BLUE SKY BUILDING

*founded on excellence*

## WHITESTONE HOUSE

# CONSTRUCTION MANAGEMENT PLAN

**Revision E - July 2019**

# CONTENTS



**BLUE SKY BUILDING**
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# 1.0 INTRODUCTION

Blue Sky Building has been commissioned by Mr G Edwards to produce this Construction Management Plan, identifying specific best practice standards and procedures for the demolition and reconstruction of Whitestone House on Whitestone Lane, Camden. Compliance with this document will be obligatory for the Contractors, when appointed, and it is offered pursuant to Planning Permission ref 2015/2645/P, and Clause 2.4 of the Section 106 agreement, both dated 30th January 2017.

These standards and procedures will ensure that the interests of local residents, businesses and the public are given special attention by the Contractor during the works duration.
This report identifies how the critical construction activities will be undertaken, and specifically covers the environmental, public health and safety aspects of the proposed new house.

This document incorporates Camden's Pro-Forma Construction Management Plan (v2.3), together with associated mitigation measures. The baseline for our analysis is the Guide for Contractors Working in Camden (The Guide), which we have viewed as the minimum standards to be achieved by the Contractor. When appointed the Contractor will be required to demonstrate how the works will comply with the requirements of The Guide and how they will address the measures contained within this report.

This document details the specific obligations on the Contractor when undertaking the works, and the control measures for each environmental issue. The project will be contracted in phases and this document provides general rules for all of the works with additional information for the initial Piling Phase, for which a contractor has been appointed.

Rev C

There is a large body of environmental and safety requirements relevant to construction projects, in the form of primary legislation (Acts of Parliament), secondary legislation (Statutory Instruments, including Regulations and Orders) and statutory guidance and Codes of Practice. The Contractor will be responsible for identifying new legislation and regulations, and complying with all prevailing legislation at the time of construction including any requirements under Health and Safety legislation.

# 2.0

# CAMDEN CMP PRO FORMA v 2.3

**A completed Pro Forma Construction Management Plan follows overleaf.**

# Construction Management Plan

pro forma v2.3

Camden

# Contents

# Revisions & additional material

Please list all iterations here:

| Date | Version | Produced by |
|---|---|---|
| 2nd May 2019 | 1st issue | T Cole. Blue Sky Building (BSB) |
| 28th May 2019 | Rev A | T Cole. Blue Sky Building |
| 19th June 2019 | Rev B * | T Cole. Blue Sky Building |
| 9th July 2019 | Rev C * | T Cole. Blue Sky Building |
| 17th July 2019 | Rev D * | T Cole. Blue Sky Building |
| 22nd July 2019 | Rev E * | T Cole. Blue Sky Building |

* Revision E: Low loaders omitted from all phases

* Revision D: CCS Number added. Low loaders omitted from Piling Phase

* Revision C: Final Vehicle routing amended as noted

* Revision B: Consultation letters added at Q11, Page 16.

**Additional sheets**

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

| Date | Version | Produced by |
|---|---|---|
| 2nd May 2019 | CMP Document providing additional detail | BSB |

# 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 Transport for London's (TfL's Standard for Construction Logistics and Community Safety **(CLOCS)** scheme) and Camden's Minimum Requirements for Building Construction **(CMRBC).**

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.

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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.

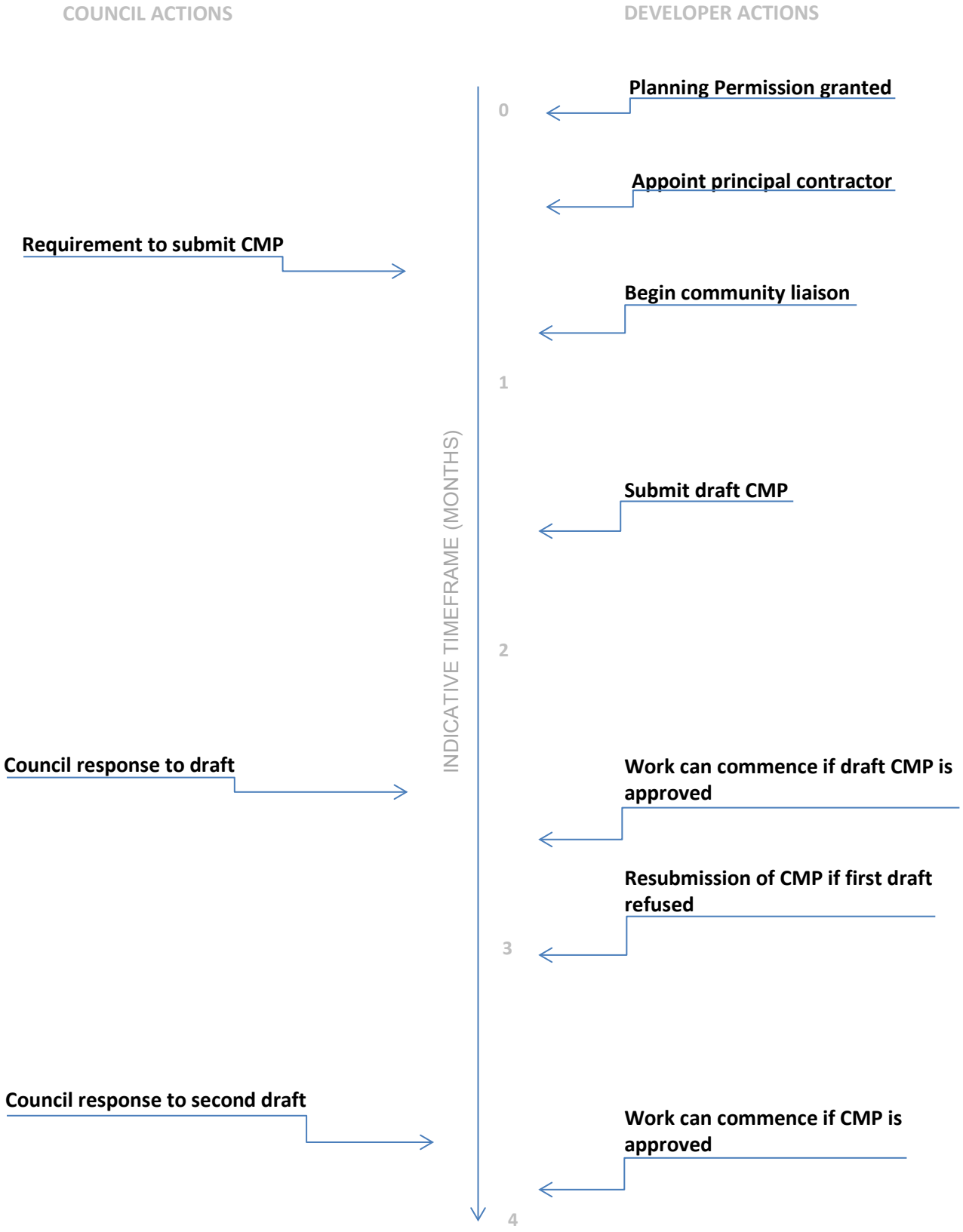
If your scheme involves any demolition, you need to make an application to the Council's Building Control Service. Please complete the "**Demolition Notice.**"

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
Requirement to submit CMP
Begin community liaison
1
INDICATIVE TIMEFRAME (MONTHS)
Submit draft CMP
2
Council response to draft
Work can commence if draft CMP is approved
Resubmission of CMP if first draft refused
3
Council response to second draft
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: Whitestone House, Whitestone Lane, London, NW31EA

Planning Reference: 2015/2645/P

This is a detailed CMP, pursuant to Grant of Full Permission and Section 106 Agreement

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

Name: Tim Cole

Address: Blue Sky Building, 35 Duke Street, LONDON, W1U 1LH

Email: info@blueskybuilding.com

Phone: 0207 831 5950

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.

Contractors (Trenchco Ltd) are appointed for the initial Piling Phase of works only:

Name: Liam Murphy

Address: Whitestone House, Whitestone Lane, London NW31EA

Email: liam@trenchco.co.uk

Phone: 0208 732 3030

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.

Contractors (Trenchco Ltd) are appointed for the initial Piling Phase of works only:

Name: Tomas Begley

Address: Trenchco Ltd, 499 Watford Way, Mill Hill, London, NW7 2QP

Email: tom@trenchco.co.uk

Phone: 0208 732 3030

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.

Contractors (Trenchco Ltd) are appointed for the initial Piling Phase of works only:

Name: Tomas Begley

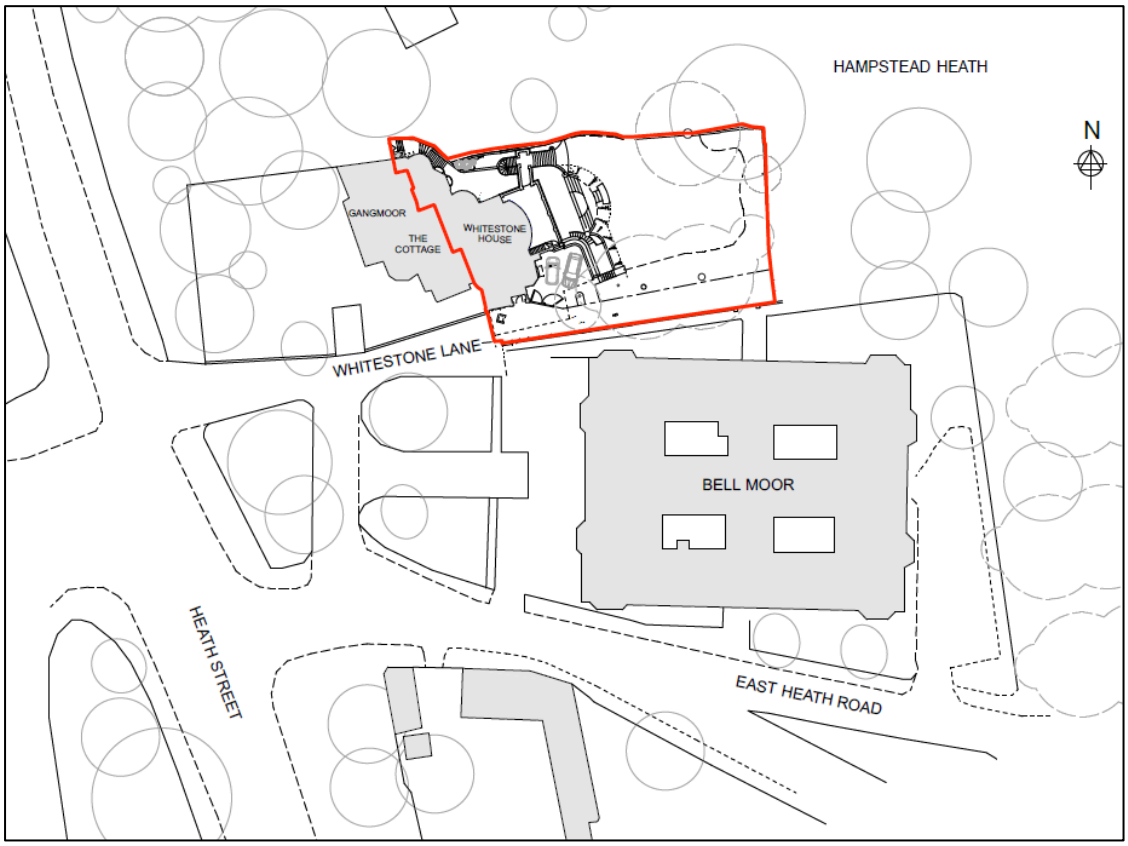
Address: Trenchco Ltd, 499 Watford Way, Mill Hill, London, NW7 2QP

Email: tom@trenchco.co.uk

Phone: 0208 732 3030

# 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.




Whitestone House is situated at the end of Whitestone Lane. Originally a modest Regency house, it was redesigned in the 1930's under the direction of Sir Clough Williams-Ellis. It lies within the Hampstead conservation area. The house is attached to 'The Cottage', a three-storey Victorian house, and 'Gangmoor,' a 3 storey, early 18th century grade II listed building. The end of Whitestone Lane, adjacent to Whitestone House is private land over which there is a pedestrian right of way to Hampstead Heath.

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

The proposal is to demolish the house, up to the party wall with The Cottage and Gangmoor, and the existing lower ground floor and construct a new enlarged lower ground floor with basement beneath over the larger footprint.

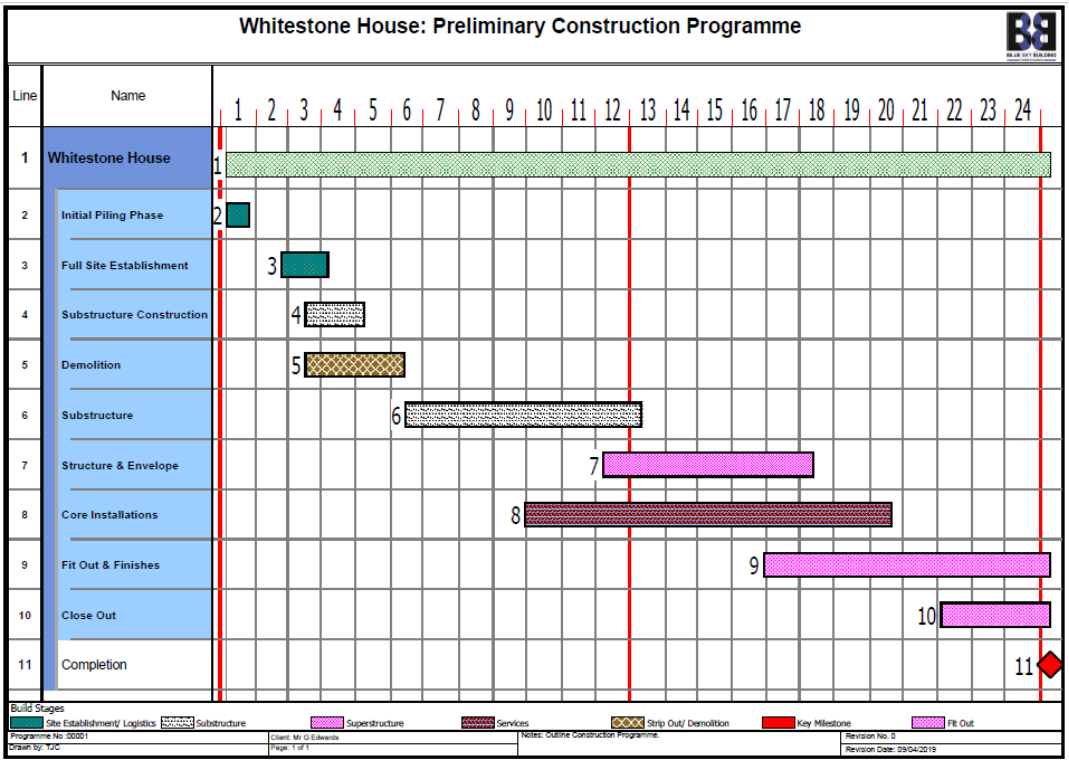
Whitestone Lane is a private single-track gravel topped lane accessed from Heath Street. Its top end is owned by Gangmoor and the lower end is owned by Whitestone House. There is a public right of way over the lane to Hampstead Heath. Vehicle management will be a key factor in carrying out the works.

The Cottage and Gangmoor are residential properties attached to Whitestone House. On the opposite side of the lane is Bell Moor, a block of private residential apartments.

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).

The construction project is planned to commence in mid-2019, subject to satisfactorily clearing remaining Planning Conditions and successfully appointing a contractor. An overall construction programme of 24 months is envisaged. Works will commence with an initial piling phase.

Summary Programme:



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

| |
|---|
| Confirmed. Standard hours of work will be in accordance with the above stated standards. |

# 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.

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**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.).

The key receptors are the immediate neighbours of Gangmoor and The Cottage (both the adjoining properties), and the residents of the apartments in Bell Moor on the other side of Whitestone Lane.

## 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.

Copies of the first issue of this CMP were issued to neighbours in May 2019 and comments received from Dr Lincoln Chin of Gangmoor and representatives of the Bell Moor apartments have been incorporated into Revision A of this document.

Letters and the CMP were sent to:

Dr Lincoln Chin, Gangmoor, Whitestone Lane, NW3 1EA

Mrs Ellie and Mr Miles Allen, The Cottage, Whitestone Lane, NW3 1EA, and

Mr Laurence Permutt, Bell Moor Management Limited, 5 Bell Moor, East Heath Road London, NW3 1DY.

Copies of the letters are included in appendix 1 of this document. Comments received and actions taken are listed overleaf.

Rev B

Neighbours comments received on the issued CMP on the 07.05.2019

From Gangmoor:

1. Access and Egress to be moved Heath Street to East Heath Road so to minimize disruption
2. No noisy works prior 9 am

From Bellmoor:

3. Noise and vibration monitors to be located in basement
4. To provide the Noise and vibration assessment
5. No noisy works on Saturday
6. Clarification on the method that will be employed to preventing egress from surface level car park of Bell Moor being blocked on Whitestone Lane
7. Clarification on the presence of hoarding in phase 1 to demarcate the pedestrian use
8. Contact details of neighbours liaison appointed

Amended CMP submitted on the 6.06.2019 including neighbours comments and requets:

1. Access and Egress changed to East Heath Road following Swept Path Analysis carried out from appointed contractor. It was agreed that smaller construction vehicles will be used to allow the use of this suggested entrance.
2. Agreed with appointed contractor for phase 1
3. Agreed
4. Provided, no further comments received
5. Agreed and included
6. More details provided, and no further comments received
7. Updated drawings showing temporary barrier to protect side entrance to Bellmoor and no further comments received
8. Details provided

No comments were received from The Cottage

Liaison and issue of information to neighbours will continue as works proceed.

Revision C: Rev C
The final traffic routing has been amended to include vehicles entering Whitestone Lane in forward gear from revering Eastheath Road, turning in the car park ramp area of Bell Moor in order to reverse into site and to leave in forward gear. This change has been discussed and agreed with Bell Moor's representatives. (email received from Sanjay Samaroo on 5th July 2019)

## 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.

We propose that a Construction Working Group is established including Dr Chin of Gangmoor and representatives of the Bell Moor Apartments and The Cottage

## 13. Schemes

Please provide details of your Considerate Constructors Scheme (CCS) registration. Please note that Camden requires enhanced CCS registration that includes CLOCS monitoring.

Contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

Considerate Constructors Scheme registration number is: 117215

Rev D

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.

The size and nature of the proposed development is such that vehicle movements and numbers of operatives will be small. Community impact will therefore be local and limited to the immediate neighbours and users of Whitestone Lane.

A review of the Planning Portal indicates no current schemes of this nature in the immediate neighbourhood. Further reviews will be undertaken, and the assistance of the council sought ahead of implementing the Construction scheduling and methodology.

# 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. Guidance material which details CLOCS requirements can be accessed here, details of the monitoring process are available here.

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

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

## CLOCS Contractual Considerations

15. Name of Principal contractor:

Contractors are appointed for the initial Piling Phase of works only:
Trenchco Ltd, 499 Watford Way, Mill Hill, London, NW7 2QP

Contractors details for subsequent phases will be submitted following appointment.

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).

**Contracts**
FORS Bronze accreditation as a minimum will be a contractual requirement, FORS Silver or Gold operators will be appointed where possible. Where FORS Bronze operators are appointed, written assurance will be sought from contractors that all vehicles over 3.5t are equipped with additional safety equipment (as per CLOCS Standard P13), and that all drivers servicing the site will have undertaken approved additional training (e.g. Safe Urban Driving + 1 x e-learning module OR Work Related Road Risk Vulnerable Road User training + on-cycle hazard awareness course + 1 x e-learning module etc.). CLOCS Compliance will be included as a contractual requirement.
**Desktop checks**
Desktop checks will be made against the FORS database of trained drivers and accredited companies as outlined in the CLOCS Standard Managing Supplier Compliance guide. These will be carried out as per a risk scale based on that outlined in the CLOCS Managing Supplier Compliance guide.
**Site checks**
Checks of FORS ID numbers will form part of the periodic checks and will be carried out as per an appropriate risk scale. Random spot checks will be carried out by site staff on vehicles and drivers servicing the site at a frequency based on the aforementioned risk scale. These will include evidence of further training, license checks, evidence of routing information, and checks of vehicle safety equipment. Results from these checks will be logged and retained, and enforced upon accordingly.
Collision reporting data will be requested from operators and acted upon when necessary.

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. Please sign-up to join the CLOCS Community to receive up to date information on the standard by expressing an interest online.

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

| |
|---|
| Yes, Confirmed. |

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.

| |
|---|
| Please refer to drawing in section 7: Traffic Management of this overall document. |

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

Traffic plans will be discussed at pre start meetings with sub-contractors and suppliers, and the agreed traffic routing included in all sub-contracts and supply orders. Any changes to the plan will be communicated through regular progress meetings.

**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. (Refer to the *Guide for Contractors Working in Camden*).

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.

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

| Vehicles Per Day | Description | Size | Dwell Time |
|---|---|---|---|
| **Piling** | | | |
| <1 | Skip Lorries | 6.8m l x 2.55m w x 3.4m h | 20mins |
| 3 | Tipper/ Grab. 6-wheeler | 7.8m l 2.55m w x 3.6m h | 40mins |
| <1 | Steel/ Formwork by flatbed | 10.0 m l x 2.6m x 3.7m h | 60mins |
| 3 | 6m$^3$ Concrete truck | 8.8m l x 2.6m w x 3.6m h | 20mins |
| <1 | Plant deliveries, occasional. Flatbed | 10.0m l x 2.6m x 3.7m h | 60mins |
| **6** | **Peak during piling operations** | | |
| **Demolition** | | | |
| 6 | Skip Lorries | 6.8m l x 2.55m w x 3.4m h | 20mins |
| <1 | Scaffold/ Sundries | 10.0 m l x 2.6m x 3.7m h | 60mins |
| **6** | **Peak during Demolition** | | |
| **Excavation** | | | |
| 1 | Skip Lorries | 6.8m l x 2.55m w x 3.4m h | 20mins |
| 5 | Tipper/ Grab. 6-wheeler | 7.8m l 2.55m w x 3.6m h | 40mins |
| <1 | Plant deliveries, occasional. Flatbed | 10.0m l x 2.6m x 3.7m h | 60mins |
| 6 | **Peak during Bulk Excavation** | | |
| **Superstructure** | | | |
| <1 | Skip Lorries | 6.8m l x 2.55m w x 3.4m h | 20mins |
| <1 | Plant deliveries, occasional. Flatbed | 10.0m l x 2.6m x 3.7m h | 60mins |
| <1 | Scaffold/ Sundries | 10.0 m l x 2.6m x 3.7m h | 60mins |
| 6 | 6m$^3$ Concrete truck | 8.8m l x 2.6m w x 3.6m h | 20mins |
| **6** | **Peak during superstructure** | | |
| **Envelope** | | | |
| 1 | Bricks/ Blocks Hiab offloaded | 10.0 m l x 2.6m w x 3.6m h | 60mins |
| 1 | Scaffold/ Sundries | 10.0 m l x 2.6m x 3.7m h | 60mins |
| <1 | Skip Lorries | 6.8m l x 2.55m w x 3.4m h | 20mins |
| 1 | Ready Mixed Mortar (tubs) | 7.8m l 2.55m w x 3.6m h | 20mins |
| **3** | **Peak during envelope** | | |
| **Fitting Out** | | | |
| 1 | Fit Out Materials, 10m rigid | 10.0 m l x 2.6m x 3.7m h | 60mins |
| 1 | Skip Lorries | 6.8m l x 2.55m w x 3.4m h | 20mins |
| 4 | Small Vans – Box Vans | 8.1m l x 2.5m w x 3.6m h | 30mins |
| **6** | **Peak during Fit Out** | | |

Rev D

Rev E

Rev E

Construction scheduling has been calculated using smaller vehicles that can more easily navigate the site access.
Deliveries will be restricted to off peak hours, 9.30 am to 4.30 pm.

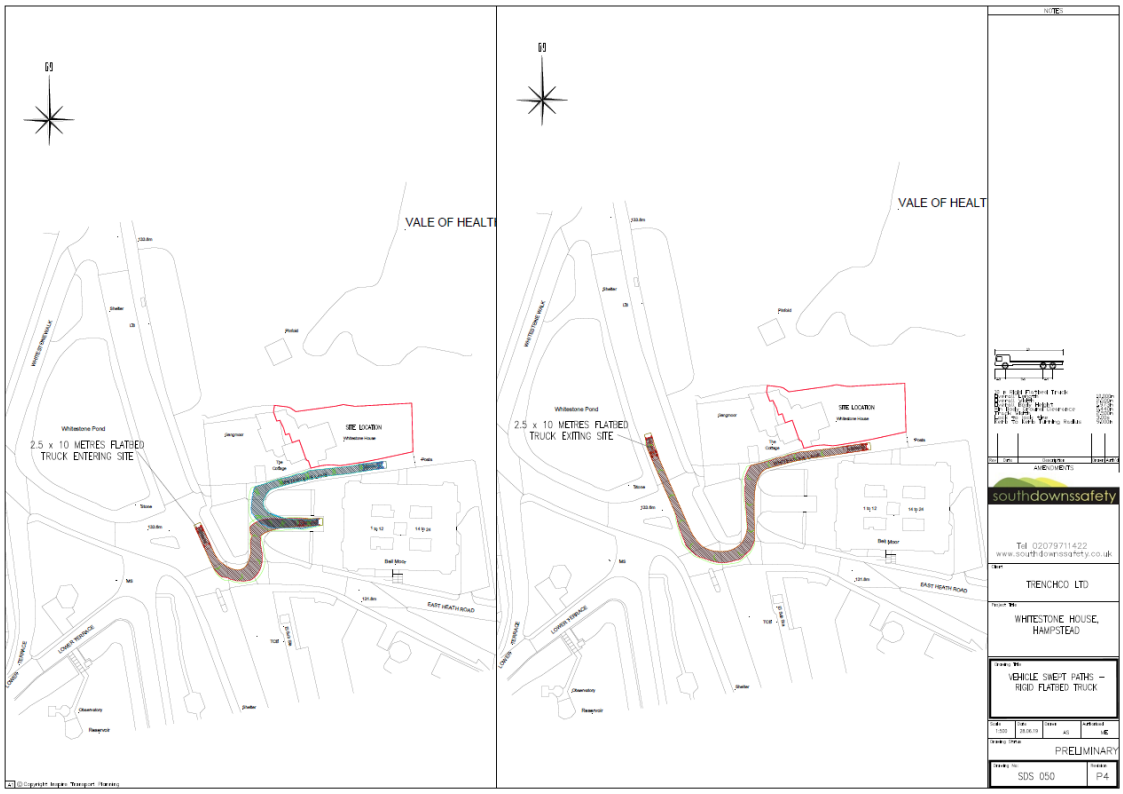
Rev D

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.

A review of the Planning Portal indicates no current schemes of this nature in the immediate neighbourhood. Further reviews will be undertaken, and the assistance of the council sought ahead of implementing the Construction scheduling and methodology.

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

The site will be accessed as follows for the initial Piling Phase of works:




Rev C

A larger scale of this drawing appears in section 7; Traffic Management

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.

Holding areas are not required for the initial piling works. Future works contractors will consider the use of holding areas when sub-contract and supplier orders are placed, and when the source locations of components are better known.

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.

Not required for initial piling works. Future works contractors will consider the choice of consolidating deliveries in one location when sub-contract and supplier orders are placed, and when the source locations of components are better known.

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).

The site will be managed in accordance with the Mayor of London's Control of Dust & Emissions During Construction & Demolition SPG so that vehicles do not have to wait to park safely. Any vehicle having to wait they should not idle. If a vehicle is stationary for more than a minute, turning off the engine will be enforced through the site rules. Non-compliance will be recorded by Traffic Marshals and repeat offenders disallowed from attending site.

**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.

All deliveries will enter and leave site as shown. Please see SPA at Q 19c for further detail of turning manoevre. Traffic marshals will hold traffic one car length back from traffic signal stop line to facilitate turning vehicles.


Rev C & D

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.

All deliveries and waste removal vehicles will be pre-planned with suppliers who will be required to book delivery times through a Delivery Management System operated by the contractor to ensure that traffic management procedures can be put in place suitable for the type of vehicle. Trained traffic marshals and banksmen will be deployed to control vehicles turning from Heath Street into East Heath Road and into site.

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.

Only small vehicles that can safely negotiate the site access will be called upon to deliver to site

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 the site exit. A bunded area will be constructed for the use of hand-held pressure washing equipment. All vehicles will be clean before leaving site.

**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.

Most vehicles will be unloaded or loaded within the confines of the site as described. Where larger deliveries are required outside of those areas, for construction plant deliveries for example, job specific arrangements will be made including traffic marshals and local protection. Such arrangements will be agreed with Camden and neighbours in advance. Please refer to the Logistics Plans in section ^: Site Logistics for further detail.

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.

Traffic Marshalls will control all vehicle movements in and out of the site. Temporary barriers will be deployed during traffic movements to ensure the safety of pedestrians and cyclists.

Physical barriers will be erected to maintain and manage the pedestrian right of way to Hampstead Heath

Traffic Marshals will be specially tasked with maintaining safe access to the entrances Bell Moor's car park and the entrances to Gangmoor during vehicle manoeuvres.

# 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.

**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.

No parking bay suspensions are required.

**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.

None required

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.

None required

**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.

No diversions are required.

**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.

There are no hoardings or scaffolding requirements on the public highway. Please refer to the indicative logistics plans in section 6 of this overall document for logistics proposals for the site and the private lane.

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.

Not applicable.

**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.

The project will be connected to existing utility supplies and no diversions or new connections are required in the highway.

# 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.

Site hours will be as stipulated by the Camden Guide:

- 8.00am to 6pm on Monday to Friday
- 8.00am to 1.00pm on Saturdays

Hours of noisy works will be discussed and agreed with neighbours. For the first phase of piling works we have agreed that no noisy works will take place before 9.00 am on weekdays and not at all on Saturdays.

Best Practicable Means (BPM) of noise control will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities.

A rotary piling rig will be employed to bore contiguous and load bearing piles for new foundations (sizing subject to further engineering investigation and design).

Stripping out will be undertaken using hand tools or hand-held mechanical breakers. Hard demolition will continue to use hand tools assisted by a 360° mini excavator fitted with shear and grapple jaws.

Excavation will be by 360° excavator, loading to tipper lorries or skips with the assistance of a conveyor belt loader.

Concrete pours will involve the use of mechanical vibrators, typically pouring on two days of each working week during the structural phase.

Noisy operations will be managed on a "two hours on – two hours off" schedule during peak operations. Timing of quiet periods will be agreed with the construction working group to suit preferences where possible.

Noise levels will be monitored by the Contractors during the works. Camden shall be given access to all noise readings if required as soon as they become available.

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

A Construction Noise and Vibration Assessment Report was undertaken by Southdowns Environmental Consultants in April 2019. A full copy of their report is appended in Section 9.0: Noise & Vibration.

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

Please refer to separate Acoustic Report issued by Southdown Environmental, included in section 9.0: Noise & Vibration.

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

The quietest and newest vehicles/plant machinery shall be used at all times. Electric powered plant will be selected where available. All vehicles and mechanical plant used for the purpose of the works shall be fitted with effective exhaust silencers, shall be maintained in good and efficient working order and operated in such a manner as to minimise noise emissions.

Site hoardings will be solid timber, which will assist to contain noise within the site. A sheeted scaffold will surround the building during both demolition and new construction.

Delivery vehicles will be managed by traffic marshals to ensure that engines are not left idling during offloading and the use of horns and reversing alarms is limited to Highway Code guidelines.

Please refer also to the proposed mitigation measures and assessment included in section 9 of this document.

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

The contractors' Construction Managers all attend the 5-day SMSTS course and will be trained in BS 5228.

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

The contractor will follow the following Dust Control regime:

- Dust on site will be suppressed when breaking through concrete and excavation of soil in dried conditions by fine water spray.
- All vehicles carrying loose or potentially dusty material to or from the site will be fully sheeted.
- When necessary, clean public roads and access routes using wet sweeping methods.
- Minimise the amount of excavated material held on site & sheet, seal or damp down unavoidable stockpiles of excavated material held on site, where required.
- Avoid double handling of material wherever reasonably practicable.
- Conveyors will be enclosed as far as practicable and the point of discharge to skip will be via a chute to reduce the drop height of spoil.
- Fine water spay will be used to suppress dust emissions from demolition and loading.

Please refer to Section 10.0 of this document for further details of air quality mitigation measures.

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.

All delivery and muck away vehicles will enter the site from East Heath Road. Wheel wash facilities will be established inside the site comprising hard-standing, jet wash equipment and a trapped sump to prevent waste entering the drainage system. "Trackway" or similar proprietory plating will be deployed to protect areas of gravel road and to limit tracking out of material.

All skips and lorries delivering or removing granular material will be sheeted before travelling on the highway.

If any spoil falls onto the highway it will be cleaned immediately. Site personnel will clean off their boots before exiting the site if they cannot change footwear before.

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

The Contractors will demonstrate the management, monitoring, auditing and training procedures that are in place to ensure compliance with the Camden Minimum Requirements. The Contractors' nominated Site Managers will have the responsibility of monitoring all site activities and ensuring environmental standards are maintained.

The Contractors will maintain on site, a system for recording any incidents and any ameliorative action taken for inspection by Camden's representatives. The Contractors will ensure as far as is reasonably practical, that necessary action has been taken and steps to avoid recurrence have been implemented.

Regular spot checks will be carried out to ensure noise, vibration or dust levels are not causing undue impact on nearby receptors.

A site contact number will be provided to all nearby residents should any of the above cause issue. Noise tests will be carried out directly at site boundary.

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.

This is a small site in the context of the GLA SPG and dust risk is Medium. A Risk Assessment for control of dust is included in section 10.0 of this document.

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.

Confirmed

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.

We confirm that the site is classified as Medium Risk under the SPG description, therefore real time dust monitoring will be established by the contractor.

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).

Rodent traps will be set out prior to any demolition or construction. Site welfare will be controlled such that waste food does not accumulate.

A licensed pest control company will be employed to test bait the surface for a minimum of 28 days before commencement.

No new ground will be broken on site until such time as a clear 7 days is evidenced after 28 days of test baiting. Records will be maintained on site for inspection.

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

The existing building was largely reconstructed in around 2005, and does not therefore contain asbestos.

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.

All operatives, management and visitors to site will be required to attend an induction which will include presentation of the Site Rules and including behavioural and disturbance related limitations.

The main contractor will enforce site rules through the issue of Improvement and Prohibition Notices for breaches of Health and Safety. Offenders will be removed from site.

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: Summer 2019 to 2021 (Provisional)

b) Is the development within the CAZ? (Y/N): No

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

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

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: Confirmed

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: Confirmed

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:** 2nd May 2019

**Print Name:** Tim Cole

**Position:** Preconstruction Manager

Please submit to: planningobligations@camden.gov.uk

End of form.

# 3.0 NATURE OF THE PROJECT/ SCOPE OF WORKS

## Scope of Works

It is proposed to reconstruct the existing property at Whitestone House with the construction of a new basement storey below the existing lower ground floor. The proposal is to demolish the house, up to the party wall with The Cottage and Gangmoor, and the existing lower ground floor and construct a new enlarged lower ground floor with new basement beneath.

The upper floors are to be replaced with a new structure comprising load bearing masonry walls and steel beams/ timber floors and steel framed roof. The detailing and fenestration of the new elevations will be to match the existing house.

Key environmental issues warranting the contractor's particular attention are:

- Minimal disturbance of neighbours through noisy and dusty activities;
- Management of deliveries and traffic through the local streets;
- Protection of trees within the neighbouring properties and beyond;
- Maintaining the pedestrian right of way to Hampstead Heath;
- Providing protection to the private gravelled lane; and
- Maintaining a Considerate Constructor's approach to the project throughout

# 4.0 METHODOLOGY, SEQUENCE AND PROGRAMME

The overall construction programme is estimated at around 24 months. A bar chart programme is included at the end of this section.

This section of the document will identify the specific methodology that has been identified for the project in conjunction with the Structural Engineer.

It is currently envisaged that the scheme will be delivered in two phases:

1. an initial phase of piling and;
2. a later phase encompassing demolition, structural works and fitting out, to completion.

The project can be broken down into a series of discrete sub projects. In summary, these consist of:

- Initial Piling Phase
- Pre-start enabling works;
- Site Establishment, including hoardings, scaffolding, and temporary services;
- Early Works and Demolition;
- Basement Construction;
- House Construction;
- Fitting out of the new house together with mechanical & electrical services, commissioning and setting to work.

## 4.1 Initial Piling Phase

Piling will be undertaken within the confines of the existing boundary. The Piling rig will be delivered to site by rigid delivery lorry. The lorry will access site by reversing from East Heath Street down to the rear of Whitestone Lane under the supervision of trained banksmen. Temporary barriers will be used to surround all delivery vehicles whilst providing a safe walkway for pedestrians to the Heath and side entrance to Bellmore Apartments. We will use plywood sheets to form a route for the piling rig & excavator from the double gates to the piling area.

Muck-away will be based on a Wait & Load method as shown on Logistics drawing 001 in section 6.0 of this document. As above the tipper truck will be directed to the underside of the conveyor by banksmen and temporary barriers will be used to provide a safe walkway for pedestrians.

Concrete Delivery – Concrete lorries will approach site using the same route as the piling rig delivery. We will place a mobile concrete pump inside the double gates at the rear. Barriers will be placed around the concrete mixer lorry and at the rear entrance leaving sufficient space for pedestrian access to the Heath

## 4.2 Pre-Start Enabling works

Prior to commencement of main site works a period of pre-commencement planning and activities will be carried out to ensure works can be undertaken efficiently. Certain elements of these works will require third party approvals.

- Production of detailed, task specific Construction Method Statements in accordance with the Guide for Contractors Working in Camden.
- Mobilisation of selected plant and operators.
- Formulation of the Construction Phase Plan (CDM 2015) and risk assessments.
- Contractors Community Liaison Contact to be named and to commence direct liaison with the Construction Working Group.
- Formulation of Site waste management plans and environmental plans as per the current DEFRA guidelines.
- Production of detailed works programmes and sequencing.
- Surveys of existing services and structures to confirm methodology, decommissioning and temporary supply requirements.
- Highways condition surveys to be carried out prior to commencement on site.
- CCTV surveys of existing drainage.
- Camden licence applications and approvals for hoardings and scaffolding if required.
- Baseline environmental monitoring.
- Temporary works design.

- Pest control site baiting a minimum of 2 weeks before commencement
- Registration of the project under the Considerate Constructers Scheme
- Section 61 (noise) prior notice agreement to be made with Camden Council
- 6 weeks' notice to be given for any road (and pavement) closures or crane lifts required in the early stages of the contract.

## 4.3 Site establishment and logistics

Site establishment is the preparation of the site to carry out the demolition and enabling process. This activity is generated from vacant possession of the site and will include the following activities:

- Securing the site with the erection of a full height close boarded hoarding, as shown on the logistics drawings in section 6.
- Hoardings will be 2.4m high, decorated, and the required notices of Contractors Contact details will be displayed on the entrance gates.
- Installation of site temporary electrics, lighting, water and fire alarms.
- Establishment of site security provisions to ensure that the site is protected against unauthorised or unlawful entry and potential theft from site.
- Local diversions of existing utilities if required and isolation of existing services and systems within the building will be carried out at an appropriate point in liaison with the statutory service providers.
- Establish welfare arrangements in sectional hutting in the garden for initial works.
- Emergency routes on site to be specified and clearly signposted.

Preparation of the Site and buildings for the demolition and construction activities will involve installation of the site hoarding, scaffolding and sheeting.

The condition of the structure and construction techniques would be investigated to provide as much information prior to construction commencing. Suspended floors and load bearing walls should be examined for any inconsistencies before use,

(openings through the floors, changes in construction, existing cracks and damage or signs of previous repairs). Any such items should be reported to the Temporary Works Engineer prior to commencement.

## 4.4 Early Works & Demolition

Once the site is established the focus of early construction activity will be:

- Commencement of programme critical piling to the new basement perimeter,
- Installing tree protection measures,
- Erection of scaffolding and stripping out of the main house for demolition,
- Overall site clearance

The pile design of the new basement remains subject to full site investigation and detailed design, but it is currently anticipated that the new basement will be constructed of contiguous piled perimeter walls, raft slab, concrete liner with loadbearing piles and a concrete ground slab. Perimeter piling is a programme critical item and the initial piling phase will safeguard the overall programme. Basement construction will follow a “top down” approach to reduce the amount of temporary works required and to minimise movement to the existing structure.

Garden areas will be stripped of vegetation and topsoil and a piling platform of crushed concrete will be laid in advance of piling. A piling rig will be delivered and offloaded in Whitestone Lane and will move on tracks into the garden area.

Early operations to prepare the main house for demolition will include the isolation of any live services in the building. An advance survey of all existing services will have been carried out in the pre-construction phase to highlight termination points.

The soft strip of redundant fixtures and fittings within the existing structures will be carried out working from the roof level downwards, manually using hand-held tools. As the materials are stripped, they will be removed to ground floor level and deposited into skips or small lorries located in the front drive and garden. Architecturally significant or reusable components will be carefully stored for re-use in the fitting out stage or recycled in similar projects.

A full scaffold will be erected to the house to afford access to the roof and provide a screen using Monarflex sheeting. Demolition can be considered deconstruction and will involve dismantling the house in the reverse order to its construction. The building will be stripped of roof and floor timbers mostly by hand, with the assistance of “Brokk” robot machines or mini

360º excavator fitted with appropriate shear and grapple attachments.

A small self-erecting crane will be introduced to the site to assist in the process. Steel frame members will be unbolted or cut using oxy-acetylene equipment and lifted to ground level for removal by skip or small lorry.

The scaffold will be an independent structure, not tied to the building and will be maintained one floor higher than demolition throughout the process.

## 4.5 Basement Construction

As the demolition reaches ground level the ground floor slab will be removed. The contractor will need to develop a full temporary works proposal to restrain the existing perimeter piles in the temporary condition, once the existing ground floor slab is removed.

The cutting out of the below ground concrete works (retaining walls, underpinned foundation sections etc) will be progressed by non-percussive means. The exact nature of the cutting out and removal of these large elements of concrete is to be agreed with the Party Wall Surveyors to ensure the disruption to adjacent properties is minimised.

The perimeter contiguous piled wall, together with internal piles will progress from the back of the site to the frontage. A degree of backfilling in compacted layers back up to lower ground floor level or a scaffold deck piling platform will be required in order to place these piles to the correct level. A reinforced concrete capping beam will follow the progress of contiguous piles. Excavation will commence and temporary propping will be introduced as basement formation level is reached.

The ground floor slab will then be cast to provide structural stability to the below ground structure prior to bulk excavation. Reduce level dig to basement level will proceed by mining under the new slab. Internal temporary piles may be used to support the ground floor slab in the temporary condition prior to the permanent basement columns being cast. Excavation will be by hand and mini excavator with excavated material loaded away to skips or lorries by conveyor belt.

Basement drainage, and slab preparation will follow excavation. Basement slab and pile caps will be cast, followed by internal columns. Removal of temporary works will take place following satisfactory load transfer to the permanent works. Then the reinforced concrete liner wall will be cast to the face of piles, ensuring wall is tied to piles. Waterproofing treatment will complete the structural works below ground.

## 4.6 House Construction

The loadbearing masonry structure will be constructed using traditional techniques up to eaves level. Brickwork will be constructed from traditional scaffolding that will be erected floor by floor as work proceeds. The scaffold will be fully sheeted to assist in the prevention of noise and dust nuisance.

Mortar will be delivered in ready mixed tubs for each working day and materials will be lifted to the work face by a small platform hoist.

Steel beams and timber joists will be erected with the self-erecting crane, as will the roof framing in steel and timber.

While the house construction proceeds the new basement will be made fully watertight and early fit out activities of blockwork walls, plant placement and main services distribution will be progressed. Components for the car lift will be lowered into position before the whole basement is enclosed.

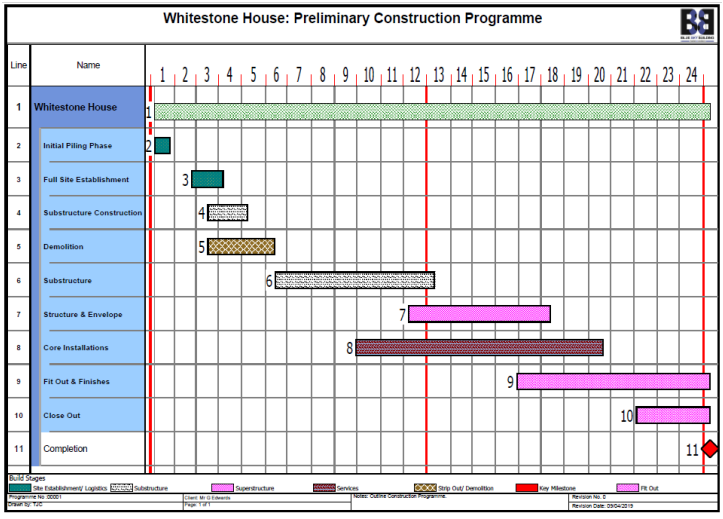
## 4.7 Fitting Out

When the envelope is made fully watertight to the house, the first fix carpentry and services installations will proceed. Final decorating and small materials will be delivered through the front door and at that stage any remaining scaffold and goods hoist will be removed.

Service connections, commissioning and setting to work will be undertaken as the project nears completion, in parallel to external works.

As the major construction works complete, the boundary walls will be repaired or reinstated as necessary and garden landscaping completed. The site welfare accommodation will be removed together with the tree protection measures.

## Summary Construction Programme:



# 5.0 THE CONSTRUCTION SITE

This section outlines the requirements relating to site management practices, ranging from the location of accommodation and equipment to the operation of plant on site. It outlines a number of procedures that should be implemented during site operation.

These relate to working hours, site layout, appearance, and good housekeeping.

Representatives from the Contractor and Camden Council Environmental Control may regularly inspect the construction site to ensure that these procedures are adhered to. The Contractor must follow a 'good housekeeping' policy at all times. The site should be cleared by the Contractor on completion of the development.

The specific measures to be implemented by the Contractor will include:

## Working Hours

Core working hours will be 08.00 – 18.00 on weekdays and 08.00 – 13.00 on Saturday, in line with The Guide's limits on noisy working.

Noisy works during the critical early piling phase will not start before 9.00 on weekdays and not at all on Saturdays.

There may occasionally be a need to work outside these hours in order to undertake essential works, and the Contractor will make due application to the council should the need arise.

To ensure that the impact of the construction is kept to a minimum on this project we propose a voluntary Section 61 Prior Working Agreement is adopted.

## Good Housekeeping

The Contractor will follow a 'good housekeeping' policy at all times. This will include, but not necessarily be limited to the following. The Contractor will:

- Register the project with the Considerate Constructer's Scheme
- ensure considerate site behaviour of the Contractor's staff;
- ensure the noise from lorry reversing alarms and the like are kept to minimum levels;

- prohibit open fires;
- ensure that appropriate provisions for dust control and road cleanliness are implemented;
- remove rubbish at frequent intervals, leaving the site clean and tidy;
- frequently inspect, repair and re-paint as necessary all site hoardings to comply with the conditions of Camden Council's Licence – all flyposting and graffiti is to be removed as soon as reasonably practicable and within 24 hours of notice from the Camden Council;
- maintain toilet facilities and other welfare facilities for its staff;
- remove food waste;
- frequently cleanse wheel washing facilities;
- prevent vermin and other infestations; and
- undertake all loading and unloading of vehicles expediently from as identified on the logistics drawing and traffic management section.

## Public Information

The site gate will display any necessary health & safety material. The name and 24-hour telephone contact details of the Contractor's nominated representative will be shown, together with the full details of the Contractor's regional or head office.

## Security

The Contractor will ensure that the site is secure and prevent unauthorised entry to or exit from the site. Site gates will be closed and locked when there is no site presence. Alarms will incorporate an appropriate cut-off period. Access and egress will be via the existing security gate.

## Hoardings, Site Layout and Facilities

The site will be completely secure to deter public access. Hoardings will be minimal and not on the highway or pavement as the existing boundary and gates will remain intact. Should hoardings be required (for replacement of gate for example), they will be constructed and managed in accordance with Camden's licensing.

Site welfare arrangements will initially be in sectional units located in the garden, and will be moved in accordance with the basement construction sequence.

## Emergency Planning and Response

The Contractor will develop a plan for emergencies to incorporate:

- Emergency procedures including emergency pollution control to enable a quick response.
- Emergency phone numbers and the method of notifying Camden Council and statutory authorities. Contact numbers for the key staff of the Contractor will also be included. The Contractor will display a 'contact board' on the gate identifying key personnel with contact addresses and telephone numbers, so that members of the public know who to contact in the event of a report or query.
- London Fire and Emergency Planning Authority (LFEPA) requirements for the provision of site access points.
- Site Fire plan and management controls to prevent fires.
- A plan to reduce fire risk and potential fire load during construction, operation and subsequently during maintenance or repair. The project will comply with any third party requirements as may be appropriate at specific sites.

## Cranes

Cranes are likely to be trailer mounted self-erecting cranes operated from ground level inside the site boundary. If the contractor identifies a methodology with a specific need for larger cranes then Camden must be given 10 days' notice of its use, and 6 weeks' notice in the event that a road closure is required.

## Considerate Constructors Scheme

The site will be registered with the 'Considerate Constructors Scheme'. This scheme ensures that contractors carry out their operations in a safe and considerate manner with due regard to neighbours, passing pedestrians and road users.

# 6.0 SITE LOGISTICS

The efficient management of the site logistics will be vital to the success of the project. A key strategy of logistics for a construction project is to ensure that the products and materials arrive on site at the time and in the quantities that are required.

The Contractor will ensure that the necessary pre-planning is undertaken and that the quality of the communication between those planning the project and those supplying the products and materials is maintained throughout the duration of the project.

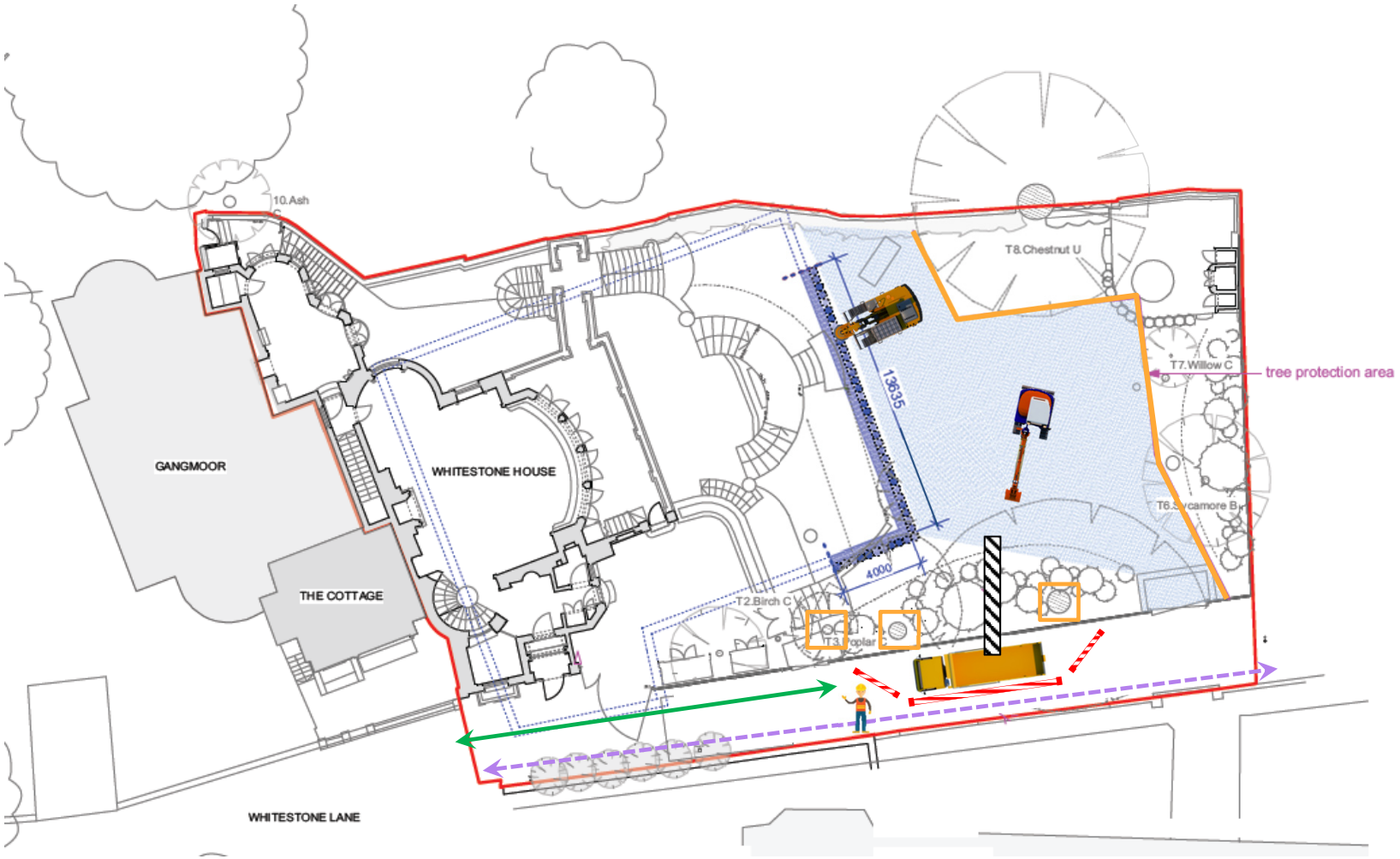
The drawings overleaf illustrates the proposed overall logistics plan for the site which incorporates the following key features:

- The site is fully enclosed.
- Scaffolding will include Monarflex sheeting to encapsulate dust and noise.
- Vehicles delivering or collecting from site will be sized to navigate Whitestone Lane and the turn into site without disrupting local parking and road users.
- "Trackway" or similar proprietary road plating will be deployed to protect the gravel surface of Whitestone Lane during construction operations.

Rev C

- Products and materials will be delivered to site by vehicles, unloaded inside the site boundary.
- Access and egress to be controlled by fully manned security points.
- Concrete placement will be by ready mix truck and small trailer pump, located inside the boundary.

Please refer overleaf to the Site Layout Plans




Vehicle Loading forecast to be maximum of two vehicles per day during piling, with a loading time of c. 40 minutes

**KEY**

- Hoarding / Boundary
- Tree Protection
- Conveyor Belt
- Temporary Barrier while Loading
- Construction Access
- Pedestrian Access to Heath
- Traffic Marshal

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**PROJECT:** Whitestone House, Camden
**CLIENT:** Mr G Edwards

**TITLE:** **Logistics Plan – Initial Piling – Muck Away**

**DRAWING NO.:** BSB-WH-001A.1

**REVISION NO. & DATE:** Rev A – 24/05/2019



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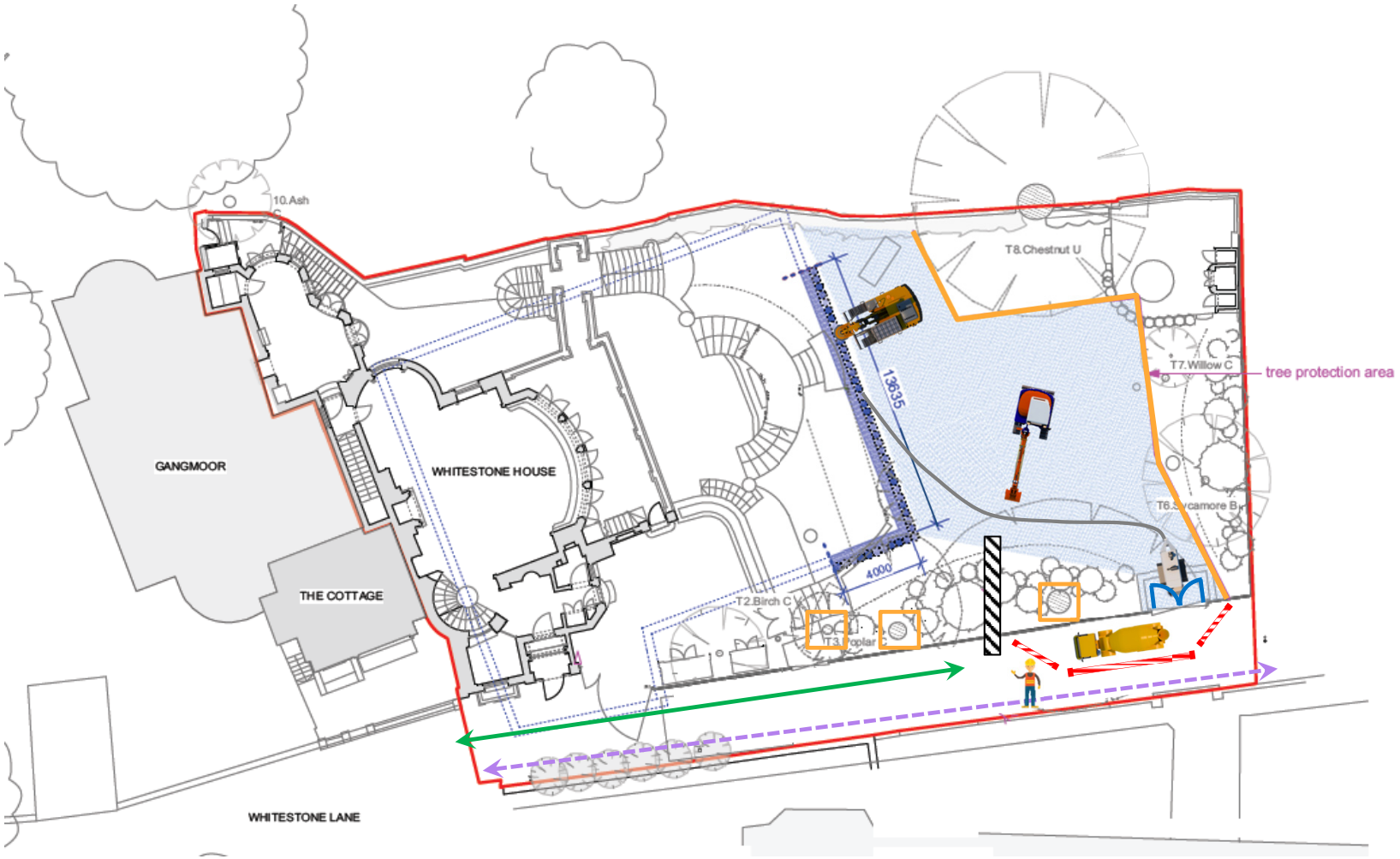


Concrete deliveries forecast to be maximum of two vehicles per day during piling, with a loading time of c. 30 minutes

**KEY**

- Hoarding / Boundary
- Tree Protection
- Conveyor Belt
- Temporary Barrier while Loading
- Construction Access
- Pedestrian Access to Heath
- Traffic Marshal

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**PROJECT:** Whitestone House, Camden
**CLIENT:** Mr G Edwards

**TITLE:** **Logistics Plan – Initial Piling – Concrete Delivery**

**DRAWING NO.:** BSB-WH-001A.2

**REVISION NO. & DATE:** Rev A – 24/05/2019



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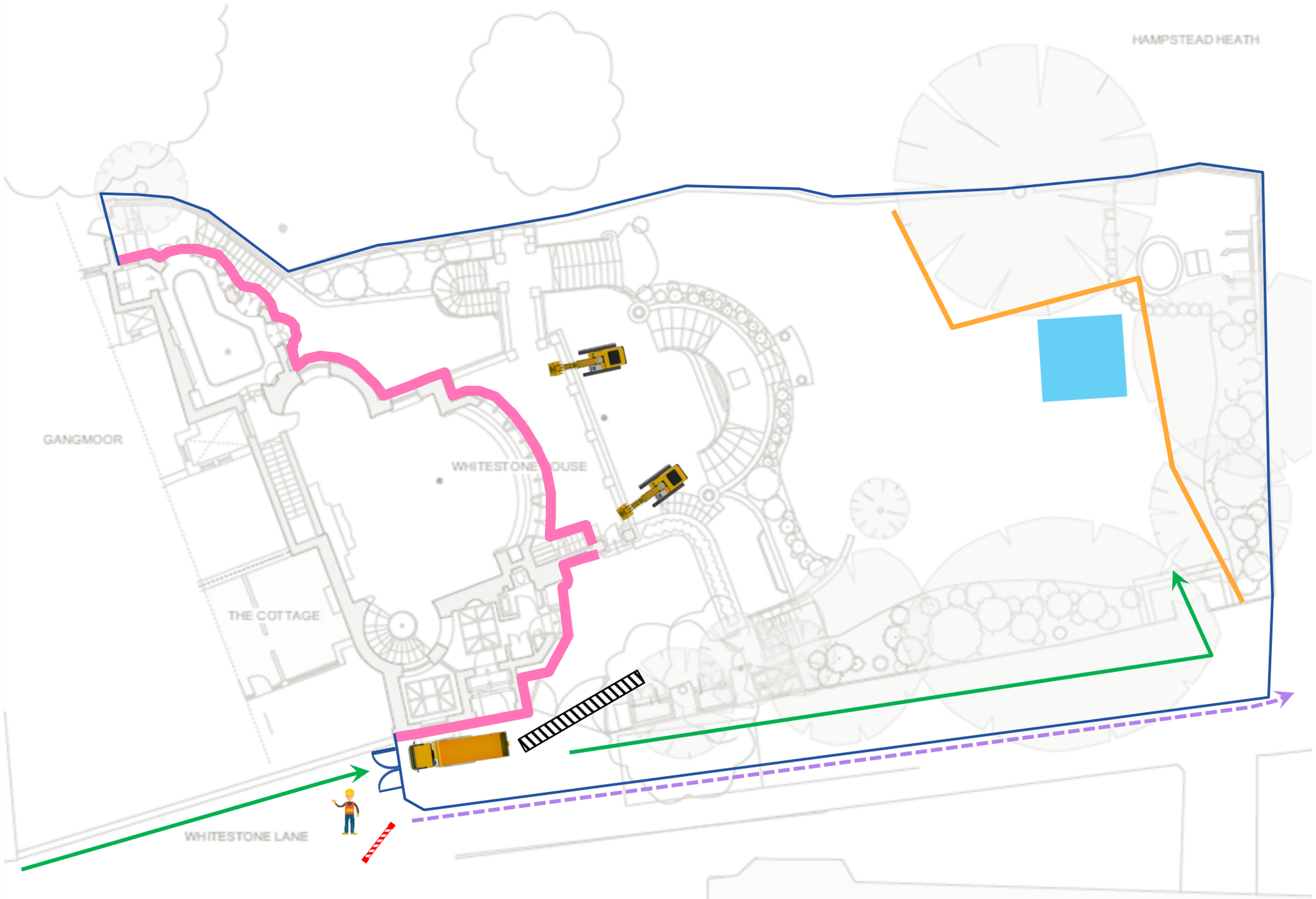


Traffic Marshals to manage vehicle manoeuvres and ensure access to Bellmoor is maintained safely

**KEY**

- Hoarding / Boundary
- Tree Protection Zone (indicative)
- Sheeted Scaffold
- Site Accommodation
- Mini Excavator
- Conveyor Belt
- Construction Access
- Pedestrian Access to Heath
- Traffic Marshal
- Barrier (during vehicle movements only)

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**PROJECT:** Whitestone House, Camden
**CLIENT:** Mr G Edwards

**TITLE:** **Logistics Plan – Demolition**

**DRAWING NO.:** BSB-WH-002

**REVISION NO. & DATE:** Rev A – 24/05/2019



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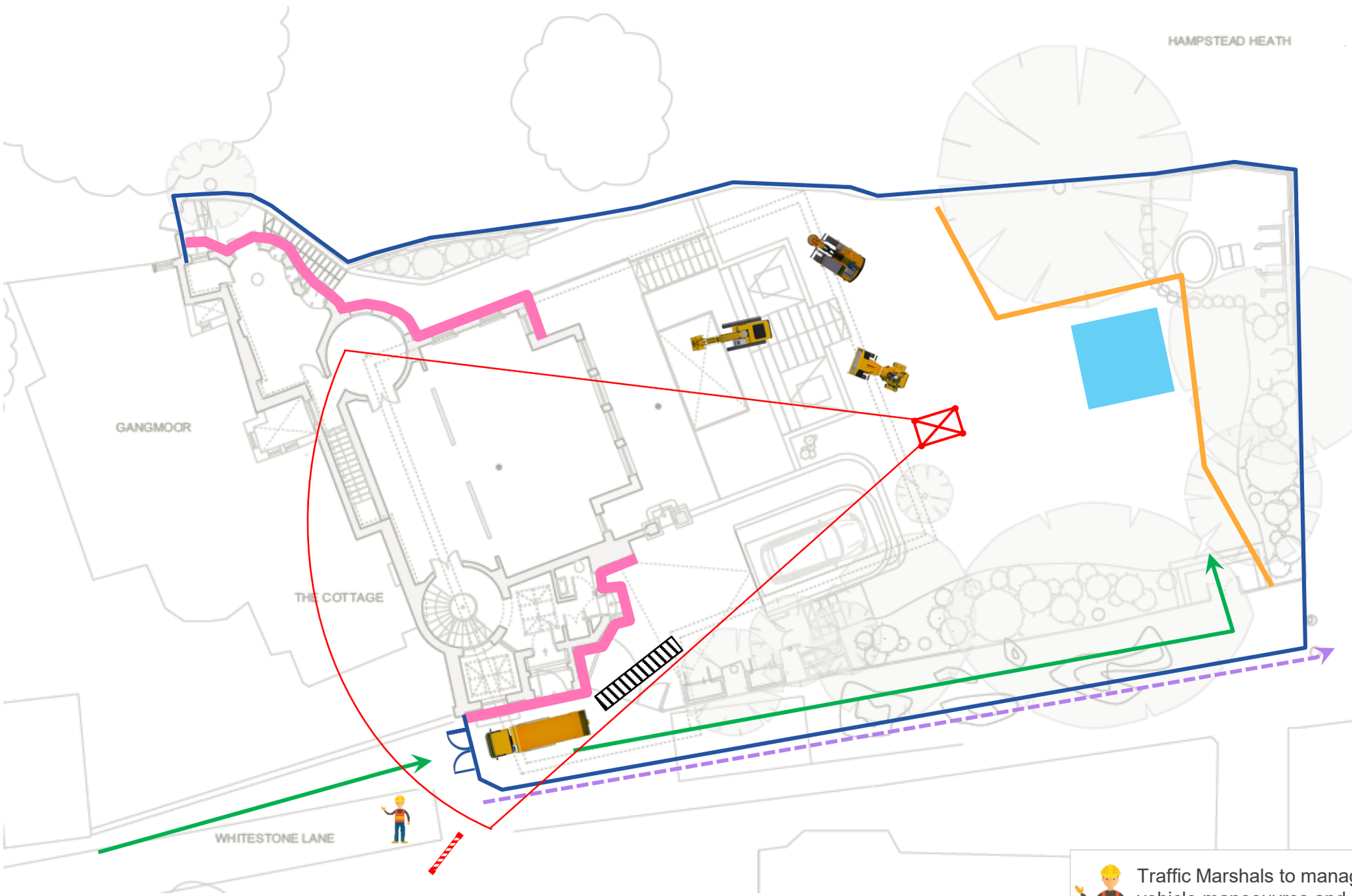


Example of a Self-Erecting Crane

**KEY**

- Hoarding / Boundary
- Tree Protection Zone (indicative)
- Sheeted Scaffold
- Site Accommodation
- Mini Excavator
- Conveyor Belt
- Construction Access
- Pedestrian Access to Heath
- Trailer Mounted Crane
- Mini Piling Rig
- Dumper

Traffic Marshals to manage vehicle manoeuvres and ensure access to Bellmoor is maintained safely

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**PROJECT:** Whitestone House, Camden
**CLIENT:** Mr G Edwards

**TITLE:** **Logistics Plan – Construction**

**DRAWING NO.:** BSB-WH-003

**REVISION NO. & DATE:** Rev A – 24/05/2019



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# 7.0 TRAFFIC MANAGEMENT

This section highlights the measures by which the Contractor will avoid nuisance to the public that may arise from increases in traffic flows and temporary rearrangements of the road network associated with the construction works. Measures have been considered in relation to access routes, site access, marking of lorries, timing of movements, environmental standards, vehicle registration and parking.

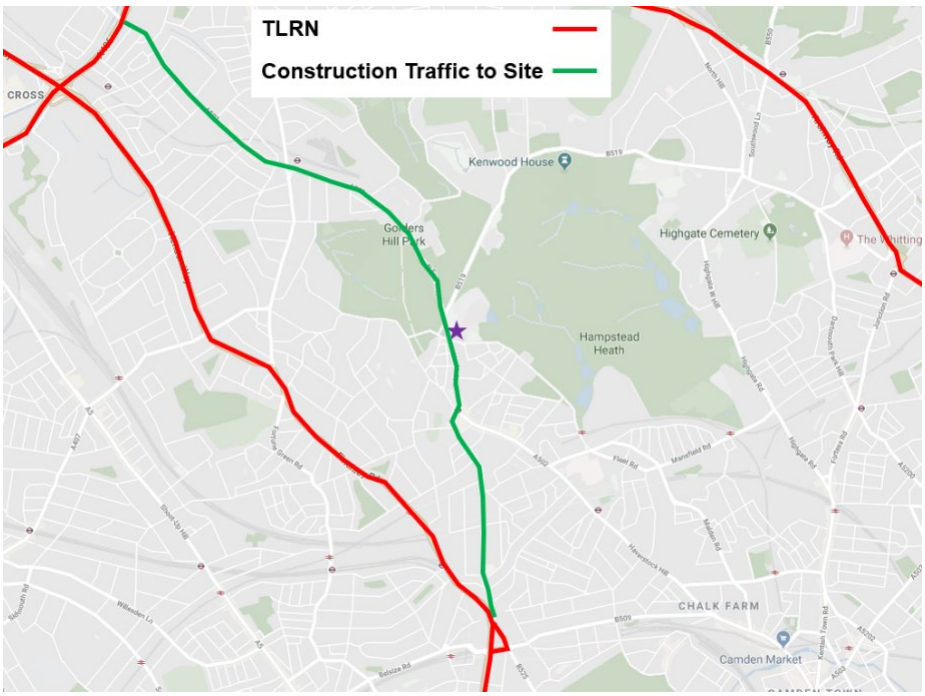
Loading and unloading of vehicles will mostly be managed inside the site boundary with vehicles turning in to the existing gate from Whitestone Lane. The Contractor will maintain, as far as reasonably practicable, existing public access routes and rights-of-way during construction.

## Access routes

The Contractor will use designated construction traffic routes for deliveries to the site and removal of waste etc.

Access routes to and from the site to be used by heavy goods vehicles (HGVs) will be agreed with Camden Council prior to initiation of the demolition and construction programme, to minimise disruption to the road and pedestrian network. Deliveries will use the Transport for London Road Network (TLRN) and A roads to approach site.

Site traffic will approach site directly from the A502 Heath Street, turning into East Heath Road under traffic marshal guidance from the traffic lit junction of Heath Street, East Heath Road and West Heath Road.




**Where possible vehicles will be brought to site between the hours of 09.30 and 15.30 hours to avoid the peak periods.** The Contractor will maintain an up-to-date log of all drivers that will include a written undertaking from them to adhere to Camden Council's approved routes for construction traffic.

FORS Bronze accreditation as a minimum will be a contractual requirement for all contractors and suppliers, FORS Silver or Gold operators will be appointed where possible. CLOCS compliance will be a contract requirement. Copies of registration documents for regular/ repeat vehicles will be held on site and will be available for inspection. All suppliers will be notified of the requirement in supply orders and a log of vehicles held on site. Non-compliant vehicles will not be permitted entry.

The total vehicle numbers per day are not expected to be large, although it is recognised that *any* construction traffic through the surrounding streets may constitute a nuisance. The contractor will be required to plan deliveries to use small rigid vehicles and where this is not possible to make due arrangements for access via consultation with neighbours and Camden Council.

Please refer overleaf for Swept Path Analysis for piling access

N

VALE OF HEALTH

133.8m

Shelter

LB

WHITESTONE WALK

Pinfold

Whitestone Pond

2.5 x 10 METRES FLATBED TRUCK ENTERING SITE

Gangmoor

SITE LOCATION

Whitestone House

The Cottage

WHITESTONE LANE

Posts

Stone

133.6m

1 to 12

14 to 24

Bell Moor

MS

131.8m

EAST HEATH ROAD

LOWER TERRACE

TCB

El Sub Sta

Observatory

Reservoir

Shelter

N

VALE OF HEALT

133.8m

Shelter

LB

WHITESTONE WALK

Pinfold

Whitestone Pond

2.5 x 10 METRES FLATBED TRUCK EXITING SITE

Gangmoor

SITE LOCATION

Whitestone House

The Cottage

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131.8m

EAST HEATH ROAD

LOWER TERRACE

TCB

El Sub Sta

Observatory

Reservoir

Shelter

Rev C

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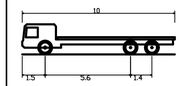
NOTES




10 m Rigid Flatbed Truck

| | |
|---|---|
| Overall Length | 10.000m |
| Overall Width | 2.500m |
| Overall Body Height | 1.973m |
| Min Body Ground Clearance | 0.440m |
| Track Width | 2.500m |
| Lock to lock time | 5.00s |
| Kerb to Kerb Turning Radius | 9.000m |

| Rev | Date | Description | Drawn | Auth'd |
|---|---|---|---|---|

AMENDMENTS

southdownssafety

Tel 02079711422
www.southdownssafety.co.uk

Client

TRENCHCO LTD

Project Title

WHITESTONE HOUSE, HAMPSTEAD

Drawing Title

VEHICLE SWEPT PATHS – RIGID FLATBED TRUCK

| Scale | Date | Drawn | Authorised |
|---|---|---|---|
| 1:500 | 28.06.19 | AS | ME |

Drawing Status

PRELIMINARY

| Drawing No: | Revision |
|---|---|
| SDS 050 | P4 |

# 8.0 SITE WASTE MANAGEMENT

The Contractor must use working methods that minimise waste. Any waste arising from the site must be properly categorised and dealt with in accordance with appropriate legislation. Opportunities for re-using or recycling construction or demolition waste should be explored and implemented.

The Contractor will carry out the works in such a way that as far as is reasonably practicable the amount of spoil and waste (including groundwater, production water and run-off) to be disposed of is minimised, and that any waste arising from the site is properly categorised and dealt with in accordance with the appropriate legislation and guidance.

A formal and detailed Waste Management Plan will be prepared by the Contractor. The disposal of all waste or other materials removed from the Site will be in accordance with the requirements of the Environment Agency, Control of Pollution Act (COPA), 1974, Environment Act 1995, Special Waste Regulations 1996, Duty of Care Regulations 1991 and the Waste Management Regulations 2006.

In general, and in accordance with the principles of the UK Government's 'Waste Strategy 2010', a principal aim during demolition and construction will be to reduce the amount of waste generated and exported from the site.

This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary. The contractor will be required to investigate opportunities to minimise and reduce waste generation, such as:

- Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme.
- Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste.
- Attention to material quantity requirements to avoid over-ordering and generation of waste materials.
- Re-use of materials wherever feasible, either on site or elsewhere (e.g. re-use of crushed concrete from slab removal for fill; re-use of excavated soil for landscaping; re-use of timber and steel from the existing building).
- The Government has set broad targets of the use of reclaimed aggregate, and in keeping with best practice, Contractors will be required to maximise the proportion of materials recycled.
- Segregation of waste at source where practical.
- Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. using an off-site waste segregation facility and re-sale for direct re-use or re-processing). Our expectations in this regard are shown in the table overleaf.

| Material | Target | Probable Location |
|---|---|---|
| Architectural salvage | 100% re-used | Re-used on site or through several architectural salvage companies in London. |
| Metals | 100% recycled | Every effort will be made to retain steel members for reuse with any surplus being taken to recycle as scrap. |
| Reusable bricks | 100% recycled | Taken off site to be cleaned and reused in brickwork |
| Hardcore (brick/block/ concrete etc.) | 100% recycled | Taken off-site to be crushed and reused as fill or substrate for hardstandings. |
| Excavated material/ sand, clay etc. | 100% recycled | Clay – 100% processed for re-use (subject to analysis). |
| Timber | Up to 80% re-used<br>The amount re-used will depend on the material | We will attempt to salvage any re-useable timber for hoardings, battening, shuttering etc. on site, with the balance being retained by the Contractor. |
| Glass | 100% recycled | Processing facilities widely available. |
| Mixed waste | The amount recycled will depend on the material | An absolute minimum will remain for transport to landfill. |
| Asbestos (if found) | 100% landfill | Taken to a licensed site. |

Overall, the waste management for the site is likely to comprise of the following:

- **Soft Strip**. As the materials are stripped they will be removed to ground level. The material will then be deposited into skips within the boundary for removal from site for segregation at a recycling centre.
- **Hard Demolition.** Bricks and roof tiles will be separated and retained where possible. Debris will be cleared by machine and deposited into skips for processing off site.
- **Excavation**. Arisings will be loaded directly into skips or tipper lorries by machine for processing off-site.

# 9.0 NOISE AND VIBRATION

The Contractor will monitor and control levels of noise and vibration from the site.

Measures for reducing such levels are set out of this section. A prior approval via Section 61 of the Control of Pollution Act 1974 is proposed.

## Best Practicable Means

Best Practicable Means (BPM) of noise control will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities.

The general principles of noise management are given below:

Control at source:

- Equipment – noise emissions limits for equipment brought to site.
- Equipment – method of directly controlling noise e.g. by retrofitting controls to plant and machinery.
- Equipment - indirect method of controlling noise e.g. acoustic screens.
- Equipment - indirect method of controlling noise e.g. benefits and practicality of using alternative construction methodology to achieve the objective as opposed to more conventional but noisier techniques; selection of quieter tools/machines; application of quieter processes.

Control across site by:

- Administrative and legislative control,
- Control of working hours,
- Control of delivery areas and times,
- Careful choice of compound location,
- Physically screening site,
- Control of noise via Contract specification of limits,
- Noise Monitoring, to check compliance with noise level limits, cessation of works until alternative method is found.
- Many of the activities which generate noise can be mitigated to some degree by careful operation of machinery and use of tools. This may best be addressed by tool box talks and site inductions.

## Noise Control

The Contractor's environmental team will undertake a noise assessment using noise predicting software which projects noise levels at adjoining properties based on the emissions made by specific plant. This noise assessment will be carried out in accordance with BS5228-1: 2009+A1: 2014 'Code of Practice for noise and vibration on construction and open sites.

This assessment allows the Contractor to select the most appropriate plant, methodology and controls to minimise disruptions of buildings close to the site (sensitive receptors) and in particular the neighbouring residents, during the demolition, piling and basement work phases.

Noise levels will be monitored by the Contractor during the course of the works. Camden Council shall be given access to all noise readings if required as soon as they become available.

Although the noise levels to be included in a formal agreement between the Contractor and Camden Council are the maximum to be allowed, at sensitive locations the Contractor will be requested to achieve, where practicable, noise levels lower than the specified limits.

## Noise Control Measures

The Contractor shall comply with the recommendations set out in BS5228:2009 and in particular with the following requirements:

- Vehicles and mechanical plant will be maintained in a good and effective working order and operated in a manner to minimise noise emissions. The contractor will ensure that all plant complies with the relevant statutory requirements;
- HGV and site vehicles will be equipped with broadband, non-tonal reversing alarms;
- Compressor, generator and engine compartment doors will be kept closed and plant turned off when not in use;
- All pneumatic tools will be fitted with silencers/mufflers;

- Care would be taken when unloading vehicles to avoid un-necessary noise;
- The use of particularly noise plant will be limited, i.e. avoiding use of particularly noisy plant early in the morning;
- Restrict the number of plant items in use at any one time;
- Plant maintenance operations will be undertaken at distance from noise-sensitive receptors;
- Reduce the speed of vehicle movements;
- Ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise-sensitive receptors;
- When replacing older plant, ensure that the quietest plant available is considered;
- Drop heights will be minimised when loading vehicles with rubble;
- Vehicles should be prohibited from waiting at the site with their engines running or alternatively, located in waiting areas away from sensitive receptors;
- Local hoarding, screens or barriers should be erected to shield particularly noisy activities;
- Temporary noise screens will be used to reduce noise from particularly noisy activities and the height of perimeter hoarding will be extended where this would assist in reducing noise disturbance at sensitive receptors; and
- Hours of operation should be strictly enforced and any deviations other than those previously identified will be with the consent of the local authority;
- Limiting of high impact activities (including piling works) to specific times of the day. For example, this may include 2 hours on – 2 hours off, or the restriction of such activities to between 09:00-12:00 and 14:00-17:00;
- Piling will be carried out with the method that minimises both noise and the transmission of vibration to sensitive receptors;
- Vehicles, plant and equipment will undergo regular servicing and maintenance to prevent irregular noise levels;
- The location of stationary plant in areas which will have a minimized impact on occupied residential and commercial properties, where feasible;
- Static plant, when in operation, is to be sound attenuated using methods based on the guidance and advice in the BS 5228, where practical;
- Implementation of Best Practice Means (as defined in Section 72 of the COPA) by trade contractors at all times, and are to carry out all work in such a manner as to reduce disturbances from noise and vibration;
- Preference for electrically powered plant, to mechanically powered alternatives, where practical;

## Construction Traffic

The Contractor will incorporate the following measures into the scheme to avoid noise related impacts from construction traffic:

- Vehicles will not wait or queue up with engines running at the site or the public highway;
- Vehicles will be properly maintained to comply with noise emissions standards;
- Deliveries will be restricted to be within working hours of the site; and
- Design and routing of access routes will minimise vehicle noise and the need to perform reversing manoeuvres.

## Vibration control

Vibration is a particular risk during the demolition, piling and excavation stages. The measures taken to reduce the acoustics of these operations will also assist in mitigating the effects of vibration on neighbours and their property.

A digital seismograph measuring device will be used to measure the amount of vibration produced during the works. Where elevated levels are recorded the source will be investigated and, where possible, alternative techniques employed to reduce the levels.

The Contractor will comply with the vibration levels established by agreement with Camden, which will consider BS 5228-2.

Please refer overleaf to the Construction Noise & Vibration Assessment Report

southdowns
environmental consultants

# GRAHAM EDWARDS

# WHITESTONE HOUSE, WHITESTONE LANE, HAMPSTEAD, LONDON, NW3 1EA

# LONDON BOROUGH OF CAMDEN

# CONSTRUCTION NOISE AND VIBRATION ASSESSMENT REPORT

**APRIL 2019**

**2310W-SEC-00001-02**

**FINAL REPORT**

# GRAHAM EDWARDS
# WHITESTONE HOUSE, WHITESTONE LANE, HAMPSTEAD, LONDON, NW3 1EA
# CONSTRUCTION NOISE AND VIBRATION ASSESSMENT REPORT

**DOCUMENT REFERENCE: 2310W-SEC-00001-02**

| REVIEW AND AUTHORISATION | | | |
|---|---|---|---|
| **Authored By**<br>Ryan Webb | **Position**<br>Assistant Consultant | **Signature** | **Date**<br>09/04/2019 |
| **Reviewed By**<br>Matthew Weston | **Position**<br>Principal Consultant | **Signature** | **Date**<br>17/04/2019 |
| **Checked By**<br>Nathan Gregory | **Position**<br>Senior Consultant | **Signature** | **Date**<br>10/04/2019 |
| **Approved By**<br>Patrick Williams | **Position**<br>Director | **Signature** | **Date**<br>18/04/2019 |

| AMENDMENT HISTORY | | | |
|---|---|---|---|
| **Issue** | **Status** | **Description** | **Date** |
| 01 | Draft | Draft for client comment | 18/04/2019 |
| 02 | Final | Final issue following client comment | 24/04/2019 |
| | | | |

This report has been prepared using all reasonable skill and care within the resources agreed by the client. No responsibility is accepted for matters outside the terms and scope of the agreement under which this report has been prepared. Similarly no responsibility in any form is accepted for third party use of this report or parts thereof, the contents of which are confidential to the client.

**CONTENTS** **PAGE NO.**

# 1. INTRODUCTION

1.1.1 Southdowns Environmental Consultants Ltd (Southdowns) was instructed in March 2019 by Graham Edwards to produce a Construction Noise and Vibration Assessment for the proposed development at Whitestone House within the London Borough of Camden (LBC).

1.1.2 The purpose of the noise and vibration assessment is to identify the potential risk of adverse noise and vibration effects which may be caused by construction activities associated with the works.

1.1.3 The noise and vibration assessment has been prepared to satisfy the local authority's planning condition no. 10 associated with the construction works at Whitestone House which states:

*"Prior to commencement of the development, a noise and vibration assessment with regards to the equipment hereby approved shall be submitted to the Council detailing proposed construction site noise and vibration levels along with proposed site sound acoustic screening and mitigation."*

1.1.4 A separate construction management plan, which incorporates Camden's Pro-Forma Construction Management Plan (v2.3), has been prepared by Blue Sky Building construction consultancy. However, control measures specific to the management of noise and vibration are provided in this document.

1.1.5 Details of the site and the proposed development are described in the following section of this report. Risk assessments of potential noise and vibration effects are presented in Sections 3 and 4 respectively. Generic control and site-specific measures are listed in Section 5. Finally, the aforementioned sections are summarised in Section 6. Figures and Tables are presented in Appendices A and B, respectively.

## 2. SITE DETAILS

### 2.1 Site Description

2.1.1 Whitestone House is located in Hampstead, within the administrative boundary of the London Borough of Camden (LBC).

2.1.2 Whitestone House is an existing four-storey building situated at the end of Whitestone Lane.

2.1.3 The Whitestone House is adjoined to two three-storey residential properties to the west, 'The Cottage' and 'Gangmoor', the latter of which is grade II listed. The immediate surrounding area is sparsely populated, with the next closest residential properties located in Bellmoor Apartment block approximately 10m away on East Heath Road at its closest point.

2.1.4 Approximately 55m to the south of the site lies Queen Marys Hospital. The Transport for London (TfL) Northern Line runs in a northwest-southeast direction approximately 250m west of the site.

2.1.5 A site location plan is shown in Figure A1 of Appendix A.

### 2.2 Proposed Development

2.2.1 The development proposal comprises of the demolition and reconstruction of the existing Whitestone House with the construction of a new basement storey below the existing lower ground floor for provision of car parking, music room/library, gym, swimming pool and the erection of single storey enclosure to house car lift at ground floor level.

2.2.2 An architect's plan of the proposal is presented in Figure A2 of Appendix A.

2.2.3 Based on information provided by the client, all deliveries to/from site and the removal of spoil will occur at the site entrance. Hoarding will be erected around the site.

2.2.4 Materials and spoil will be stored on site in skips, within site hoarding. Skip wagons will be used to transfer spoil from the site.

### 2.3 Sensitive Receptors

2.3.1 The existing site adjoins two residential receptors which are located to the west on Whitestone Lane and is close to residential properties on East Heath Road to the south.

2.3.2 Representative receptors are presented, with relative horizontal distances to site and delivery locations, in Table 2.1 overleaf. A receptor plan is shown in Figure A1 of Appendix A.

| Receptor No. | Receptor Address | Receptor Type | Distance, m | |
|---|---|---|---|---|
| | | | Site | Road |
| R1 | Gangmoor– east façade [2] | Residential | 12 | 22 |
| R2 | The Cottage – south façade [2] | Residential | 12 | 13 |
| R3 | Bellmoor – north façade | Residential | 20 | 15 |
| R4 | Queen Marys Hospital | Hospital | 55 | 40 |
| R5 | The Old Court House – east façade | Residential | 135 | 145 |
| R6 | Summit Lodge – east façade | Residential | 125 | 117 |
| R7 | Hollycot – west façade | Residential | 140 | 150 |

**TABLE 2.1: REPRESENTATIVE RECEPTOR DISTANCES**

*Note: [1] receptor types based on desktop survey; and*
*[2] nominal distance to the centre of site and delivery bay used for properties adjoining Whitestone House.*

## 2.4 Construction Methodology

2.4.1 The development works detailed within this document will be undertaken between 08:00 and 18:00 hrs Monday to Friday and between 08:00 and 13:00 hrs Saturday and no works on Sundays, as outlined in the Camden's Minimum Requirements for Building Construction (CMRBC) [1] document. Deliveries will be limited to between 09:30 to 16:30 hrs Monday to Friday and 08:00 and 13:00 hrs on Saturdays. If feasible, only lighter vehicles for deliveries will operate on Saturdays from 08:00 hrs to 13:00 hrs.

2.4.2 An outline of the construction methodology is presented below based on information provided by the client prior to the appointment of a contractor. The construction sequence provided below will be superseded by the Contractor's final proposals.

2.4.3 It is predicted that there will be 9 no. activities required to complete the construction works at Whitestone House which are to be carried out sequentially. These activities are presented in the following sub-section with further details of plant and expected usage presented in Table B1 of Appendix B.

Site Setup, Deliveries and Spoil Removal

2.4.4 Scaffolding to be set up around the house where necessary and hoarding set up around the site perimeter.

2.4.5 Plant and materials will be delivered to a dedicated loading bay on Whitestone Lane and on to the driveway of Whitestone House. Debris will be stored on site in skips and removed by a skip wagon.

2.4.6 A luffing jib crane will be used during the development to transfer materials around the site.

2.4.7 It is expected that there will be up to a maximum of six vehicle movements per day, depending on the activity.

2.4.8 A traffic management plan will be made available to all potential delivery vehicles and site staff to ensure potential disturbance is minimized.

Demolition Building Superstructure - Upper Floors and Roof

2.4.9 The existing superstructure will be demolished in reverse order to construction method, retaining only the western boundary wall with the two adjoining properties. Careful consideration to be given to existing roof and attic frame. The cutting of steelworks into manageable lengths will be carried out by angle grinders or powered hand tools. Followed by the demolition of the existing perimeter wall.

Removal of Existing Pin Foundations and Lower Ground Floor Slab

2.4.10 Removal of the existing ground floor will include the break-up of the ground floor concrete slab by breakers and concrete saws. Angle grinders and powered hand tools will be used to cut steel and timber support beams.

2.4.11 Cutting out of the below ground concrete works (retaining walls, underpinned foundations etc) will be carried out by non-percussive means. The exact methodology of this will be agreed with the Party Wall Surveyors to minimise disruption.

Piling

2.4.12 Continuous flight auger piles rather than driven piles will be recommended for use by the specialist piling contractor as to minimise vibration, noise and ground heave.

2.4.13 A mini piling rig will be used to install perimeter contiguous piled walls which follow the perimeter of the new basement space. Piles will also be installed stepped in from the retained party wall on the western boundary and internal piles to carry the vertical load from the structure above. Fixing reinforcement to capping beam, with starter bars for lower ground floor slab, and cast capping beam will be carried out with the assistance of powered hand tools. Finally the tying of capping beam into existing piled wall construction on the South elevation.

2.4.14 Spoil will be removed with the use of a conveyor in to a skip, where it will be removed from site using a skip wagon.

Underpinning

2.4.15 Underpinning will be required to strengthen the foundations of the proposed structure. Bays will be excavated and underpinned in a ‘hit and miss’ sequence. Each bay is to be backfilled until all of the pins are complete prior to commencement of the excavation.

Excavation

2.4.16 Excavation down to new basement level will be carried out primarily by the use of a small excavator and spoil transferred into skips using wheelbarrows and a conveyor. The use of an electric breaker or concrete saw may be required.

2.4.17 Hand tools will be used to prepare basement drainage, fix basement reinforcements and tie to piled wall construction.

Form Reinforced Concrete Structure, Walls and Ground Floor Slab

2.4.18 The basement slab will be cast and tied into the piles to act as permanent horizontal prop to the retaining wall. Internal column frameworks will be placed and the basement columns cast.

2.4.19 Removal any temporary works requirements, including any temporary pile supports to the ground floor slab will be carried out using concrete saws and powered hand tools and transferred out using a conveyor into a skip.

2.4.20 Concrete will be delivered to site ready mixed and pumped onto site using a mobile pump to form new basement slab (ground-bearing slab).

2.4.21 Hand tools and an angle grinder may be used to finish and shape the concrete structure.

2.4.22 The concrete roof will finish the main construction of the basement and will be constructed using the same plant as the walls and stairs.

Superstructure Construction – Upper Floors

2.4.23 The upper floors and roof constructions are to be built in traditional form, comprising of load bearing external wall construction supporting a grillage of steel beams at each floor level that in turn support the timber floor infill construction.

2.4.24 A steel framed roof construction with timber infill has been proposed for Whitestone House.

2.4.25 A hoist will be used to transfer materials to the upper levels of the development.

Finishes & Contingency

2.4.26 This activity includes any minor finishes and decorative works to the property with the use of hand tools and powered hand tools.

# 3. NOISE RISK ASSESSMENT

## 3.1 Overview

3.1.1 This section presents an assessment of the risk of construction noise generated by the works due to commence at Whitestone House, and the associated potential adverse effects on the surrounding area.

3.1.2 An assessment of the noise impact has been undertaken based upon the plant and equipment, scheduled construction activities, and the programme of works as presented in this document.

## 3.2 Calculated Noise Levels

3.2.1 Calculated receptor noise levels have been determined based on the plant listed for each activity in Table B1 of Appendix B, with construction activities being undertaken sequentially.

3.2.2 Construction activity noise levels have been calculated assuming source locations in both the site and delivery areas. Appropriate screening from buildings and other local barriers has been applied, however, barriers will not always screen noise sources from upper storeys as these may overlook the barriers. Worse case receptor construction noise levels are presented.

3.2.3 The calculated construction noise levels during each activity described in Section 2, at potentially sensitive receptors, are presented in Table 3.1 below.

| Rec. | Address | Calculated Construction Noise Level dB $L_{Aeq,10hr}$ | | | | |
|---|---|---|---|---|---|---|
| | | Site Setup | Demolition of Existing Building Superstructure - Upper Floors and Roof | Removal of Existing Pin Foundations and Lower Ground Floor Slab | Piling | Underpinning |
| R1 | Gangmoor– east façade | 72.2 | 74.1 | 73.7 | 73.7 | 74.0 |
| R2 | The Cottage – south façade | 73.2 | 74.9 | 74.9 | 74.5 | 74.6 |
| R3 | Bellmoor – north façade | 69.7 | 71.2 | 71.6 | 70.8 | 70.8 |
| R4 | Queen Marys Hospital | 61.1 | 62.5 | 62.9 | 62.1 | 62.0 |
| R5 | The Old Court House – east façade | 52.2 | 53.9 | 53.9 | 53.5 | 53.6 |
| R6 | Summit Lodge – east façade | 53.2 | 54.8 | 55.0 | 54.4 | 54.4 |
| R7 | Hollycot – west façade | 51.9 | 53.6 | 53.6 | 53.1 | 53.3 |

**TABLE 3.1: CALCULATED CONSTRUCTION NOISE LEVELS BY ACTIVITY**

*Notes:*
*[1] – Calculated levels 1m from a façade.*

| Rec. | Address | Calculated Construction Noise Level dB $L_{Aeq,10hr}$ | | | |
|---|---|---|---|---|---|
| | | Excavation | Form Reinforced Concrete Structure, Walls and Ground Floor Slab | Superstructure Construction – Upper Floors | Finishes & Contingency |
| R1 | Gangmoor– east façade | 73.9 | 73.6 | 74.6 | 71.3 |
| R2 | The Cottage – south façade | 74.7 | 74.0 | 74.7 | 71.6 |
| R3 | Bellmoor – north façade | 70.9 | 69.9 | 70.5 | 67.4 |
| R4 | Queen Marys Hospital | 62.2 | 61.2 | 61.7 | 58.6 |
| R5 | The Old Court House – east façade | 53.6 | 53.0 | 53.7 | 50.5 |
| R6 | Summit Lodge – east façade | 54.5 | 53.7 | 54.4 | 51.3 |
| R7 | Hollycot – west façade | 53.3 | 52.6 | 53.4 | 50.2 |

**TABLE 3.1 (CTD): CALCULATED CONSTRUCTION NOISE LEVELS BY ACTIVITY**

*Notes:*
*[1] – Calculated levels 1m from a façade.*

3.2.4 The higher calculated noise levels at R1 to R3 are due to the close proximity of these receptors to the delivery location and Whitestone House where high impact plant such as powered hand tools, electric breakers, poker vibrators, concrete saws and angle grinders are due to operate.

3.2.5 Due to the calculated noise levels, construction contractors will be required to ensure that BPM is strictly adhered to.

3.2.6 It is noted that the highest calculated daily construction noise level is 74.9 dB $L_{Aeq,10hr}$ at The Cottage (R2) during the demolition of the existing building superstructure and the removal of the existing pin foundations and lower ground floor slab. The higher noise levels at this location is due to the use of noisy plant items, such as electric breakers and powered hand tools, in close proximity to the receptor. This activity should therefore be carefully managed in accordance with the measures presented in Section 5.3.

3.2.7 It should be noted that the noise levels presented in Table 3.1 represent an estimated average value for each activity across the footprint of the worksite. Noise levels are likely to vary over time as the main works location progresses.

# 4. VIBRATION RISK MANAGEMENT

## 4.1 Overview

4.1.1 This section presents an assessment of the potential risk regarding vibration generated by the construction works detailed in this document, and the associated adverse effects on buildings and the surrounding area. The surrounding area is predominantly residential and as such the occupants of residential buildings are also likely to be vibration sensitive.

4.1.2 The risk assessment has been based on an appraisal of the plant listed in Table B1 of Appendix B, examining the likelihood of each item generating significant vibration at receptors.

## 4.2 Guideline Vibration Thresholds

4.2.1 Vibration should be evaluated against guidance presented in relevant British Standards in order to assess the likelihood of both structural damage to neighbouring buildings and the human response of the occupants.

Building Damage

4.2.2 According to BS 7385 Part 2 [2] for residential or light commercial buildings, the threshold for the onset of potential cosmetic damage (i.e. formation of hairline cracks on drywall surfaces or the growth of existing cracks in plaster or drywall surfaces) to buildings varies with frequency. This ranges from a PPV (component) of 15 $mms^{-1}$ at 4 Hz, rising to 20 $mms^{-1}$ at 15 Hz, and to 50 $mms^{-1}$ at and above 40 Hz for transient vibration. BS 7385: Part 2 also states that the probability of building damage tends towards zero at 12.5 $mms^{-1}$ peak component particle velocity.

Subjective Response

4.2.3 According to guidance provided in BS 5228 Part 2 [3], the threshold of vibration perceptible to humans lies around 0.14 to 0.3 $mms^{-1}$. The Standard also indicates that PPVs of around 1 $mms^{-1}$ in residential environments, as a first estimate, are likely to cause complaints, but can be tolerable provided prior warning and explanation of the works is given to residents. Vibration magnitudes of around 10 $mms^{-1}$ are likely to be intolerable for more than a very brief exposure to this level.

4.2.4 Single or infrequent occurrences of these levels do not necessarily correspond to the stated effect in every case, values are provided only to give an initial indication of potential effects.

## 4.3 Vibration Control Plan

4.3.1 To control and minimise vibration effects caused by construction activity, the vibration mitigation measures listed in Section 5 of this report will be adopted at all times.

4.3.2 Works will be controlled on a risk-based approach with attended monitoring used to judge the acceptability of the works, and safe working distances going forward.

## 4.4 Estimated Vibration Levels

4.4.1 From a review of the schedule of construction plant supplied by the construction consultancy the main vibration generating plant associated with the proposed construction works are from the rotary bored piling rig.

4.4.2 To estimate the potential groundborne vibration that could arise during the use of the piling rig, measured data, presented in BS 5228-2, obtained at various distances from a rotary bored piling rig have been used to estimate potential PPV vibration magnitudes. A summary of the sensitive receptor estimated vibration levels is presented below in Table 4.1

| Rep. ID | Address | Rotary Bored Piling[1] | |
|---|---|---|---|
| | | Separation Distance (m) | Estimated PPV $mms^{-1}$ |
| R1 | Gangmoor– east façade | 12 | <0.4 and >0.1 |
| R2 | The Cottage – south façade | 12 | <0.4 and >0.1 |
| R3 | Bellmoor – north façade | 20 | <0.1 and >0.02 |
| R4 | Queen Marys Hospital | 55 | <0.02 |
| R5 | The Old Court House – east façade | 135 | <0.02 |
| R6 | Summit Lodge – east façade | 125 | <0.02 |
| R7 | Hollycot – west façade | 140 | <0.02 |

**TABLE 4.1: ESTIMATED CONSTRUCTION VIBRATION AT RECEPTORS**

*Note:* [1] - PPVs estimated using the empirical data presented in BS 5228-2 for a rotary bored piling (measured levels of 0.4 $mms^{-1}$ at a distance of 10m, 0.1 $mms^{-1}$ at a distance of 15m and 0.02 $mms^{-1}$ at a distance of 26m).

4.4.3 Based on the guidance from BS 5228 Part 2 and in accordance with CMRBC, the estimated vibration levels presented in Table 4.1 are below the 1 $mms^{-1}$ tolerable threshold for residential environments and therefore are unlikely to cause complaints at the closest sensitive receptors.

4.4.4 Particular care should also be taken to reduce the use of the breaker along the western party walls of the site due to the close proximity of two adjoined properties.

4.4.5 At the commencement of any potentially disturbing phases of works such as breaking out it is proposed that attended vibration measurements will be obtained to ensure receptor levels remain below appropriate thresholds.

# 5. NOISE AND VIBRATION CONTROL MEASURES

## 5.1 Control Measures

5.1.1 The control measures detailed in this section have been developed in accordance with the proposed plant list, detailed in Table B1 of Appendix B. Plant assumptions and control measures have been derived in liaison with the construction consultancy in the absence of an appointed principal contractor at this stage. Plant assumptions and control measures are to be agreed with the principal contractor and LBC prior to the commencement of works.

5.1.2 Generic and specific control measures have been developed in accordance with LBC's CMRBC.

## 5.2 Site Personnel

5.2.1 All operatives on site will be trained to ensure that noise minimisation is implemented at all times. Operatives will also be trained in line with Best Practicable Means (BPM), as defined in Section 72 of the Control of Pollution Act 1974) [4]. Works will be checked regularly by site management to ensure that BPM are being undertaken and where necessary corrective actions implemented.

5.2.2 Employees must show consideration to the sensitive receptors, including residential neighbours, and must not generate unnecessary noise at any time when travelling to and from the site.

## 5.3 General Noise and Vibration Control Measures

5.3.1 As required by LBC's CMRBC: "*A noise and vibration reduction philosophy shall be adopted to reduce noise and vibration wherever is reasonably possible during demolition and construction works throughout the site and during the duration of these works.*"

5.3.2 BPM will be used to reduce noise and vibration levels at all times. Where practicable the control measures set out in BS 5228:2009 + A1:2014 Part 1 [5], BS 5228:2009 + A1:2014 Part 2 Section 8 and LBC's CMRBC will also be implemented.

5.3.3 Generic noise and vibration control measures, where appropriate, include:

<u>Community Engagement</u>

- details of the site personnel responsible for noise and vibration, the head office, the duration of the project and site working hours, will be displayed on the site boundary;
- letter drops to neighbouring residents before work begins;
- liaison with neighbouring construction sites to co-ordinate works as far as practicable, particularly off-site vehicle movements, to avoid waiting vehicles (outside of the scope detailed within the CTMP);
- site will keep an observations, investigations and complaints log, to be made available to LBC on request; and
- all complaints will be responded to.

Plant Choice and Management

- choice of methodology/technique for operations (including site layout) will be considered in order to eliminate or reduce emissions at sensitive locations;
- fixed items of construction plant will be electrically powered where practicable in preference to diesel or petrol driven;
- noisy plant will be kept as far away as possible from sensitive areas;
- each item of plant used will comply with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/United Kingdom Statutory Instrument (SI) 2001/1701 [6] where reasonably available;
- equipment will be well-maintained and will be used in the mode of operation that minimises noise;
- any noisy operations will be limited to working between 09:00 to 18:00 hrs Monday to Friday and 08:00 and 13:00 hrs on Saturdays; and
- a temporary builder's power supply will be applied for in advance if no existing supply is available onsite.

## 5.4 Site Specific Noise and Vibration Control Measures

5.4.1 Control measures detailed below, and in sub-section 5.5 have been developed following consideration of the site plans and relevant documentation provided by the client:

- where breakers are required, multiple breakers will be employed such that the total period of exposure is reduced;
- The breaking-up of concrete and the removal of floor slabs should be carried out using non-percussive techniques where practicable;
- where percussive breaking techniques are required, concrete slabs will be cut, where possible, to isolate the slab, thus reducing the transmission of vibration;
- where powered tools are required, they are to be screened as far as reasonably practicable to reduce potential impact;
- compressors and generators will be isolated from the floor where reasonably practicable;
- noise attenuation screening to be used if deemed appropriate. Screening is to be free of significant holes or gaps as far as reasonably practicable;
- where spoil is to be transported into tipper lorries, vehicles being loaded are to sit with their engines off to minimise noise emitted;
- spoil will be loaded into lorries in a such a manner as to minimise impact noise;
- where possible softer materials (such as soils) will be loaded into lorries first to form a cushioning barrier to rubble and other hard materials to reduce impact noise;
- static dewatering plant will be located in semi-permanent enclosures;
- robust vehicle management procedures will be required to avoid vehicles arriving in an unscheduled manner, to ensure only one vehicle is at site at any one time. Deliveries to site will be restricted between 09:30 and 16.30 hrs Monday to Friday and between 08:00 and 13:00 on Saturdays; and

- inspections to be carried out during works to ensure the condition of surrounding buildings is not impaired.

## 5.5 Monitoring Regime

5.5.1 Audits on BPM will be undertaken with respect to noise and vibration. BPM audits will be scheduled to coincide with attended noise and vibration site survey visits. Site contact details will be made available to the consultant to provide proactive feedback to site operatives on best practice.

Noise

5.5.2 Attended noise measurements will be made by suitably qualified personnel with a precision integrating sound level meter fitted with a windshield where required. The noise meter will be fully BS EN 61672-1 [7] Class 1 compliant. Measurements will be made by a competent person who is a member of the Institute of Acoustics.

5.5.3 Attended noise measurements will be obtained using the 'F' time weighting and A-weighting frequency network. The sound level meter will be calibrated before and after the survey period using a Class 1 Acoustic Calibrator.

5.5.4 Continuous 5 minute $L_{Amax,F}$, $L_{Aeq,T}$, $L_{A10,T}$, and $L_{A90,T}$ noise levels will be measured at each of the sensitive locations.

5.5.5 As required by LBC's CMRBC "*Noise monitoring shall be undertaken using a combination of semi-permanent (continuous) and attended monitoring methods. The locations of the semi-permanent (continuous) and attended monitoring and the frequency of the sampling will be agreed with London Borough of Camden in writing. Where the measured noise levels are more than 3 dB (A) above the predicted noise levels or in the event of a complaint of noise an investigation shall be carried out to ascertain the cause of the exceedance or the complaint and to check that Best Practicable Means are being used to control the noise in accordance with the steps set out in the application for 'prior consent'. Noise levels shall be reduced further if it is reasonably practicable to do so*."

Vibration

5.5.6 At the commencement of any potentially disturbing phases of works such as demolition it is proposed that attended vibration monitoring will be undertaken to ensure receptor levels remain below appropriate thresholds.

5.5.7 The location of the vibration monitoring will be selected so that the measured vibration levels are representative of those experienced by the most affected premises. It is recommended that at least 1 no. continuous unattended vibration monitor is installed along the party wall with either Gangmoor or The Cottage properties during potentially disturbing phases of works. The monitor will need to be installed prior to the commencement of the demolition works and remain in-situ until after the excavation is completed.

5.5.8 Works will be controlled on a risk-based approach with attended monitoring used to judge the acceptability of the works, and to establish safe working distances for individual items of vibration inducing plant.

5.5.9 As required by LBC's CMRBC "*In the case of vibration, measured vibration levels shall be compared with the criteria in BS 5228: 2009 part 2 (i.e. 1mms$^{-1}$ PPV for potential*

*disturbance in residential and using a suggested trigger criteria of 2mms$^{-1}$ for commercial). Lower limits must be agreed with the Council if there is a risk that vibration levels may interfere with vibration sensitive equipment or other vibration sensitive objects*."

## 6. SUMMARY & CONCLUSIONS

6.1.1 A noise and vibration assessment has been prepared on behalf of Graham Edwards to identify and assess the risk associated with the construction works at Whitestone House, Hampstead.

6.1.2 Construction methodologies have been prepared in consultation with project specific documentation and the client's appointed construction consultancy prior to the appointment of the contractor.

6.1.3 Noise predictions using the methodology presented in Section 3.2 have shown that the calculated noise levels are between 50.2 dB and 74.9 dB $L_{Aeq,10hr}$ at the closest residential receptors throughout the development of Whitestone House. The highest calculated noise levels were 74.9 dB $L_{Aeq,10hr}$ at The Cottage (R2) measured during the demolition of the existing building superstructure and removal of existing pin foundation and lower ground floor slab. BPM will be fully implemented at all times during the development to restrict noise impacts.

6.1.4 Vibration estimations using the methodology presented in Section 4.3 have shown that the estimated vibration levels at the adjoining properties, Gangmoor and The Cottage, range between 0.4 and 0.1 PPV $mms^{-1}$.

6.1.5 Generic control measures have been presented for noise and vibration control in Section 5.3. Attended and unattended monitoring should be undertaken at sensitive receptors and to ensure BPM is being adhered to during sensitive phases of construction.

6.1.6 With the control measures described in this noise and vibration assessment, the potential for significant noise and vibration related adverse effects will be reduced.

## 7. REFERENCES


1. London Borough of Camden. Camden Minimum Requirements for Building Construction. February 2019.

2. British Standards Institution. BS7385: 1993 Evaluation and Measurement for Vibration in Buildings; Part 2 guide to damage levels from groundborne vibration. 1993.

3. British Standards Institution BS 5228: 2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites; Part 2 Vibration. 2014.

4. Her Majesty's Stationary Office. Control of Pollution Act. 1974.

5. British Standards Institution. BS 5228: 2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites; Part 1 Noise. 2014.

6. The European Commission. 2000/14/EC/United Kingdom: The Noise Emission in the Environment by Equipment for use Outdoors Regulations. 2001.

7. British Standards Institution. BS EN 61672-1: 2013 Electroacoustics. Sound level meters. Specifications. 2013.

# APPENDIX A: FIGURES


**FIGURE A1: WHITESTONE HOUSE SITE LOCATION AND SENSITIVE NOISE RECEPTOR PLAN**

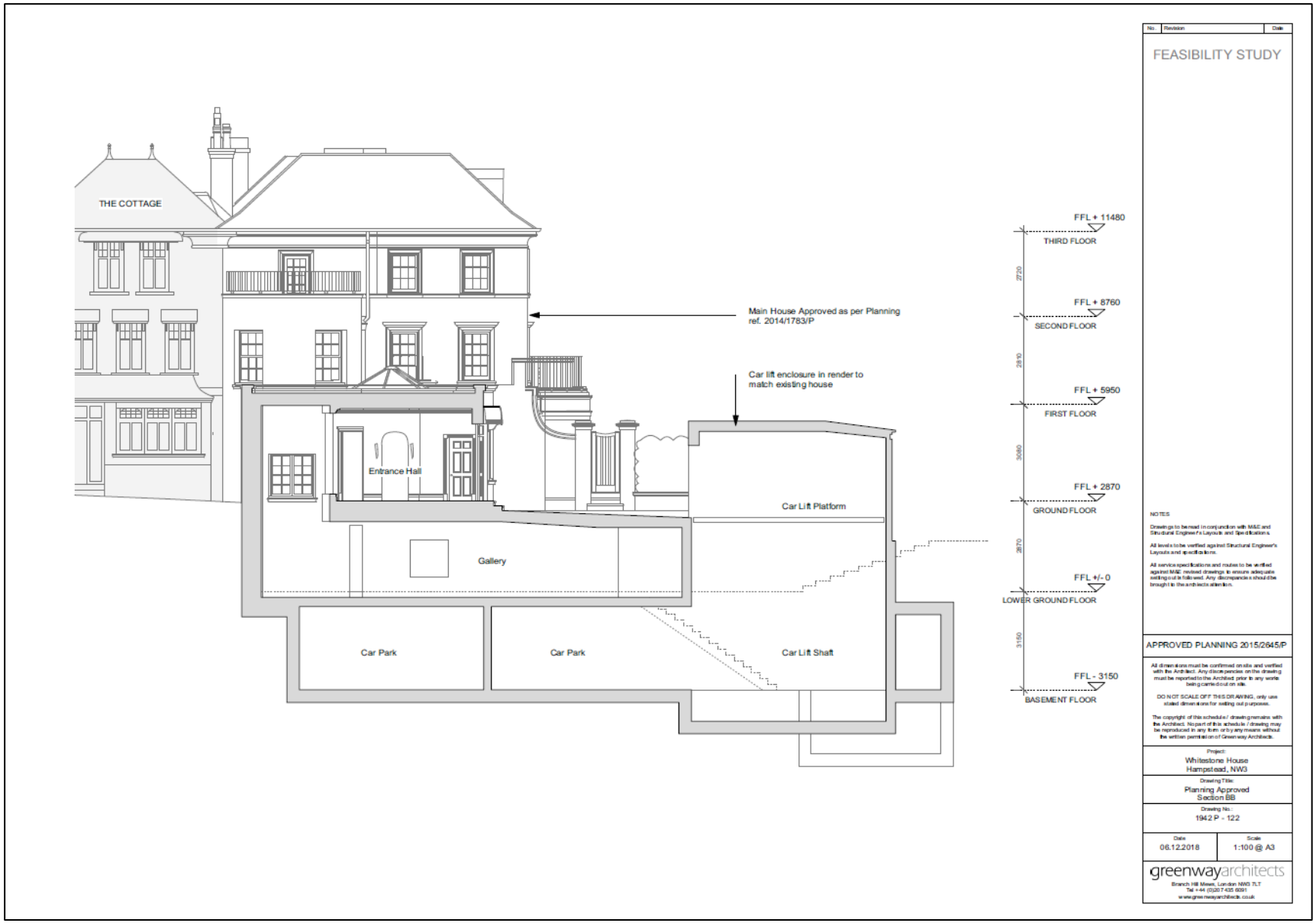



**FIGURE A2: PROPOSED ARCHITECT PLANS FOR WHITESTONE HOUSE, LONDON**

# APPENDIX B: TABLES

| Activity ID | Activity | Plant Name | BS Ref | Lw | % On | No. Plant | Location |
|---|---|---|---|---|---|---|---|
| 1 | Site Setup | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 50 | 4 | Site |
| | | Powered Hand Tools [4] | Measured | 112 | 10 | 3 | Site |
| | | Scaffolding | BS 5228-1:2009+A1:2014+A1:2014 Table D.7:2 | 98 | 50 | 1 | Road |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 6 | Road |
| 2 | Demolition of Existing Building Superstructure - Upper Floors and Roof | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 30 | 5 | Site |
| | | Powered Hand Tools [4] | Measured | 112 | 10 | 3 | Site |
| | | Concrete Saw [4] | BS 5228-1:2009+A1:2014 Table C.4:72 | 107 | 10 | 2 | Site |
| | | Angle Grinder [4] | BS 5228-1:2009+A1:2014 Table C.4:93 | 108 | 20 | 2 | Site |
| | | Electric Breaker [4] | BS 5228-1:2009+A1:2014 Table C.1:6 | 111 | 15 | 2 | Site |
| | | Crane | BS 5228-1:2009+A1:2014 Table C.4:48 | 104 | 15 | 1 | Site |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 5 | Road |
| | | Skip Wagon | BS 5228-1:2009+A1:2014 Table C.8:21 | 106 | 5 | 2 | Road |
| 3 | Removal of Existing Pin Foundations and Lower Ground Floor Slab | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 35 | 5 | Site |
| | | Powered Hand Tools [4] | Measured | 112 | 10 | 3 | Site |
| | | Concrete Saw [4] | BS 5228-1:2009+A1:2014 Table C.4:72 | 107 | 25 | 2 | Site |
| | | Electric Breaker [4] | BS 5228-1:2009+A1:2014 Table C.1:6 | 111 | 20 | 2 | Site |
| | | Skip Wagon | BS 5228-1:2009+A1:2014 Table C.8:21 | 106 | 5 | 4 | Road |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 2 | Road |
| 4 | Piling | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 50 | 5 | Site |
| | | Mini Piling Rig | BS 5228-1:2009+A1:2014 Table C.3:18 | 103 | 40 | 1 | Site |
| | | Excavator | BS 5228-1:2009 Table C.4:68 | 93 | 20 | 1 | Site |
| | | Conveyor | BS 5228-1:2009+A1:2014 Table C.10:23 | 81 | 30 | 1 | Site |
| | | Skip Wagon | BS 5228-1:2009+A1:2014 Table C.8:21 | 106 | 5 | 2 | Road |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 50 | 4 | Road |

**TABLE B1: PLANT ASSUMPTIONS**

*Notes: [1] due to the varying levels of screening at each source/receiver path, screening has been dealt with in a separate calculation;*
*[2] 5 dB attenuation assumed for sources of noise with only partial line of sight over local screening in accordance with the principles of BS 5228-1:2009+A1:2014;*
*[3] 10 dB attenuation assumed for external sources without a line of sight to the receptor; and*
*[4] static noise emitting components, screened to reduce noise propagation path.*

| Activity ID | Activity | Plant Name | BS Ref | Lw | % On | No. Plant | Location |
|---|---|---|---|---|---|---|---|
| 5 | Underpinning | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 40 | 5 | Site |
| | | Concrete Saw [4] | BS 5228-1:2009+A1:2014 Table C.4:72 | 107 | 10 | 1 | Site |
| | | Electric Breaker [4] | BS 5228-1:2009+A1:2014 Table C.1:6 | 111 | 20 | 2 | Site |
| | | Poker Vibrator | BS 5228-1:2009+A1:2014 Table C.4:33 | 106 | 5 | 1 | Site |
| | | Water Pump - Contingency [4] | BS 5228-1:2009+A1:2014 Table C.4:23 | 89 | 20 | 1 | Site |
| | | Crane | BS 5228-1:2009+A1:2014 Table C.4:48 | 104 | 20 | 1 | Site |
| | | Cement Mixer and Pump | BS 5228-1:2009+A1:2014 Table C.4:24 | 95 | 30 | 1 | Road |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 4 | Road |
| | | Skip Wagon | BS 5228-1:2009+A1:2014 Table C.8:21 | 106 | 5 | 1 | Road |
| 6 | Excavation | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 40 | 5 | Site |
| | | Electric Breaker [4] | BS 5228-1:2009+A1:2014 Table C.1:6 | 111 | 25 | 2 | Site |
| | | Water Pump – Contingency [4] | BS 5228-1:2009+A1:2014 Table C.2:45 | 93 | 20 | 1 | Site |
| | | Concrete Saw [4] | BS 5228-1:2009+A1:2014 Table C.4:72 | 107 | 5 | 1 | Site |
| | | Excavator | BS 5228-1:2009 Table C.4:68 | 93 | 20 | 1 | Site |
| | | Conveyor | BS 5228-1:2009+A1:2014 Table C.10:23 | 81 | 30 | 1 | Site |
| | | Crane | BS 5228-1:2009+A1:2014 Table C.4:48 | 104 | 20 | 1 | Site |
| | | Skip Wagon | BS 5228-1:2009+A1:2014 Table C.8:21 | 106 | 5 | 2 | Road |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 4 | Road |
| 7 | Form Reinforced Concrete Structure, Walls and Ground Floor Slab | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 50 | 3 | Site |
| | | Powered Hand Tools [4] | Measured | 112 | 10 | 3 | Site |
| | | Concrete Saw [4] | BS 5228-1:2009+A1:2014 Table C.4:72 | 107 | 5 | 1 | Site |
| | | Poker Vibrator | BS 5228-1:2009+A1:2014 Table C.4:33 | 106 | 5 | 1 | Site |
| | | Angle Grinder [4] | BS 5228-1:2009+A1:2014 Table C.4:93 | 108 | 20 | 1 | Site |
| | | Crane | BS 5228-1:2009+A1:2014 Table C.4:48 | 104 | 20 | 1 | Site |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 4 | Road |
| | | Cement Mixer and Pump | BS 5228-1:2009+A1:2014 Table C.4:24 | 95 | 30 | 1 | Road |

**TABLE B1 (CTD): PLANT ASSUMPTIONS**

*Notes: [1] due to the varying levels of screening at each source/receiver path, screening has been dealt with in a separate calculation;*
*[2] 5 dB attenuation assumed for sources of noise with only partial line of sight over local screening in accordance with the principles of BS 5228-1:2009+A1:2014;*
*[3] 10 dB attenuation assumed for external sources without a line of sight to the receptor; and*
*[4] static noise emitting components, screened to reduce noise propagation path.*

| Activity ID | Activity | Plant Name | BS Ref | Lw | % On | No. Plant | Location |
|---|---|---|---|---|---|---|---|
| 8 | Superstructure Construction – Upper Floors | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 40 | 3 | Site |
| | | Powered Hand Tools [4] | Measured | 112 | 25 | 3 | Site |
| | | Small Cement Mixer | BS 5228-1:2009+A1:2014 Table C.4:23 | 89 | 20 | 1 | Site |
| | | Poker Vibrator | BS 5228-1:2009+A1:2014 Table C.4:33 | 106 | 5 | 1 | Site |
| | | Angle Grinder [4] | BS 5228-1:2009+A1:2014 Table C.4:93 | 108 | 20 | 1 | Site |
| | | Crane | BS 5228-1:2009+A1:2014 Table C.4:48 | 104 | 15 | 1 | Site |
| | | Hoist | BS 5228-1:2009+A1:2014 Table C.4:61 | 96 | 20 | 1 | Site |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 4 | Road |
| 9 | Finishes & Contingency | Hand Tools | BS 5228-1:2009 Table C.1:19 | 97 | 60 | 3 | Site |
| | | Powered Hand Tools [4] | Measured | 112 | 10 | 2 | Site |
| | | Delivery Vehicle Arrive/Depart | BS 5228-1:2009+A1:2014 Table D.7:121 | 98 | 5 | 3 | Road |

**TABLE B1 (CTD): PLANT ASSUMPTIONS**

*Notes: [1] due to the varying levels of screening at each source/receiver path, screening has been dealt with in a separate calculation;*
*[2] 5 dB attenuation assumed for sources of noise with only partial line of sight over local screening in accordance with the principles of BS 5228-1:2009+A1:2014;*
*[3] 10 dB attenuation assumed for external sources without a line of sight to the receptor; and*
*[4] static noise emitting components, screened to reduce noise propagation path.*

# 10.0 AIR QUALITY

The Contractor will, as far as reasonably practical, seek to control and limit emissions to the atmosphere in terms of gaseous and particulate pollutants from vehicles and plant used on site and dust from construction activities.

The contractor will prepare a statement identifying proposed dust control measures before work starts and make it available tor Camden Council on request. Special precautions must be taken if materials containing asbestos are encountered.

Throughout the project, the Contractors will ensure the following:

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site, in accordance with The Guide
- Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary. This may be the environment manager/engineer or the site manager
- Display the head or regional office contact information
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Camden Council.
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken
- Make the complaints log available to the LA when asked
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book.
- Hold regular liaison meetings with other high-risk construction sites within 500m of the Site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised
- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the LA when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary

- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the Site boundary that are at least as high as any stockpiles on site
- Fully enclose site or specific operations where there is a high potential for dust production and the site is actives for an extensive period
- Avoid site runoff of water or mud
- Keep site fencing, barriers and scaffolding clean using wet methods
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site
- Cover, seed or fence stockpiles to prevent wind whipping
- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London NRMM standards
- Ensure all vehicles switch off engines when stationary - no idling vehicles
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable
- Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems
- Ensure an adequate water supply on the Site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate
- Use enclosed chutes and conveyors and covered skips
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods
- Avoid bonfires and burning of waste materials
- Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust)

- Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground
- Avoid explosive blasting, using appropriate manual or mechanical alternatives
- Bag and remove any biological debris or damp down such material before demolition
- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable
- Only remove the cover in small areas during work and not all at once
- Avoid scabbling (roughening of concrete surfaces) if possible
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust
- Use water-assisted dust sweeper(s) on the access and local roads, if required
- Avoid dry sweeping of large areas
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site log book
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system

The Contractor will ensure that dust monitoring will be carried out during potential dust producing activities. An initial Air Quality (Dust) Risk Assessment has been carried out in accordance with the GLA Supplementary Planning Guidance document: The Control of Dust and Emissions During Construction and Demolition and is included overleaf.

Please refer overleaf to the Air Quality (Dust) Risk Assessment

# Whitestone House

### Air Quality (Dust) Risk Assessment.

### Introduction

This assessment follows the principles set out in the GLA Supplementary Planning Guidance document: The Control of Dust and Emissions During Construction and Demolition.

Whitestone House is a domestic dwelling in a residential street. Receptors are the immediate neighbours and public using the quiet private highway. The proposed works at Whitestone House are of domestic scale and as such section 1.9 of the SPG limits the requirement for a full Dust Risk Assessment. We have considered the risks and proposed mitigation as follows:

### Risk Considerations:

| Phase of Work | Scope | Dust Risk Level |
|---|---|---|
| Piling | Small/ medium diameter bored or CFA piling in contiguous wall and for structural support. | Medium |
| Demolition | Stripping out of fixtures and fittings and demolition of the existing building. Breaking out of ground slab and concrete/ masonry foundations. | Medium |
| Earthworks | It is intended to construct a new single level basement below the lower ground floor with a contiguous piled perimeter wall. The new basement will extend under the footprint of the existing building when demolished.<br><br>Material excavated by machines and loaded away directly to tipper trucks or skips. | Medium |
| Construction | New basement structure comprising, reinforced concrete slabs, columns, walls and floors. Masonry, steel and timber new house construction.<br><br>Concrete and mortar supplied as ready mixed. | Low |
| Trackout | Vehicles are loaded and unloaded inside the site boundary for all of the works and wheels are washed before re-joining the highway. | Medium |

**Mitigation Measures (in accordance with Appendix 7 of the SPG)**

### Site management:

- Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.
- Display the head or regional office contact information.
- Record and respond to all dust and air quality pollutant emissions complaints.
- Make a complaints log available to the local authority when asked.
- Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.
- Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.
- Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.

### Preparing and maintaining the site:

- Plan site layout: machinery and dust causing activities should be located away from receptors.
- Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials from site as soon as possible.

### Operating vehicle/machinery and sustainable travel:

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.
- Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.
- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

### Operations:

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).
- Use enclosed chutes, conveyors and covered skips.

- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.

### Waste management:

- Reuse and recycle waste to reduce dust from waste materials.
- Avoid bonfires and burning of waste materials.

### Demolition:

- Soft strip inside buildings before any structural demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).
- Ensure water suppression is used during demolition operations.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.

### Construction

- Avoid scabbling (roughening of concrete surfaces) if possible.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.

### Trackout:

- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport.

# 11.0 MANAGING THE ENVIRONMENTAL IMPACT OF CONSTRUCTION

This section sets out the requirements on the Contractor for managing the environmental impacts of the demolition and construction. The Contractor will prepare site specific Method Statements setting out how the requirements of The Guide will be met.

The Contractor will need to demonstrate the management, monitoring, auditing and training procedures that are in place to ensure compliance with The Guide. The Contractor will also set out the specific roles and responsibilities of personnel in managing, monitoring all sub-contractors.

The specific measures to be implemented by the Contractor will include:

- Once the contract for the building works has been placed the Contractor will produce task specific method statements in accordance with this overall document.
- The Contractor will liaise with Camden Council's Environmental Inspectorate when appropriate, agreeing arrangements for specific site activities and ensuring compliance with The Guide.
- The Contractor will be responsible for establishing and maintaining contact with Camden Council and local residents and keeping them informed of construction matters likely to affect them.
- This liaison will include the regular and frequent distribution of Newsletters and attendance at meetings at the request of Camden Council with representatives of The Construction Working Group.
- The Contractor will advise the local authority within 24 hours of any incidents of non-compliance with The Guide and health and safety issues. The Contractor will respond to any reports referred by Camden Council, Police or other agencies within 24 hours, or as soon as reasonably practicable.

- The Contractor will maintain on site, a system for recording any incidents and any ameliorative action taken for inspection by the Council's representatives. This will be forwarded to the Council on a regular basis. The Contractor will ensure as far as is reasonably practical, that necessary action has been taken and steps to avoid recurrence have been implemented.

- The Contractor will provide an information and reporting telephone 'Hot Line' staffed at all times during working hours. Information on this facility shall be prominently displayed on site hoardings. The Contractor's nominated person will attend monthly reviews with Camden Council's Environmental Inspectorate, or otherwise as requested.

- The Contractor will facilitate Camden Council's Environmental Inspectors to undertake regular planned inspections of the site to check compliance with The Guide and associated records.

# 12.0 AUTHORITIES AND PUBLIC LIAISON

The Contractor will prepare a full programme of activity for the project before it starts. Programmes and methodology will be available for inspection by the Client's representatives and Camden Council's Environmental Inspectors on request.

The Contractor will nominate community relations personnel, who will be focussed on engaging with the local community. The Contractor will ensure that occupiers of nearby properties and local residents will be informed in advance of works taking place, including the estimated duration.

To date contractors (Trenchco Ltd) are appointed for the initial Piling Phase of works only. There nominated Community Liaison Officer is:

Name: Tomas Begley
Address: Trenchco Ltd, 499 Watford Way, Mill Hill, London, NW7 2QP
Email: tom@trenchco.co.uk
Phone: 0208 732 3030

The Contractor will inform local residents likely to be affected by such activities at least 14 days prior to undertaking the works, as well as applying for the appropriate permits and licences, e.g. road closures for delivery, or use of mobile cranes or abnormal deliveries to the site. The Guide states that the most suitable method of informing residents is through leaflet drop.

Whilst the Contractor will provide monthly newsletters, we propose that a Construction Working Group will be set up with representatives of the adjacent properties.

The Contractor's project director together with the nominated person (if different) will agree with these neighbours a schedule of regular review meetings. Sufficient time prior to activities will be allowed for the neighbours' reasonable concerns to be addressed. Where required and reasonable, requested ad-hoc meetings with these neighbours will be attended by the Contractor's project director and the nominated person.

In the case of work required in response to an emergency, Camden Council, and all neighbours will be advised as soon as reasonably practicable that emergency work is taking place. Potentially affected occupiers will also be notified of the 'hotline' number, which will operate during working hours.

APPENDIX

# 1 CONSULTATION LETTERS

BLUE SKY BUILDING
founded on excellence

greenwayarchitects

Dr Lincoln Chin
Gangmoor
Whitestone Lane
NW3 1EA

Re: Whitestone House, Whitestone Lane, NW3 1EA

**Planning application ref: 2015/2645/P**
***Substantial demolition and rebuild of existing four storey dwelling house and excavation of single basement for provision of car parking music room/library/gym and swimming pool. Erection of single storey enclosure to house car lift at Ground floor level. Installation of three dormer window to front roof slope.***

Dear Dr Chin

We're writing to you on behalf of Mr G. Edwards to inform you that we are planning to implement the current planning permission at Whitestone House.

The aim of this leaflet is to describe and explain the works that are proposed to implement the planning permission and to make available to the neighbours the Construction Management Plan. This has been prepared to identify how the construction traffic will be managed and controlled during the proposed works.

The Construction Management Plan has been requested by Camden Council to satisfy the conditions of the agreement set out in the planning approval and it is a Council requirement that consultations with the neighbours should take place prior to submitting the CMP. This provides the neighbours to be given the reassurances and clarifications they may need.

You will have 14 days from the date you receive this letter to make your comments in writing to Licia De Angelis at Greenway Architects at licia@greenwayarchitects.co.uk or calling us at 020 7435 6091.

Sincerely

Licia De Angelis

On behalf of
Greenway Architects

***Planning Approved Proposal***

The permission allows for an extension to the upper floors of the house along with an enlarged lower ground floor and a completely new basement below the existing lower ground floor.

The construction project is planned to commence in summer 2019 subject to satisfactory clearing of pre-planning Conditions and Section 106 Agreement. An overall construction programme of 24 months is envisaged and works will commence with an initial piling phase only.

***Proposed Implementation works, Phase 1***

The works to be carried out at this stage will comprise a portion of the basement wall piling and foundations to the East side of the property, as illustrated in the attached plan.

No other construction works are proposed at this stage.

The proposed basement piled wall works are at a distance that is greater than six meters from the South boundary between Whitestone House and Bell Moor, therefore no Party Wall Awards are required at this stage.
However, in order to safeguard the interest of all parties, a Party Wall surveyor has been appointed to prepare a detailed schedule of conditions of Whitestone Lane roadway and immediately adjacent areas prior enabling works. The schedules will be undertaken shortly and sent to you in due course.

The implementation works will be undertaken by a specialist ground work contractor during approximately three weeks in July/August 2019 after all pre-planning conditions are discharged and Section 106 satisfied.
Three weeks of notice from the date of commencement will be given prior to any works starting on site.
Construction Works for Phase 2 will be confirmed in due course.

The appointed ground work contractor for the above described works is Thenchco Ltd

***Construction Traffic Management for Phase 1***

*Access and Egress*

Vehicles will access site from Heath Street reversing into Whitestone Lane under supervision of a trained banksmen.
Vehicles will exist Whitestone Lane in a forward gear turning right onto Heath Street under supervision of a trained banksmen

*Piling works*

Piling rig will be delivered to site by rigid delivery lorry. The lorry will access site by reversing from Heath Street down to the rear of Whitestone Lane under the supervision of trained banksmen. “Trackway” or similar covering will be used as protection to the lane way. Temporary barriers will be used to surround all delivery vehicles whilst providing a safe walkway for pedestrians to the Heath and side entrance to Bell Moor Apartments.

*Vehicles traffic*

Muck-away will be based on a Wait & Load method as per the sketch attached. As above the tipper truck will be directed to the underside of the conveyor by banksmen and temporary barriers will be used to provide a safe walkway for pedestrians.

Concrete lorries will approach site using the same route as the piling rig delivery. A mobile concrete pump will be placed inside the double gates at the rear. Barriers will be placed around the lorry and at the rear entrance leaving room sufficient space for pedestrian access to the Heath

The type and number of vehicles to service site during the phase 1 will be:

Set up site: 2 days
1 no. rigid deliveries lorries per day with a dwell time up to 60 min
2 no.  flatbed delivery lorries per day with a dwell time up to 30 min

Piling: 12 days
2 no.  Concrete wagons per day with a dwell time up to 30 min
2 no. muck-away wagons per day with a dwell time up to 40 min

Demobilize
1 no. rigid deliveries lorries per day with a dwell time up to 60 min
1 no.  flatbed delivery lorries per day with a dwell time up to 30 min

All times quoted are based upon our best assessment with the information we have to date

More details can be found in the complete Construction Management Plan included with this letter.

The proposed CMP covers the construction works for the entire approved scheme. The CMP is a flexible document and it will be updated throughout the build programme as and when appropriate and neighbours will be given a chance to comment on each iteration of the document.

**Contacts:**

Architect:

Greenway Architects
Branch Hill Mews, London NW3 7LT
Tel 020 7435 6091
*Contact:*
Licia De Angelis, Project Architect
licia @greenwayarchitects.co.uk

# phase 1 portion of piling works

BRICK CONSTRUCTION

HAMPSTEAD HEATH

red line = Whitestone house boundary

blue dotted line = planning approved basement wall

blue hatch = portion of planning approved basement wall to be build to implement the planning permission

10.Ash C

T8.Chestnut U

T7.Willow C

tree protection area

13635

GANGMOOR

WHITESTONE HOUSE

T9.Magnolia C

T6.Sycamore B

4000

THE COTTAGE

T2.Birch C

T3.Poplar C

T5.Chestnut U

6000

T4.Chestnut U

T1.Cherry U

red line = Whitestone house boundary

WHITESTONE LANE

magenta dotted line = 6 m distance from the boudary

Bell Moor basement outline

BELL MOOR

| No. | Revision | Date |
|---|---|---|

NOTES

Drawings to be read in conjunction with M&E and Structural Engineer's Layouts and Specifications.

All levels to be verified against Structural Engineer's Layouts and specifications.

All service specifications and routes to be verified against M&E revised drawings to ensure adequate setting out is followed. Any discrepancies should be brought to the archiects attention.

APPROVED PLANNING 2015/2645/P

All dimensions must be confirmed on site and verified with the Architect. Any discrepencies on the drawing must be reported to the Architect prior to any works being carried out on site.

DO NOT SCALE OFF THIS DRAWING, only use stated dimensions for setting out purposes.

The copyright of this schedule / drawing remains with the Architect. No part of this schedule / drawing may be reproduced in any form or by any means without the written permission of Greenway Architects.

Project:
Whitestone House
Hampstead, NW3

Drawing Title:
Proposed enabling works:
Planning approved Basement footprint overlaid to Existing GF

Drawing No.:
1942 - 01

| Date | Scale |
|---|---|
| 07.05.2019 | 1:200 @ A3 |

greenwayarchitects
Branch Hill Mews, London NW3 7LT
Tel +44 (0)20 7435 6091
www.greenwayarchitects.co.uk


| No. | Revision | Date |
|---|---|---|

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Project:
Whitestone House
Hampstead, NW3

Drawing Title:
Proposed enabling works:
Front Elevation: Section X-X

Drawing No.:
1942 - 02

| Date | Scale |
|---|---|
| 07.05.2019 | 1:100 @ A3 |

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Branch Hill Mews, London NW3 7LT
Tel +44 (0)20 7435 6091
www.greenwayarchitects.co.uk

greenwayarchitects

Mrs Ellie and Mr Miles Allen
The Cottage
Whitestone Lane
NW3 1EA

Re: Whitestone House, Whitestone Lane, NW3 1EA

**Planning application ref: 2015/2645/P**
***Substantial demolition and rebuild of existing four storey dwelling house and excavation of single basement for provision of car parking music room/library/gym and swimming pool. Erection of single storey enclosure to house car lift at Ground floor level. Installation of three dormer window to front roof slope.***

Dear Sirs

We're writing to you on behalf of Mr G. Edwards to inform you that we are planning to implement the current planning permission at Whitestone House.

The aim of this leaflet is to describe and explain the works that are proposed to implement the planning permission and to make available to the neighbours the Construction Management Plan. This has been prepared to identify how the construction traffic will be managed and controlled during the proposed works.

The Construction Management Plan has been requested by Camden Council to satisfy the conditions of the agreement set out in the planning approval and it is a Council requirement that consultations with the neighbours should take place prior to submitting the CMP. This provides the neighbours to be given the reassurances and clarifications they may need.

You will have 14 days from the date you receive this letter to make your comments in writing to Licia De Angelis at Greenway Architects at licia@greenwayarchitects.co.uk or calling us at 020 7435 6091.

Sincerely

Licia De Angelis

On behalf of
Greenway Architects

***Planning Approved Proposal***

The permission allows for an extension to the upper floors of the house along with an enlarged lower ground floor and a completely new basement below the existing lower ground floor.

The construction project is planned to commence in summer 2019 subject to satisfactory clearing of pre-planning Conditions and Section 106 Agreement. An overall construction programme of 24 months is envisaged and works will commence with an initial piling phase only.

***Proposed Implementation works, Phase 1***

The works to be carried out at this stage will comprise a portion of the basement wall piling and foundations to the East side of the property, as illustrated in the attached plan.

No other construction works are proposed at this stage.

The proposed basement piled wall works are at a distance that is greater than six meters from the South boundary between Whitestone House and Bell Moor, therefore no Party Wall Awards are required at this stage.
However, in order to safeguard the interest of all parties, a Party Wall surveyor has been appointed to prepare a detailed schedule of conditions of Whitestone Lane roadway and immediately adjacent areas prior enabling works. The schedules will be undertaken shortly and sent to you in due course.

The implementation works will be undertaken by a specialist ground work contractor during approximately three weeks in July/August 2019 after all pre-planning conditions are discharged and Section 106 satisfied.
Three weeks of notice from the date of commencement will be given prior to any works starting on site.
Construction Works for Phase 2 will be confirmed in due course.

The appointed ground work contractor for the above described works is Thenchco Ltd

***Construction Traffic Management for Phase 1***

*Access and Egress*

Vehicles will access site from Heath Street reversing into Whitestone Lane under supervision of a trained banksmen.
Vehicles will exist Whitestone Lane in a forward gear turning right onto Heath Street under supervision of a trained banksmen

*Piling works*

Piling rig will be delivered to site by rigid delivery lorry. The lorry will access site by reversing from Heath Street down to the rear of Whitestone Lane under the supervision of trained banksmen. “Trackway” or similar covering will be used as protection to the lane way. Temporary barriers will be used to surround all delivery vehicles whilst providing a safe walkway for pedestrians to the Heath and side entrance to Bell Moor Apartments.

*Vehicles traffic*

Muck-away will be based on a Wait & Load method as per the sketch attached. As above the tipper truck will be directed to the underside of the conveyor by banksmen and temporary barriers will be used to provide a safe walkway for pedestrians.

Concrete lorries will approach site using the same route as the piling rig delivery. A mobile concrete pump will be placed inside the double gates at the rear. Barriers will be placed around the lorry and at the rear entrance leaving room sufficient space for pedestrian access to the Heath

The type and number of vehicles to service site during the phase 1 will be:

Set up site: 2 days
1 no. rigid deliveries lorries per day with a dwell time up to 60 min
2 no.  flatbed delivery lorries per day with a dwell time up to 30 min

Piling: 12 days
2 no.  Concrete wagons per day with a dwell time up to 30 min
2 no. muck-away wagons per day with a dwell time up to 40 min

Demobilize
1 no. rigid deliveries lorries per day with a dwell time up to 60 min
1 no.  flatbed delivery lorries per day with a dwell time up to 30 min

All times quoted are based upon our best assessment with the information we have to date

More details can be found in the complete Construction Management Plan included with this letter.

The proposed CMP covers the construction works for the entire approved scheme. The CMP is a flexible document and it will be updated throughout the build programme as and when appropriate and neighbours will be given a chance to comment on each iteration of the document.

**Contacts:**

Architect:

Greenway Architects
Branch Hill Mews, London NW3 7LT
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*Contact:*
Licia De Angelis, Project Architect
licia @greenwayarchitects.co.uk

# phase 1 portion of piling works

BRICK CONSTRUCTION

HAMPSTEAD HEATH

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T7.Willow C

tree protection area

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GANGMOOR

WHITESTONE HOUSE

T9.Magnolia C

T6.Sycamore B

4000

THE COTTAGE

T2.Birch C

T3.Poplar C

T5.Chestnut U

6000

T4.Chestnut U

T1.Cherry U

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WHITESTONE LANE

magenta dotted line = 6 m distance from the boudary

Bell Moor basement outline

BELL MOOR

| No. | Revision | Date |
|---|---|---|

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All service specifications and routes to be verified against M&E revised drawings to ensure adequate setting out is followed. Any discrepancies should be brought to the archiects attention.

APPROVED PLANNING 2015/2645/P

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Project:
Whitestone House
Hampstead, NW3

Drawing Title:
Proposed enabling works:
Planning approved Basement footprint overlaid to Existing GF

Drawing No.:
1942 - 01

| Date | Scale |
|---|---|
| 07.05.2019 | 1:200 @ A3 |

greenwayarchitects
Branch Hill Mews, London NW3 7LT
Tel +44 (0)20 7435 6091
www.greenwayarchitects.co.uk


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NOTES

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Front Elevation: Section X-X

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Mr Laurence Permutt
Bell Moor Management Limited
5 Bell Moor
East Heath Road London
NW3 1DY

Re: Whitestone House, Whitestone Lane, NW3 1EA

**Planning application ref: 2015/2645/P**
***Substantial demolition and rebuild of existing four storey dwelling house and excavation of single basement for provision of car parking music room/library/gym and swimming pool. Erection of single storey enclosure to house car lift at Ground floor level. Installation of three dormer window to front roof slope.***

Dear Mr Permutt

We're writing to you on behalf of Mr G. Edwards to inform you that we are planning to implement the current planning permission at Whitestone House.

The aim of this leaflet is to describe and explain the works that are proposed to implement the planning permission and to make available to the neighbours the Construction Management Plan. This has been prepared to identify how the construction traffic will be managed and controlled during the proposed works.

The Construction Management Plan has been requested by Camden Council to satisfy the conditions of the agreement set out in the planning approval and it is a Council requirement that consultations with the neighbours should take place prior to submitting the CMP. This provides the neighbours to be given the reassurances and clarifications they may need.

You will have 14 days from the date you receive this letter to make your comments in writing to Licia De Angelis at Greenway Architects at licia@greenwayarchitects.co.uk or calling us at 020 7435 6091.

Sincerely

Licia De Angelis

On behalf of
Greenway Architects

***Planning Approved Proposal***

The permission allows for an extension to the upper floors of the house along with an enlarged lower ground floor and a completely new basement below the existing lower ground floor.

The construction project is planned to commence in summer 2019 subject to satisfactory clearing of pre-planning Conditions and Section 106 Agreement. An overall construction programme of 24 months is envisaged and works will commence with an initial piling phase only.

***Proposed Implementation works, Phase 1***

The works to be carried out at this stage will comprise a portion of the basement wall piling and foundations to the East side of the property, as illustrated in the attached plan.

No other construction works are proposed at this stage.

The proposed basement piled wall works are at a distance that is greater than six meters from the South boundary between Whitestone House and Bell Moor, therefore no Party Wall Awards are required at this stage.
However, in order to safeguard the interest of all parties, a Party Wall surveyor has been appointed to prepare a detailed schedule of conditions of Whitestone Lane roadway and immediately adjacent areas prior enabling works. The schedule will be undertaken shortly and sent to you in due course.

The implementation works will be undertaken by a specialist ground work contractor during approximately three weeks in July/August 2019 after all pre-planning conditions are discharged and Section 106 satisfied.
Three weeks of notice from the date of commencement will be given prior to any works starting on site.
Construction Works for Phase 2 will be confirmed in due course.

The appointed ground work contractor for the above described works is Thenchco Ltd

***Construction Traffic Management for Phase 1***

*Access and Egress*

Vehicles will access site from Heath Street reversing into Whitestone Lane under supervision of a trained banksmen.
Vehicles will exist Whitestone Lane in a forward gear turning right onto Heath Street under supervision of a trained banksmen

*Piling works*

Piling rig will be delivered to site by rigid delivery lorry. The lorry will access site by reversing from Heath Street down to the rear of Whitestone Lane under the supervision of trained banksmen. “Trackway” or similar covering will be used as protection to the lane way. Temporary barriers will be used to surround all delivery vehicles whilst providing a safe walkway for pedestrians to the Heath and side entrance to Bell Moor Apartments.

*Vehicles traffic*

Muck-away will be based on a Wait & Load method as per the sketch attached. As above the tipper truck will be directed to the underside of the conveyor by banksmen and temporary barriers will be used to provide a safe walkway for pedestrians.

Concrete lorries will approach site using the same route as the piling rig delivery. A mobile concrete pump will be placed inside the double gates at the rear. Barriers will be placed around the lorry and at the rear entrance leaving room sufficient space for pedestrian access to the Heath

The type and number of vehicles to service site during the phase 1 will be:

Set up site: 2 days
1 no. rigid deliveries lorries per day with a dwell time up to 60 min
2 no.  flatbed delivery lorries per day with a dwell time up to 30 min

Piling: 12 days
2 no.  Concrete wagons per day with a dwell time up to 30 min
2 no. muck-away wagons per day with a dwell time up to 40 min

Demobilize
1 no. rigid deliveries lorries per day with a dwell time up to 60 min
1 no.  flatbed delivery lorries per day with a dwell time up to 30 min

All times quoted are based upon our best assessment with the information we have to date

More details can be found in the complete Construction Management Plan included with this letter.

The proposed CMP covers the construction works for the entire approved scheme. The CMP is a flexible document and it will be updated throughout the build programme as and when appropriate and neighbours will be given a chance to comment on each iteration of the document.

**Contacts:**

Architect:

Greenway Architects
Branch Hill Mews, London NW3 7LT
Tel 020 7435 6091
*Contact:*
Licia De Angelis, Project Architect
licia @greenwayarchitects.co.uk

# phase 1 portion of piling works

BRICK CONSTRUCTION

HAMPSTEAD HEATH

red line = Whitestone house boundary

blue dotted line = planning approved basement wall

blue hatch = portion of planning approved basement wall to be build to implement the planning permission

10.Ash C

T8.Chestnut U

T7.Willow C

tree protection area

13635

GANGMOOR

WHITESTONE HOUSE

T9.Magnolia C

T6.Sycamore B

4000

THE COTTAGE

T2.Birch C

T3.Poplar C

T5.Chestnut U

6000

T4.Chestnut U

T1.Cherry U

red line = Whitestone house boundary

WHITESTONE LANE

magenta dotted line = 6 m distance from the boudary

Bell Moor basement outline

BELL MOOR

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## INTRODUCING BLUE SKY BUILDING
## FOUNDED ON EXCELLENCE

In 2012, Julian Daniel, our Founder and Managing Director spotted the opportunity to create a company of his own, Blue Sky Building, which would embody the enthusiasm and passion he feels for the industry.

Blue Sky Building is an innovative construction management company which delivers unique solutions. Our founding directors boast a combined experience of over eight decades, uniting their background in the delivery of bespoke construction with the expertise and skills needed to manage complex engineering and construction projects, particularly in the midst of the kind of city centre environment prevalent in London and the South East.

We act as a trusted collaborator, setting the kind of standards other constructors aspire to, by offering our clients quality, professionalism and innovation. We've built our reputation upon offering a bespoke service each time, tailored to meet the individual needs of each client.

We know our industry and understand how the construction process works. We study our clients' business and we understand the wider business climate, bringing all three together in a pursuit of excellence which is as relentless as it is refreshing.

At Blue Sky Building, no resource is more valuable than the people charged with delivering our vision. The principles we work around are excellence, quality and safety and the values underpinning our work are intelligence, honesty, integrity and trust.

Our Promise:

- A focus on the client;
- Clarity of leadership and direction;
- Accessible and practical advice;
- Input and ownership up to Director level;
- Appropriate and timely communication;
- Simple solutions to complex issues;
- Advice which is independent and maintains the integrity of the clients' procurement process;
- In depth knowledge of the market and links to key trade contractors; and
- Value added throughout - from design, through procurement and on to construction.

### OUR SERVICES

CONSTRUCTION DELIVERY
PRECONSTRUCTION
PROJECT MANAGEMENT
CONSULTANCY

### OUR VALUES

INTELLIGENCE
HONESTY
INTEGRITY
TRUST