boundary of the MUGA, i.e. north-eastern corner of the MUGA (see Figure 4). The numbers as presented in the large circles on each building are the highest predicted façade noise levels in terms of L_{Aeq} dB.

5.6.12 It is deemed unlikely that this noise threshold will be exceeded due to activity on the MUGA and therefore negative impacts are not expected to existing and future residential receptors.

5.6.13 Furthermore noise from the MUGA is expected to be intermittent and shall not be continuous during daytime and evening periods and so any noise arising from activity on the MUGA is expected to be limited to short periods; thus reducing any potential impacts to the nearest residential receptors.

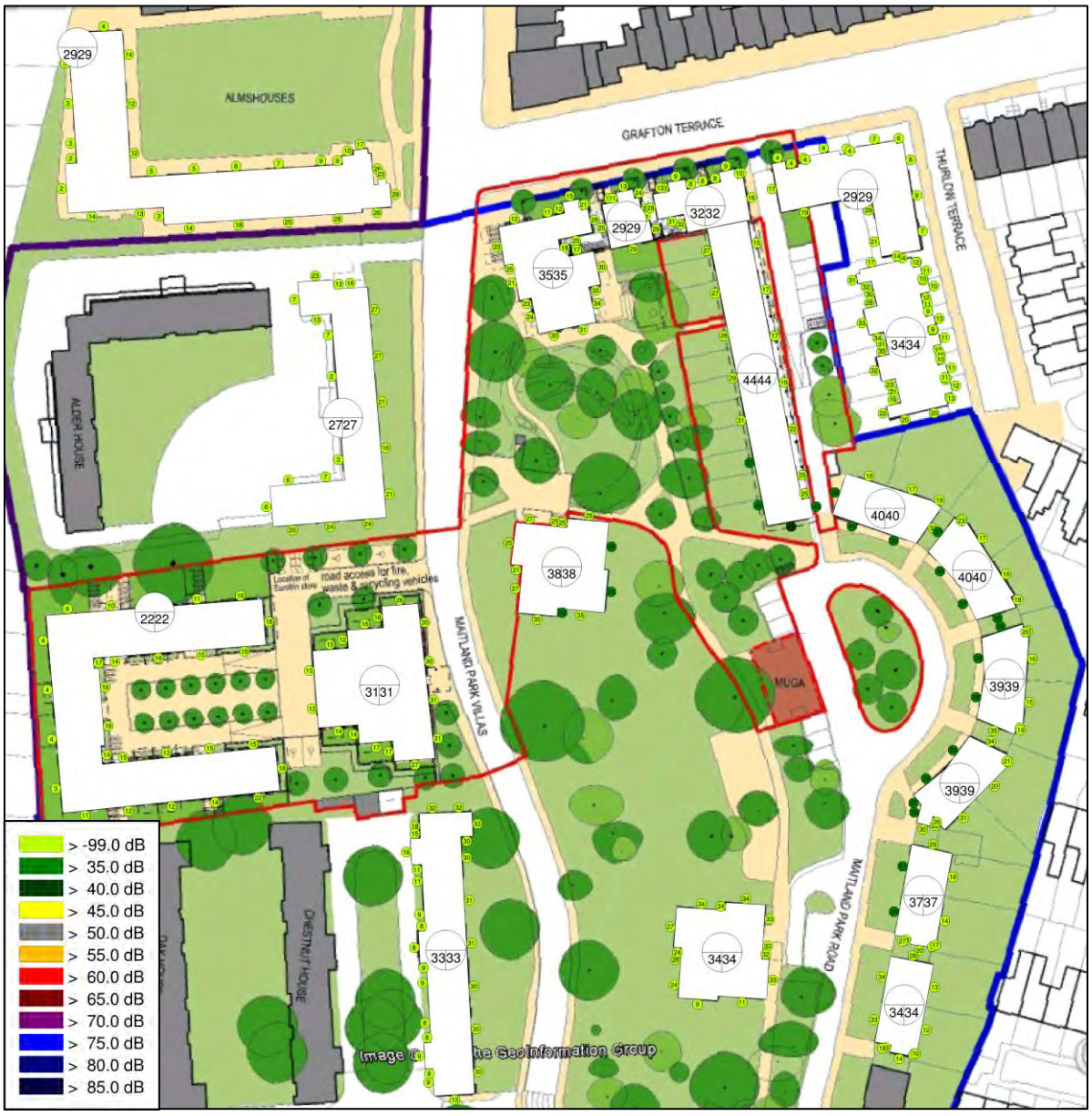

Figure 4 Predicted noise levels at the nearest noise sensitive receptors due to MUGA activity noise

5.6.14 Any future noise complaints that arise from the use of the MUGA should be treated as a noise nuisance issue.

5.7 Operational Noise Assessment – Noise Levels in Outdoor Amenity Spaces

5.7.1 BS8233:1999 and the WHO Guidelines recommend an upper ambient noise level of 55 dB L_{Aeq} in outdoor amenity spaces. The results of the noise survey as shown in Table 9 indicate that there will be periods when this criterion will be exceeded; although the background noise levels are mostly below the criterion. However this is deemed typical of outdoor amenity spaces in London.

5.7.2 Noise activity from the MUGA may cause the noise level in outdoor amenity areas that are local to the MUGA to be intermittently exceeded. However as the MUGA is only expected to be used for short periods, significant impacts are not expected to occur.

6. MITIGATION

6.1 Demolition and Construction Noise

6.1.1 As noted previously, in the absence of mitigation, adverse noise effects are likely to arise during the demolition and construction phase of the Proposed Development. At this stage, the detailed methodology for the works has not been defined and consequently specific mitigation measures cannot be given. However, standard best practice controls and measures would be adopted on-site to ensure that noise management forms an integral part of the contractors' scope of works.

6.1.2 A Construction Management Plan (CMP) will be prepared which will define mitigation measures to be adopted to minimise noise and vibration emissions at surrounding sensitive receptors. This will incorporate specific measures within all phases of the works where noise and vibration may give rise to disturbance. It is expected that the CMP will be secured by means of an appropriately worded planning condition.

6.1.3 A monitoring regime will be derived for review with the Council Officers and the appropriate threshold and action levels will be agreed for the noise and vibration parameters that are to be measured, both pre & post construction. Monitoring locations will be established on and around site and on delivery routes where necessary. On a regular basis the site team will produce reports and arrange meetings with the Council Officers and Health & Safety Executive (HSE), if appropriate and other agreed stakeholders to review the reports, monitor the procedures and review the action plans. Weekly monitoring will be carried out both during demolition and construction activities, from previously established and agreed monitoring stations around the development, to ensure that action levels set and agreed have not been exceeded.

6.1.4 Best practicable means (BPM) as defined by the Control of Pollution Act 1974, will be implemented as part of the working methodology. This will serve to minimise the noise and vibration effects at receptors in the vicinity of the construction works. The reduction in noise levels provided through the implementation of BPM varies depending on the nature of the works; however, values in excess of 10 dB can be expected through a combination of appropriate measures.

6.1.5 Typical BPM measures which could be implemented are listed below:

- Restrict working hours;
- Plan working hours to take account of the effects of noise and vibration upon persons in areas surrounding site operations and upon persons working on-site;
- Where reasonably practicable, adopt quiet working methods, using plant with lower noise emissions;
- Where reasonably practicable, adopt working methods that minimise vibration generation;
- Locate plant away from noise and vibration sensitive receptors, where feasible;
- Use silenced and well-maintained plant conforming with the relevant EU directives relating to noise and vibration;
- Avoid unnecessary revving of engines and switch off equipment when not required;
- Keep internal haul routes well maintained;
- Use rubber linings for chutes and dumpers to reduce impact noise;
- Minimise drop height of materials;
- Start-up plant and vehicles sequentially rather than all together;
- Carry out regular inspections of noise mitigation measures to ensure integrity is maintained at all times;
- Provide briefings for all site-based personnel so that noise and vibration issues are understood and mitigation measures are adhered to; and
- Manage plant movement to take account of surrounding noise sensitive receptors, as far as is reasonably practicable.

6.1.6 Other measures to be adopted by the contractor include:

- Loading excavators at ground level to reduce movement vibration by remaining static; tipper lorries with rubber tyres will be loaded from a centralised heap of rubble;
- Travelling on a site road of compacted hard core to further reduce the vibration of the lorries travelling across the site;
- The utilisation of tipping skips lowered to the ground by a crane to reduce ground-borne vibration;
- The use of mains generated electricity instead of diesel generators (where possible);
- Minimising the use of vehicle reversing alarms and a one-way driving system on site;
- Switching off engines on-site when not in use;
- Prohibiting the use of radios and other audio equipment on site;
- The utilisation of a two-way radio communications system to reduce the need for shouting; and
- Regular maintenance of the equipment noise register on site.

6.1.7 Hoarding 2.4 m high would be erected around the working areas, which will serve to provide acoustic screening to the nearby noise sensitive receptors.

6.1.8 The further use of temporary acoustic screens and/or enclosures may need to be adopted for all static items of plant which generate noise levels that have the potential to cause disturbance. Any specific construction activities requiring acoustic screening will be defined as part of the CMP process, which may include demolition activities and elements of the earthworks/external works.

6.1.9 Community liaison and communication regarding construction works should be undertaken throughout the construction phase to provide information to people residing in properties located in the vicinity of the construction works, to reduce the likelihood of adverse effects on the local community which could result in potential noise complaints. The level of engagement required would vary during the construction period, depending upon the expected effects experienced by individual receptors due to the construction works.

6.1.10 Details relating to liaison with the local community will be managed by the Contractor. It is envisaged that community liaison will provide local residents with the following information in relation to the construction works:

- The nature of the works being undertaken;
- The expected duration of the works;
- The contractor's working hours;
- Mitigation measures that have been adopted to minimise noise and vibration, as detailed in the CMP;
- Contact details in the event of a noise disturbance; and
- If work is required to extend into periods beyond the agreed hours, separate authorisation should be secured with LB Camden via the CMP.

Controlled Demolition Techniques

6.1.11 In order to reduce the noise and vibration impacts associated with the demolition works at the development site, the works will be undertaken using controlled demolition techniques. This approach requires the demolition methodology to be planned meticulously in advance of works commencing to ensure potential environmental disturbances to surrounding receptors are minimised wherever possible i.e. noise, vibration, dust.

Considerate Constructors Scheme

6.1.12 It is intended that the development will be registered with the Considerate Constructors Scheme. The Scheme strives to minimise any negative impact that construction activities may have on neighbourhoods, while leaving behind long-lasting benefits that enhance communities.

6.2 Operational Noise Assessment - Site Suitability for Residential Development

6.2.1 The mitigation measures required in order to achieve internal ambient noise level criteria are discussed in Section 6.5.

6.3 Operational Noise Assessment - Road Traffic Noise

6.3.1 As no perceptible increase in road traffic noise is expected to occur as the site currently comprises residential development, no mitigation measures are proposed.

6.4 Operational Noise Assessment – Plant Noise Assessment

6.4.1 The following mitigation measures should be taken into account by the design team at the detailed design stage:

- Where possible, placing fixed plant installations internally;
- Selection of low noise emission plant;
- Use of enclosures, acoustic louvres and acoustic barriers;
- Selection of appropriately sized attenuators; and
- Operating plant installations at reduced duty during night-time periods.

6.4.2 It is recommended that the noise levels from fixed plant installations should be considered once details of the building services plant are known and it is therefore suggested that noise emissions from plant associated with the Proposed Development are controlled via a suitably worded planning condition.

6.5 Operational Noise Assessment – Internal Noise Levels

6.5.1 A combination of standard double glazing and acoustic ventilators are expected to be sufficient to control internal ambient noise levels to within the BS8233:1999 'good' criterion.

6.5.2 Glazing should meet a minimum specification of R_W 30 dB so as not to compromise the sound insulation performance of the façade. This could typically be achieved with a specification of 6mm glass, 12mm air gap, and 6mm glass, however the sound insulation performance of the glazing must be confirmed by the manufacturer. This assumes the building fabric provides a sound insulation performance in excess of R_W 40 dB.

6.5.3 Acoustic ventilators of minimum performance 30 dB $D_{n,e,w}$ should be sought so as not to compromise the sound insulation performance of the façade.

6.5.4 The recommended sound insulation performance is expected to meet the WHO Guidelines criterion 45 dB L_{AFmax} inside bedrooms based upon the 10th highest L_{AFmax} value measured during the survey period of 70 dB L_{AFmax}. This approach recognises that the suggested 45 dB(A) limit should not be exceeded more than 10-15 times in the night.

6.5.5 The required sound insulation performance is not deemed to be onerous and is also expected to mitigate against future noise sources, e.g. noise egress from the TRA Hall.

TRA Hall Noise

6.5.6 In order to achieve the BS8233:1999 'good' criterion for internal ambient noise levels above the TRA Hall, the floor slab that separates the hall from the residential properties (if directly above) should have a sound insulation performance of approximately R_w 60 dB (allowing a 5dB contingency to allow noise ingress from other sources) is expected to be required.

6.5.7 This criterion is expected to be achieved with a combination of a concrete first floor slab and a suspended ceiling in the hall, e.g. 150mm lightweight concrete slab, 240mm cavity, 100mm mineral wool and 2 layers of 12.5mm plasterboard suspended from the slab. However any constructions should be approved by an acoustic consultant during the detailed design stage. Further details will also need to be considered, e.g. vertical flanking transmission provided by structure-borne noise.

6.5.8 If noise levels in the TRA Hall are expected to be less than 85 dB(A), a reduced sound insulation performance criterion may apply. Conversely, if noise levels in the hall are expected to be greater than 85 dB(A), then increased sound insulation performance will be required.

6.5.9 Any windows to the TRA Hall should achieve a minimum sound insulation performance of R_w 30 dB. This could typically be achieved with a specification of 6mm glass, 12mm air gap, and 6mm glass, however the sound insulation performance of the glazing must be confirmed by the manufacturer.

6.5.10 The layout of the TRA Hall should also be carefully considered at the detailed design stage to place less sensitive rooms, e.g. store rooms and corridors, at the façade to create a buffer between the hall and the façade, to therefore reduce noise egress.

Multi-Use Games Area Noise

6.5.11 Mitigation measures are not expected to be required to reduce noise levels from activity on the MUGA.

6.6 Operational Noise Assessment – Noise Levels in Outdoor Amenity Spaces

6.6.1 No mitigation measures are proposed in order to reduce noise levels in outdoor amenity spaces. Although at periods the criterion for outdoor amenity spaces will be exceeded, due to existing and future noise sources, e.g. the MUGA, this is deemed typical of a London location.

6.7 Cumulative Noise Assessment

6.7.1 It is expected that the cumulative noise climate as a result of the proposed development and existing noise sources will not significantly change when compared to the baseline noise levels as presented in Section 4.

6.7.2 The main on-site noise sources, i.e. Maitland Park Villas and Grafton Terrace, will remain in place and as discussed, the change in road traffic noise levels at the nearest noise sensitive receptors is not expected to increase significantly due to traffic calming measures on and surrounding the site.

6.7.3 If noise emissions from fixed plant installations are designed to within guideline criteria, the noise climate should not expected to be significantly affected. Designing to -5dB below background noise levels, in accordance with LB Camden policy, provides a likelihood of complaints of between a 'positive indication that complaints are unlikely' and 'marginal significance' in accordance with BS4142:1997.

6.7.4 Noise egress from the TRA Hall is not expected to be worse than current noise emissions from activities within the hall. It is expected that if the mitigation measures for building façade elements within Section 6 are adopted, noise egress will be controlled sufficiently to minimise impacts upon the nearest sensitive receptors.

6.7.5 The main noise source that is not currently present on the site is the proposed MUGA. The MUGA is expected to locally increase noise levels during daytime periods, but it is not expected that noise as generated by activities on the MUGA will provide significant impacts to the nearest sensitive receptors. Any noise complaints arising from the use of the MUGA should be treated as a noise nuisance issue.

8. CONCLUSIONS

8.1.1 Ramboll UK Limited has been appointed by EC Harris and the London Borough of Camden (LB Camden) to undertake a noise and vibration impact assessment of the proposed development at Maitland Park, Camden, London.

8.1.2 A detailed review of relevant national, regional and local policy has been undertaken.

8.1.3 The EHO at LB Camden was consulted regarding the assessment methodologies and criteria as adopted for the assessments contained in this report.

8.1.4 Unattended monitoring was undertaken at 1 location between Wednesday 12 March 2014 and Thursday 20 March 2014 to assess the current noise climate at the Lloyd House building. Attended monitoring was undertaken at 6 locations on Wednesday 12 March 2014.

8.1.5 A construction noise and vibration assessment has been undertaken based upon likely construction activities to occur at the proposed development site. Likely construction noise levels are predicted to be more than 10 dB(A) greater than background noise levels at the proposed development site. There is potential for significant impacts at the nearest sensitive receptors if key noise producing activities are not adequately mitigated.

8.1.6 Due to the proximity of the sensitive receptors in the vicinity of the application site boundary, it is likely that some vibration will be perceptible in the properties during construction activities.

8.1.7 The site suitability for residential development in terms of noise and vibration have been determined in accordance with LB Camden policy; DP28. The assessment found that noise levels at the site do not exceed the criteria for attenuation measures to be required.

8.1.8 A qualitative assessment of road traffic noise levels has been provided. The change in vehicular movements due to the proposed development is not expected to give rise to a significant change in noise levels at the façade of the nearest sensitive receptors.

8.1.9 The type, quantity and location of mechanical and electrical plant associated with the proposed development have not been defined at this stage in the design and hence it is not possible to fully quantify the noise impact at the nearest noise sensitive receptors. Therefore daytime and night-time rating noise levels have been recommended to be considered during the detailed design stage in order to achieve the LB Camden criterion of -5dB below the background noise level. It is therefore suggested that noise emissions from plant associated with the proposed refurbishment is controlled via a suitably worded planning condition.

8.1.10 Suitable façade sound insulation performances have been provided in order to mitigate against existing and future noise sources, e.g. the TRA Hall and the MUGA, to therefore achieve the 'good' criterion of BS8233:1999 and WHO Guidelines.

8.1.11 Suitable internal sound insulation and building façade sound insulation performances have been recommended for the TRA Hall in order to reduce the likelihood for potential impacts to the nearest residential receptors. However the recommendations made in this report are required to be confirmed and approved by an acoustic consultant during the detailed design stage.

8.1.12 It is likely that there will be periods in which the upper ambient noise level of 55 dB L_{Aeq} in outdoor amenity spaces will be exceeded due to the existing noise climate and noise from activity at the MUGA; although the background noise levels as measured during the surveys are mostly below the criterion. However this is deemed typical of outdoor amenity spaces in London.

8.1.13 Mitigation measures for the construction and operational phases have been identified. A discussion of cumulative noise impacts has been provided, and with the application of appropriate mitigation measures, it is considered that all significant noise and vibration issues associated with the

construction and operational phases of the proposed development can be controlled and minimised to acceptable levels.

APPENDIX 1
ACOUSTIC TERMINOLOGY

Term	Definition
Sound Pressure	Sound, or sound pressure, is a fluctuation in air pressure over the static ambient pressure
Sound Pressure Level (Sound Level)	The sound level is the sound pressure relative to a standard reference pressure of 20μPa ($20x10^{-6}$ Pascals) on a decibel scale.
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s_1 and s_2 is given by 20 log10 (s_1/s_2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20μPa.
A-weighting, dB(A)	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Noise Level Indices	Noise levels usually fluctuate over time, so it is often necessary to consider an average or statistical noise level. This can be done in several ways, so a number of different noise indices have been defined, according to how the averaging or statistics are carried out.
$L_{Aeq,T}$	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
$L_{max,T}$	A noise level index defined as the maximum noise level during the time period T. L_{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
$L_{90,T}$ or Background Noise Level	A noise level index defined as the noise level exceeded for 90% of the time over the time period T. L_{90} can be considered to be the "average minimum" noise level and is often used to describe the background noise.
$L_{10,T}$	A noise level index. The noise level exceeded for 10% of the time over the period T. L_{10} can be considered to be the "average maximum" noise level. Generally used to describe road traffic noise.
Free-Field	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5 metres
Fast Time Weighting	An averaging time used in sound level meters. Defined in BS5969.

APPENDIX 2
CONSULTATION WITH LB CAMDEN

From: David Harbon
Sent: 25 March 2014 12:58
To: Parsons, Claire
Cc: Heavey, Eimear
Subject: RE: Maitland Park and Kiln Place, Camden; DH-CP; Scope of Noise and Vibration Assessments; 25 03 14
Importance: High

Claire,

Following on from our discussion regarding the scope of the noise and vibration assessments, I would be grateful for your thoughts regarding the construction noise threshold that should be used for the basis of assessment.

I hoped to be in contact with you sooner regarding this but the noise surveys on both sites took longer than expected.

Between Wednesday 12 March and Wednesday 19 March, the daytime average L_{Aeq} at Maitland Park was 54 dB L_{Aeq}.

Between Wednesday 12 March and Saturday 15 March, the daytime average L_{Aeq} at Kiln Place was 54 dB L_{Aeq}.

In accordance with the ABC method of BS5228:2009 Code of practice for noise and vibration control on construction and open sites (Part 1: Noise), I would be grateful for your thoughts on the use of 65 dB L_{Aeq} as the construction noise threshold for our assessment.

Your earliest response would be gratefully received in order to help us achieve tight deadlines.

Thank you very much for your time and I hope to hear from you shortly.

Kind regards

David Harbon

BSc (Hons) MSc MIOA
Assistant Consultant
Acoustics, Noise and Vibration

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david.harbon@ramboll.co.uk

From: David Harbon
Sent: 26 February 2014 09:53
To: 'Parsons, Claire'
Cc: Heavey, Eimear
Subject: RE: Maitland Park Estate and Kiln Place, Camden; DH-CP; Scope of Noise and Vibration Assessments; 26 02 14 [Filed 26 Feb 2014 09:53]

Dear Claire,

Thank you for your email.

I have provided my responses to your comments below in red.

Thank you for your time and I will be in contact again shortly to further discuss the construction noise threshold that will be used for the basis of assessment.

Kind regards

David Harbon

BSc (Hons) MSc MIOA
Assistant Consultant
Acoustics, Noise and Vibration

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From: Parsons, Claire [mailto:Claire.Parsons@camden.gov.uk]
Sent: 25 February 2014 11:56
To: David Harbon
Cc: Heavey, Eimear
Subject: RE: Maitland Park Estate and Kiln Place, Camden; DH-CP; Scope of Noise and Vibration Assessments; 17 02 14

Dear David,

Thank you for your enquiry.

Please find my responses in blue text below.

Please let me know if you have any further queries.

Kind regards,

Claire Parsons
Environmental Health Officer
Regulatory Services
Communities
Culture and Environment
London Borough of Camden

Telephone: 020 7974 2638
Web: camden.gov.uk
Town Hall Extension (Culture and Environment)
Argyle Street
London WC1H 8EQ

From: David Harbon [mailto:david.harbon@ramboll.co.uk]
Sent: 17 February 2014 12:19
To: Parsons, Claire
Subject: Maitland Park Estate and Kiln Place, Camden; DH-CP; Scope of Noise and Vibration Assessments; 17 02 14

Dear Claire,

Ramboll UK Ltd has been appointed to undertake the noise and vibration assessments associated with the proposed developments at Maitland Park and Kiln Place, Camden. I wish to discuss the scope of the noise and vibration assessments with you, to confirm that the London Borough of Camden Council (LBCC) are satisfied with the approach adopted. From the email forwarded to me, as below, I understand that you are familiar with the proposals. If not then please advise and I can look to provide you with any additional information that you may require.

I have undertaken an initial review of attachments provided and relevant LBCC policy, e.g. DP28, and have found some information regarding construction noise and plant noise emissions from the Adopted Noise Strategy. I would be grateful if you could please review the proposed assessment methodologies outlined below and provide answers to the queries that I have raised.

Proposed Methodology

1. Undertake a detailed review of relevant local, regional and national noise policy and legislation.

2. Consultation with the LBCC Environmental Health Department. The assessment will be undertaken with due consideration given to the National Planning Policy Framework (NPPF) and the Noise Policy Statement for England (NPSE). However, Planning Policy Guidance 24 (PPG24) provides a methodology for the assessment of site suitability for residential development, although now superseded by the NPPF. Our previous experience demonstrates that Local Authorities welcome an assessment in accordance with PPG24 as an alternative quantitative method of assessment has not been adopted in the NPPF. Please could you confirm if this approach would be acceptable to LBCC? I would believe that this is acceptable as the LBCC guidance is based upon the guidance of PPG24. Please refer to policy DP 28 for site suitability for residential development. DP28 shall be used as the basis for assessment.

3. Unattended baseline noise monitoring at locations representative of the noise climate experienced by the nearest sensitive receptors. It is expected that 2 noise monitoring locations will be required at the Maitland Park site and 1 noise monitoring location will be required at the Kiln Place site. The baseline noise survey will monitor noise levels during daytime, evening, night-time and weekend periods to obtain a representative dataset. Additional attended monitoring will be undertaken on site to supplement the unattended surveys. Attended measurements will be typically 30 minutes in duration. Please ensure the days of the week selected for the baseline noise monitoring are representative e.g. mixture of weekdays and weekends. We intend to survey for a 1 week period. However as a minimum the survey could last from e.g. Thursday through to Tuesday.

4. Vibration monitoring will be undertaken at the Kiln Place site to ensure that vibration limits, in accordance with Camden Council guidance, due to passing trains, are not exceeded. Vibration monitoring is not proposed at the Maitland Park site.

5. The assessment of noise and vibration effects arising during the construction phase of the Proposed Development will be undertaken in accordance with the methodology outlined in BS 5228: 2009 Code of practice for noise and vibration control on construction and open sites (Part 1: Noise and Part 2: Vibration). Please could you confirm if LBCC have a Code of Construction Practice? I have attached a copy of Camden Minimum Requirements for construction. Thank you. From the information on the LBCC website I have obtained the typical construction working hours but I would be grateful if you could please confirm a daytime construction noise threshold against which the likely impacts from construction noise can be assessed, e.g. 75 dB $L_{Aeq,10hour}$ for urban areas? This would appear to be too high for these locations. Suggest impact and appropriate limits are set relative to the existing ambient environment. We will undertake the baseline noise survey and further consult with yourself to agree on an appropriate construction noise threshold.

6. Noise modelling will be undertaken using CADNA software which uses 3D modelling to predict the noise impacts on the development and also at the nearest sensitive receptors.

7. Noise from road traffic generated by the Proposed Development during the operational phase of the development will be predicted using the methodology contained in the Department of Transport and Welsh Office memorandum Calculation of Road Traffic Noise (CRTN). The significance of predicted noise changes will be determined using relevant guidance, such as that contained in The Design Manual for Roads and Bridges (DMRB) Section 3, Part 7 of Volume 11 (HD 213/11 Noise and Vibration).

8. Noise from fixed plant associated with the Proposed Development will be assessed in accordance with BS 4142: 1997 Method for rating industrial noise affecting mixed residential and industrial areas. In accordance with the Adopted Noise Strategy I note that LBCC require noise emissions from plant to be designed to a rating noise level (L_{Ar} dB) of -5dB below the background noise level, and -10 dB below the background noise level if an acoustic feature correction is to be applied in accordance with BS4142:1997. Please could you confirm if these are appropriate criteria? Yes Thank you for the confirmation.

9. The suitability of the Site for residential development will be assessed in accordance with BS 8233:1999 and the World Health Organisation (WHO) Guidelines, and mitigation measures will be designed (if necessary) to reduce noise levels to acceptable levels for internal and external residential amenity. Recommendations for the design of building envelopes will be provided. A good standard in accordance with BS8233:1999 shall be targeted and will be required to be met. Noise ingress into the residential units shall consider noise sources such as road, rail and air noise sources. And any other sources where appropriate e.g. noise from the community centre, any plant which may be installed including renewable energy sources if they are planned for this site. We shall assess the likely noise impacts from the community hall and MUGA addition to the other noise sources as previously stated, i.e. road, rail, air, plant, etc. With regard to the community hall at the Maitland Park site, we understand that the existing building will be demolished and therefore we will not be making an assessment of the contribution to the current noise climate due to noise egress from activities in the hall. However, we will be able to comment on the layout of the proposed development and sound insulation performance that is expected to be required (for the new hall) in order to achieve the relevant internal ambient noise level criteria in or at the adjoining/surrounding residential properties. Separate from planning, during detailed design, we will provide the recommendation that the acoustic details of the building fabric and façade elements will need to be carefully examined and specified to control the noise from the hall to ensure that the relevant criteria are achieved at the residential properties.

I would be grateful if you could advise if you foresee any issues with the proposals outlined above. If you have any queries or comments on the above, please don't hesitate to contact me. Please note the other points raised in my e-mail below, e.g. layout and design, noise impacts from the MUGA etc. Thank you.

Thank you for your time and I hope to hear from you shortly

Kind regards

David Harbon

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Assistant Consultant
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From: Parsons, Claire [mailto:Claire.Parsons@camden.gov.uk]
Sent: 20 January 2014 16:32
To: Poppy Carmody-Morgan
Cc: Heavey, Eimear
Subject: Maitland Park Estate and Kiln Place, Camden - Noise and Vibration Assessments

Dear Poppy,

Thank you for your e-mail regarding the above sites. I understand you would like information on the scope of the acoustic report to accompany these applications.

I have attached a document which sets out the requirements for an acoustic report and a copy of our current policy on noise, DP28, which may assist with both applications. When you appoint an acoustic consultant, please feel free to pass on my details, if they would like to contact me to discuss or agree any further details.

Other advice would be as follows:

Kiln Place

I advise that the "good" standard as noted within BS8233:1999 must be met and the noise report and any recommended mitigation must demonstrate how this standard can be met.

I advise that the acoustic report should account for noise including road traffic, rail and aircraft and also any vibration including structure borne or re reradiated noise particularly from the railway lines which are in the vicinity.

I recommend that the layout of the rooms within the properties are re-evaluated following the acoustic survey to determine if any changes should be made to account for the noise environment. The principles of "stacking" must be followed and habitable rooms should be placed on the least noisy elevation. Should any balconies be proposed, the potential impact of noise on these amenity spaces should be considered also.

Should any plant and/or machinery be proposed (including any renewable energy sources) the potential impacts should be considered along with any mitigation required to meet the relevant Camden noise standards.

The potential impact of the construction of the scheme should also be considered.

Maitland Park

I advise that the "good" standard as noted within BS8233:1999 must be met and the noise report and any recommended mitigation must demonstrate how this standard can be met. I advise that the acoustic report should account for noise from local sources including road traffic and aircraft which is noticeable in this location.

I recommend that the layout of the rooms within the properties are re-evaluated following the acoustic survey to determine if any changes should be made to account for the noise environment. The principles of "stacking" must be followed and habitable rooms should be placed on the least noisy elevation. Should any balconies be proposed, the potential impact of noise on these amenity spaces should be considered also.

I note that the community centre is proposed to have housing above – I have concerns regarding the noise impacts of this proposal. I recommend care is taken within the report to assess the potential noise impact of this and the potential mitigation that could be incorporated. As discussed earlier, complaints about noise from community centres is not uncommon and both impact and airborne sound should be considered to include potential sources such as music, dance, sport and exercise classes, children's parties etc.

Should any plant and/or machinery be proposed (including any renewable energy sources) the potential impacts should be considered along with any mitigation required to meet the relevant Camden noise standards.

I recommend that the potential noise impacts of the MUGA are considered within the report and mitigation options are considered.

The potential impact of the construction of the scheme should also be considered.

Please note that the advice provided above constitutes my initial observations based on the plans received and further information may be requested once the application is received and further information is available for review.

I hope this helps, please let me know if you have any further queries.

Kind regards,

Claire Parsons
Environmental Health Officer
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