CONSERO
LONDON

Consero London

Construction Management Plan

Proposed Development at Heath House, Hampstead, London, NW3 7ET

Consero London
Belgrave House
39-43 Monument Hill
Weybridge
Surrey
KT13 8RN

Telephone: 01932 506600

Email: info@conserolondon.com

sean.strowger@conserolondon.com

freddie.webber@conserolondon.com

Distribution

This document as to be distributed to the following organisations

Name	Organisation
Justin Sullivan	Adair Associates
Martin Buck	London Borough of Camden (Highways)
Charles Rose	London Borough of Camden (Conservation)

Contents

1.0 Introduction

This report seeks to address the requirements of London Borough of Camden (LBC) Construction Traffic Management Plan pro-forma document and has been produced to support the Town & Country Planning submission for the re-development of Heath House, Hampstead, NW3 7ET.

This plan should form the basis of the construction traffic management plan for the duration of the works and should be regularly updated and agreed with the LBC.

The report outlines and describes the high level and detailed strategy for the project timing and logistical requirements associated with the implementation of the construction phase of the re-development.

2.0 Project Description

Heath House is an Eighteenth Century listed residential property of four stories including lower ground floor.
It occupies a plot at the junction of Spaniards Road and North End Way, Hampstead Heath. North End Way connects with the north circular road for access to the wider road networks and southwards towards Central London. (see Appendix A) site location plan.

The proposed development is to fully reconfigure the internal arrangement whilst retaining listed features including the main staircase, entrance hall and internal masonry walls).

In addition a new west wing is proposed comprising of basement, lower ground, ground floor and rooms within the roof space above. The rear of the proposed wing gives access to lower ground floor parking.

The basement area is to be constructed below part of the footprint of the existing dwelling and below new west wing. The existing lower ground floor will be extended below the proposed west wing and under the front courtyard to provide below ground parking.

3.0 Outline Scope of the Works

The scope of the works is anticipated to include the following (this is not intended to be exhaustive but to be a guide for developing the plan).

- Site establishment
- Internal soft strip of dwelling of all non-structural elements including all floors including all stabilisation requirements to facades
- Underpinning to sections of the existing external walls
- Underpinning to existing internal walls
- Piling mat formed from imported material
- Contiguous piled wall to new basement
- Capping beam construction
- Excavation of basement area to level of underpinning. Second phase underpinning to all walls excavate to basement slab level
- Underslab drainage and new outfalls to sewer, insulation and anti-heave material, if required, drainage and lift pits.
- Basement slab and walls including reinforcement to west wing
- Construction of permanent perimeter walls and basement slab
- Cast in-situ floors to lower ground floor
- Internal steel column and beam frame within the existing house to support floors and give lateral restraint to facades
- Install in-situ concrete floors ground, first and second
- Construction of new extension, roofing over and tying into existing dwelling
- New roof to existing dwelling
- New roof to existing dwelling
- Fit-out to new basement areas including partitions, staircases, tiling and floor finishes, plant room installations, M&E installations and final decorations
- New partitions and diving walls through existing house and extension
- Full fit-out of existing dwelling and new extension
- Internal decoration to all areas

4.0 Construction Sequence

This general list is intended to give an overview of the main construction items and their approximate durations. From this information and in conjunction with the project programme, an assessment of local and wider area logistics can be established.

- Form temporary widening to front entrance onto North End Way including signage – 2 weeks
- Install parking area and welfare facilities to rear of existing property (see Appendix B) – 2 weeks
- Site clearance – 1 week
- Enabling works – 2 weeks
- Remove existing timber floors – 2 weeks
- Install façade support system – 4 weeks
- Underpinning phase 1 – 6 weeks
- Excavation phase 2 – 6 weeks
- Pile proposed basement and lower ground perimeter – 3 weeks
- Excavate new basement and lower ground floors – 2 weeks
- Basement drainage – 1 week
- Basement slab including reinforcement – 2 weeks
- Basement wall – 3 weeks
- Lower ground floor slab – 3 weeks
- Steel frame to support upper floors and restrain facades – 4 weeks
- Ground floor slab – 2 weeks
- Extension structure including roof – 12 weeks
- Upper floors to existing dwelling – 4 weeks
- New roof to existing dwelling – 4 weeks
- First fix
- Window replacement
- Second fix
- Decoration
- Landscaping

5.0 Construction Programme

5.1 Introduction

In this section we set our understanding of the scope of works for the major elements that will impact both on the scale of the logistics to be considered and their effect on the construction programme.

Enclosed in this section is our basic construction programme showing the major items of work. We currently anticipate an overall build period of twenty seven months.

5.2 Programme Assumptions

The following items have been highlighted due to their potential effect on logistics and the local community.

Contiguous Piling

The contiguous piling wall measures approximately 75 linear metres and it is proposed each pile will be 450mm diameter and 15 metres deep. This equates to approximately 150 piles and we would anticipate a production rate using a CFA rig of 15 per day.

The concrete requirement to feed this production date of piling is 8 wagons per day, for 10 days.

5.3 Excavation and Shell of New Basement Section

The excavated material is estimated to be approximately 1900m3 which will require 95 wagons to remove and we anticipate 6-8 wagons a day taking approximately 3 weeks to remove the material from site.

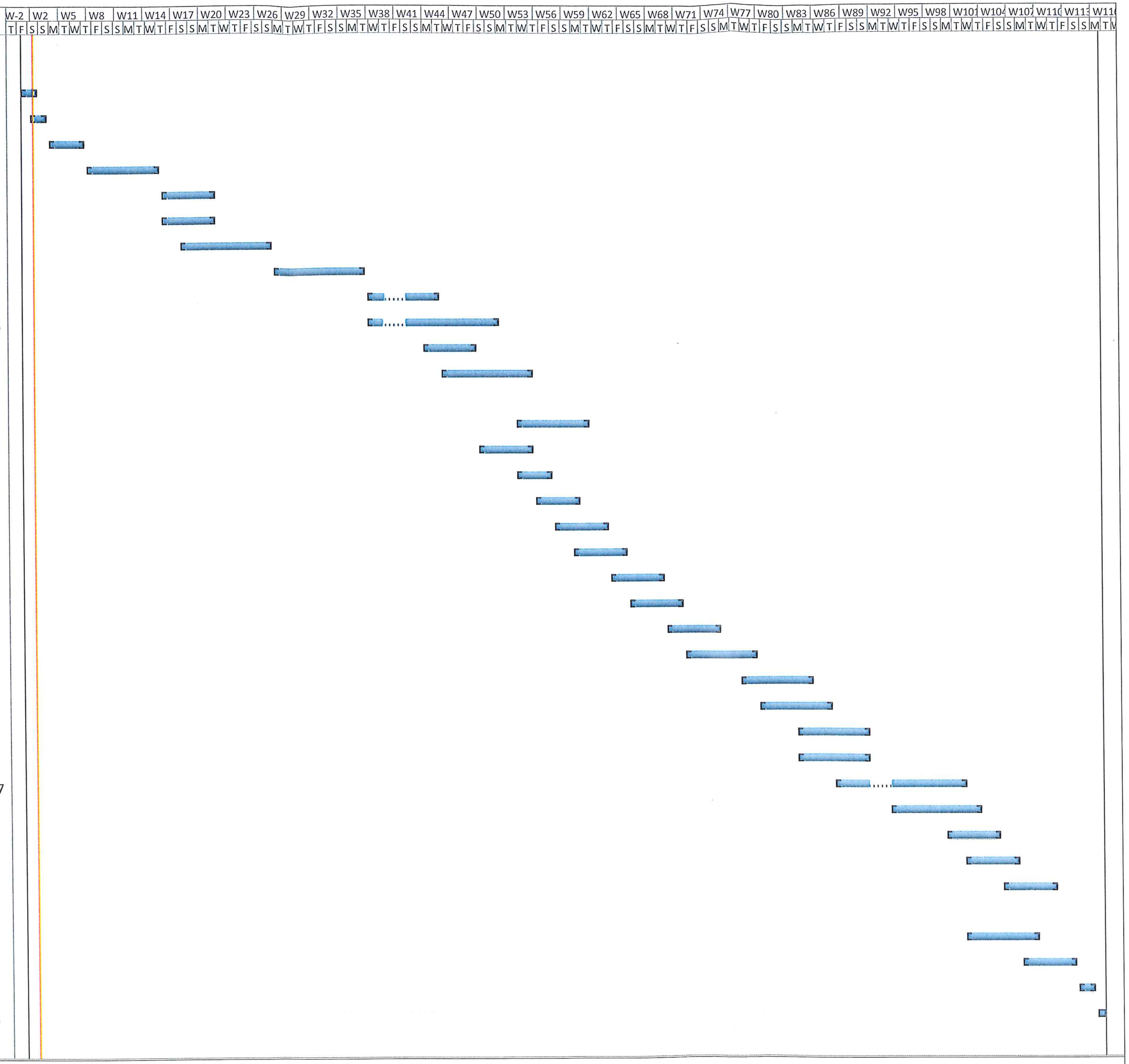
The volume of concrete for new floor and walls is estimated to be 140m3 which will require 19 wagons at a rate of 5 per day. Work to be carried out in two sections approximate total duration 3 weeks.

5.4 Underpinning Existing Dwelling

The estimated excavated material from underpinning is 220m3. The underpinning would be sequenced in a numbered order and concreted in a phased system.

The 220m3 of excavated material would require approximately 12 wagons at a rate of one per day every other day and two concrete wagons per day every other day. This sequence of work would take around 5-6 weeks with an average of 1 to 2 vehicles per day.

ID	Task Mode	Task Name	Duration	Start	Finish
1		HEATH HOUSE PROGRAMME			
2		SITE SET UP	10 days	Mon 02/11/15	Fri 13/11/15
3		ENABLING WORKS	10 days	Mon 09/11/15	Fri 20/11/15
4		SOFT STRIP	20 days	Mon 23/11/15	Sat 19/12/15
5		STRUCTUAL SUPPORT	40 days	Mon 21/12/15	Sat 13/02/16
6		DEMOLITION	30 days	Mon 15/02/16	Fri 25/03/16
7		FASCADE RETENTION	30 days	Mon 15/02/16	Fri 25/03/16
8		EXCAVATION	50 days	Mon 29/02/16	Sat 07/05/16
9		BASEMENT STRUCTURE	50 days	Mon 09/05/16	Sat 16/07/16
10		STRUCTURAL FLOORS	30 days	Mon 18/07/16	Fri 09/09/16
11		EXTENSION EXT WALLS	60 days	Mon 18/07/16	Mon 24/10/16
12		INTERNAL WALLS	30 days	Mon 29/08/16	Fri 07/10/16
13		NEW ROOF STRUCTURES	50 days	Mon 12/09/16	Fri 18/11/16
14		ROOF COVERING	40 days	Mon 07/11/16	Sat 31/12/16
15		MASONARY REPAIRS	30 days	Mon 10/10/16	Fri 18/11/16
16		WINDOW FITTING	20 days	Mon 07/11/16	Fri 02/12/16
17		CARPENTRY 1ST FIX	25 days	Mon 21/11/16	Fri 23/12/16
18		MECHANICAL 1ST FIX	30 days	Mon 05/12/16	Fri 13/01/17
19		ELECTRICAL 1ST FIX	30 days	Mon 19/12/16	Fri 27/01/17
20		MF CEILINGS	30 days	Mon 16/01/17	Fri 24/02/17
21		BOARD CEILINGS	30 days	Mon 30/01/17	Fri 10/03/17
22		PLASTER	30 days	Mon 27/02/17	Fri 07/04/17
23		FLOOR TILING	40 days	Mon 13/03/17	Fri 05/05/17
24		CARPENTRY 2ND FIX	40 days	Mon 24/04/17	Fri 16/06/17
25		WALL TILING	40 days	Mon 08/05/17	Fri 30/06/17
26		MECHANICAL 2ND FIX	40 days	Mon 05/06/17	Fri 28/07/17
27		ELECTRICAL 2ND FIX	40 days	Mon 05/06/17	Fri 28/07/17
28		DECORATING	60 days	Mon 03/07/17	Mon 09/10/17
29		FITTED FURNITURE	50 days	Mon 14/08/17	Fri 20/10/17
30		CLEAN / MASTIC	30 days	Mon 25/09/17	Fri 03/11/17
31		SNAGGING	30 days	Mon 09/10/17	Fri 17/11/17
32		TEST AND COMMISSION	30 days	Mon 06/11/17	Fri 15/12/17
33		EXTERNAL PAVING	40 days	Mon 09/10/17	Sat 02/12/17
34		PLANTING	30 days	Mon 20/11/17	Sat 30/12/17
35		DRIVE FINISHES	10 days	Mon 01/01/18	Sat 13/01/18
36		WHITE LINING PARKING	5 days	Mon 15/01/18	Sun 21/01/18



Project: Project1HEATH HOUSE PR
Date: Wed 11/11/15

Task	Summary	External Milestone	Inactive Summary	Manual Summary Rollup	Finish-only
Split	Project Summary	Inactive Task	Manual Task	Manual Summary	Deadline
Milestone	External Tasks	Inactive Milestone	Duration-only	Start-only	Progress

5.5 Excavate below Existing Dwelling

The estimated excavated material to form new basement is 400m3l which will require 20 wagons at a rate of 2 per day for 10 days. The concrete requirement for floors would be 30m3. Therefore 4 wagons over two days.

6.0 Construction Traffic and Site Logistics

6.1 All site related traffic will enter the site from the North End Way/Spaniards Road roundabout. Large vehicles will use the roundabout entrance, whilst smaller vehicles will be able to use an existing access of North End Way, which will be widened to 6m to accommodate such vehicles. *Construction Layout Plans, showing site access arrangements parking and loading arrangements and swept paths,* are enclosed at **Appendix B.**

6.2 A list of vehicles required for the demolition/construction process is provided below. It should be noted that this list is by no means exhaustive, and further specialist vehicles may be required. *A schedule of when vehicles need access to the site is provided in section 5.0 construction programme.*

Table 1 – List of site vehicles and dimensions

Vehicle	Width	Length
Private Car	1.8m	4.8m
Concrete Mixer	2.4m	8.4m
Dumper Truck	3.9m	7.2m
Excavator	2.4m	6.1m
Large Tipper	2.5m	10.2m
Small Mobile Crane	2.5m	7.1m
Small Skip Lorry	2.5m	6.3m
LGV Panel Van	2.2m	7.2m
Small Tipper	2.5m	6.6m

6.3 As stated elsewhere, parts of the driveway/access to the site will be formed first before any other construction can take place. Where practicable, the existing drives will be used for construction traffic.

6.4 Throughout the project, temporary red and white or similar approved warning signs will be erected on North End Way/Spaniards Road warning drivers, pedestrians and cyclists of the access. As the road is mainly used for local traffic the road users will soon become aware of construction site and the associated traffic. Indeed, due to the general congestion in the area, traffic speeds are low. There will be no requirement for any parking bay suspensions or temporary traffic management orders.

6.5 On completion of the driveway and turning area, all construction traffic will be able to enter and leave the site in forward gear. A small car par area will be located within the site to accommodate all traffic related to the construction of the property. Swept paths of the largest vehicles attracted to the site are shown on the Construction management Plans in Appendix B and C.

6.6 Any delivery driver will be made aware that they are to enter the site and not make their delivery from North End Way/Spaniards Road.

6.7 In order to avoid debris getting onto the public highway wheel-washing facilities would be installed and if necessary, roads in the vicinity of the access should be swept regularly. Where practicable the turning areas and the driveways will be metalled.

6.8 In the event of heavy construction traffic and vehicles leaving the site from the North End Way access, a Banksman will be used to direct traffic including any cyclists and pedestrians. In normal circumstances, pedestrian and cyclist safety will be maintained using the aforementioned warning signs, with no alternative routes being required. It is not though that the site construction traffic will have a great impact on local pedestrians and cyclists.

6.9 Where practicable all traffic related to the construction works will be directed along A-Roads such as the A502 (North End Way), A41 (Hendon Way), towards the A406 (North Circular) and the A1.

6.10 Peak deliveries per day

- Foundations – 10 loads per day (20 vehicle movements)
- Concrete – 8 loads per day (16 vehicle movements)
- Excavation – 8 loads per day (16 vehicle movements)
- Fit-out and construction 5 loads per day (12 vehicle movements)

6.11 Storage

The main contractor will establish a storage facility to ensure a level of control on the site.

We anticipate this to be in the rear garden area and have identified a possible location and size on our site plan sketch shown in appendix B.

6.12 General Deliveries

On a site of this nature limited front facilities and restricted storage operations there will need to be adopted a "just in time" delivery strategy to prevent the site being clogged with materials and impeding the flow of the work.

Therefore regular deliveries consisting of a range of vehicle sizes will be delivering to the site.

The Main Contractor will mobilise the workforce to ensure a speedy off-loading of materials to prevent any "backing up" of vehicles.

7.0 Plant and Equipment

Consideration has been given to the type of plant that is likely to be used during the construction works.

The anticipated vehicle type and use, as well as the anticipated plant and equipment associated with the construction process are set out in the following table.

8.0 Potential Impacts during Construction and Mitigation Measures

A review has been undertaken of the potential source of adverse impacts, which can be associated with carrying out demolition and construction works. The results of this are presented in the following table.

8.1 Mitigation Measures

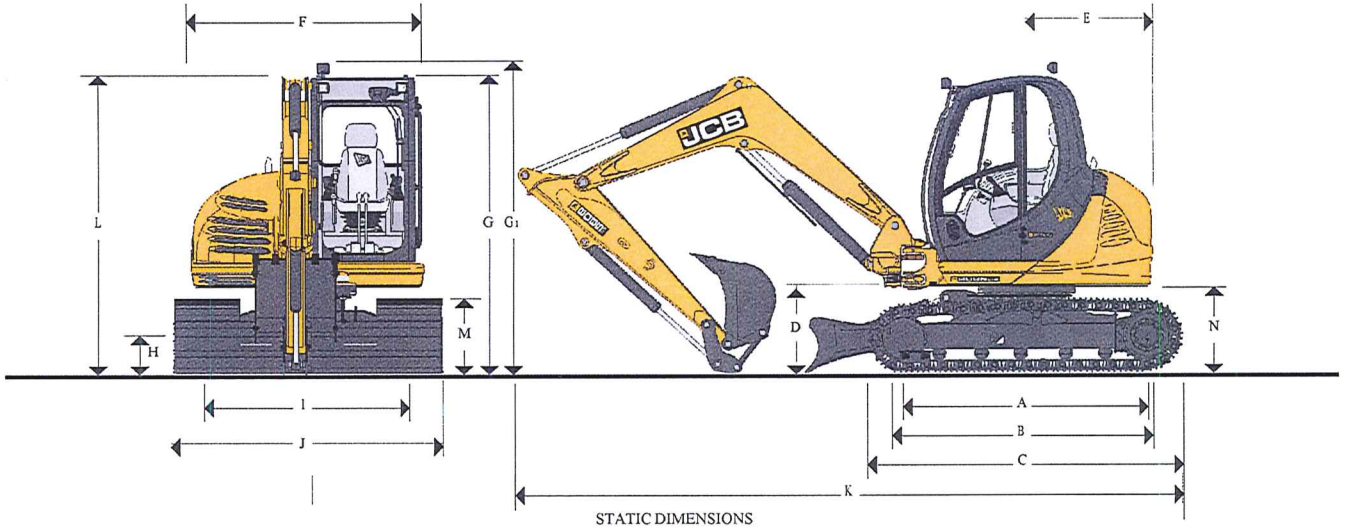
Industry accepted practical means of preventing, reducing and minimising noise generation will be adopted in agreement with BBC.

Appropriate procedures need to be followed in order to mitigate noise, vibration and air pollution (e.g. through dust and fume generation) impacts.

Measure currently planned include:

- No works will be undertaken outside the specified working hours; except in cases of emergency, where safety is an issue, or where conditions of dispensation apply
- The contractor will comply with the requirements of the COPA 1974, with particular reference to Part III of the Environmental Protection Act 1990, The Control of Noise at Work Regulations 2005 and the Health and Safety at Work Act 1974
- All plant and equipment to be used for the works will be properly maintained, silenced where appropriate to prevent excessive noise and switched off when not in use
- Hydraulic machinery and plant will be used in preference to percussive techniques where practical
- The contractor will erect and maintain throughout the construction period temporary hoarding around all working areas to assist in the screening of noise and dust generation from low-level sources
- Plant will be certified to meet relevant and current legislation and Noise and Vibration Control on Construction and Open Sites (BS 5228). All subcontractors will be made familiar with current noise legislation and the guidance in BS 5228 (Parts 1 and 2), and this CMP which will form a prerequisite of their appointment
- Loading and unloading of vehicles, dismantling the equipment such as scaffolding or moving equipment or materials around the site will be conducted in such a manner as to minimise noise generation
- Noise complaints, or exceeding of agreed levels will be reported to the contractor and immediately investigated
- Vehicles transporting materials capable of generating dust to and from site will be suitably sheeted on each journey to prevent the release of materials and particular matter

Midi 360 Excavator



STATIC DIMENSIONS

		mm (ft-in)			mm (ft-in)
A	Sprocketidlercentres	2280 (7-6)	G1	Heightover cab - work lights	2830 (9-3)
B	Track lengthon ground	2200 (7-3)	H	Groundclearance	363 (1-2)
C	Undercarriageoveralllength- rubber	2830 (9-3)	I	Track gauge	1850 (6-1)
	Undercarriageoveralllength- steel	2830 (9-3)	J	Width over tracks(450 shoes)	2300 (7-7)
D	Kingpostclearance	741 (2-5)	K	Transportlengthwithstandardlipper	6060 (19-11)
E	Tailswingradius	1160 (3-10)	L	Transportheightwithstandardlipper	2840 (9-4)
F	Overall widthof superstructure	2135 (7-0)	M	Track height	665 (2-2)
G	Heightover cab	2719 (8-11)	N	Counterweightclearance	767 (2-6)

CFA Piling rig

Self Erecting Crane

Mini Bulldozer

Table 1: SUMMARY OF VEHICLE TYPE, USE AND DISTRIBUTION

Vehicle Type	Use	Distribution
Rigid Heavy Goods Vehicle	Excavated material Removal	Strategic road network to motorway
Small Articulated Vehicle	Plant, steel bar, bricks and cladding panels	Strategic road network to motorway
Specialised Articulated HGV	Tower crane erection & dismantle, Mechanical & electrical Plant, Cladding panels. Roofing materials	Strategic road network to motorway
Specialised Equipment Low loader	Occasional Delivery of Plant	Strategic road network to motorway
Vans	Plant service, materials, other Suppliers. Existing tenants deliveries	Distributed to local and strategic network
Cars	Occasional deliveries, Couriers etc.	Distributed to local and strategic road network

Table 2: ESTIMATED TYPES OF PLANT AND EQUIPMENT FOR DEMOLITION & CONSTRUCTION

Plant	Demolition	Substructure	Superstructure	Fit out
Excavators / with hydraulic cutting shears	√	√		
Rotary Bored piling rigs		√		
Excavators	√	√		
Compressors	√	√	√	√
Muck away lorries	√	√		
Goods hoist	√	√	√	√
Tower crane	√	√	√	
Mobile concrete pump		√	√	

General waste skips	√	√	√	√
Power tools	√	√	√	√
Delivery vehicles	√	√	√	√
Forklifts	√	√	√	√
Scaffold access platforms	√	√	√	
Mobile towers	√	√	√	√

Table 3: POTENTIAL IMPACTS AND HEADLINE MITIGATION MEASURES DURING DEMOLITION AND CONSTRUCTION

Issue	Potential Impacts	Mitigation
Noise	Increased road noise levels from vehicles. Increased noise levels from plant during excavation, piling and general construction works (e.g. from the use of air compressors and diamond cutters).	Defined working hours, baffles to certain plant, local acoustic screening. Vehicle routing. Beepers, radios etc. to be silenced. Engines turned off and all measures outlined in the considerate contractors scheme
Vibration	Increased vibration levels from vehicles. Increased vibration levels from plant during demolition, piling and general construction works. Defined working when hours. Selection of appropriate plant and site work procedures.	Phased deliveries to minimise numbers of vehicles attending site, Vehicle routing. Engines to be switched off vehicles are idle or on
Dust / Air Quality	Windblown dust from ground surfaces, stockpiles, vehicles, work faces and cutting and grinding of materials. Exhaust emissions from lorries and plant delivering and removing materials including dust and particulates.	Cover all open backed vehicles, 'water down' demolition activities; switch off vehicle engines when parked.
Waste	Waste generation and its disposal.	Instigate Site Waste Management Plan and re-cycling programme
Water	Increased sediment loadings to storm water system. Potentially contaminated storm-water runoff.	Do not allow direct discharge of water into sewerage collection system.
Traffic	Traffic congestion caused by site traffic. Local traffic diversions will be required for tower crane erection and dismantle and mobile crane lift Increased vehicle movements mainly consisting of Heavy Goods Vehicles (HGVs). Nominal levels of transfer of mud and material from vehicles onto the public highway. Disruption from abnormal or hazardous loads. Exhaust emissions.	Phased deliveries to minimise numbers of vehicles attending site, switch off vehicle engines when parked, minimise abnormal loads. Wheel washing Vehicle routing
Storage of fuels and construction materials	Accidental spills, discharges to drains/storm-water systems. Contamination to ground.	All fuel tanks etc. to be bunded, no discharge allowed into the sewerage collection system.

Pedestrian access	Restrictions on pedestrian access to walkways, footpaths and roads.	Erect protective gantries / pedestrian tunnels over footways.
Hazardous and contaminated materials	Exposure of the workforce to deleterious / hazardous materials and contaminated land, mobilisation of any source contaminants and creation of pathway from source to groundwater receptor.	Site investigation reports indicate that no contaminated fill is present. COSHH assessments and careful implementation of associated working method statements to ensure that no hazardous materials find a path to groundwater source.
Ecology	Water / mud run off into the drains.	Do not allow direct discharge of water into sewerage collection system, utilise interceptors where necessary.
Energy usage	Indirect impacts associated with energy consumption such as CO2 emissions, depletion of natural resources, air pollution etc.	Site environmental plan to implement.
Views	Views impacted and/ or impeded from construction equipment, particularly cranes.	Tower crane to be positioned within the service yard area and will have minimal impact upon adjacent views

9.0 Neighbourhood Liaison

A key aspect of the successful management of the project will be to establish and maintain good relationships with all site neighbours. A construction liaison group will need to be established with the closest neighbours and those who would be affected by the demolition and construction works.

Prior to commencement of works a single point of contact (Construction or Logistics Manager) will be established as the neighbouring resident's point of liaison. This person will be named at the site entrance with a telephone number for queries/complaints. Outside normal working hours, site security will act as the main point of contact via a dedicated phone number.

Security will alert the Construction or Logistics Manager if necessary (available 24 hours).

The Construction or Logistics Manager will keep accurate records of complaints received, which will be made available to BC for inspection. The Construction or Logistics Manager will inform local residents likely to be affected by the impact of construction activities, such as erecting scaffolding/hoarding, operating mobile cranes, aerial platform operations, concrete pumps or any such equipment and shall advise of these planned events with suitable notice. In the event of unusual activities or events that can be anticipated, these will be notified to BC and the relevant property owners or occupiers wherever possible, in advance of the activity which will include:

- Commencement of construction in certain areas
- Road or footpath closures/diversions and movements of wide loads
- Actions requiring monitoring by LBC
- Work on or affecting land used by others; LBC will be informed as soon as reasonably practicable, should be emergency works arise at short notice, confirmed as essential for reasons of safety, which could cause environmental disturbance

10. Workforce

Based upon the construction programme demands and our previous experience of projects of this size and nature, we would estimate that the site workforce would peak at around 40 operations.

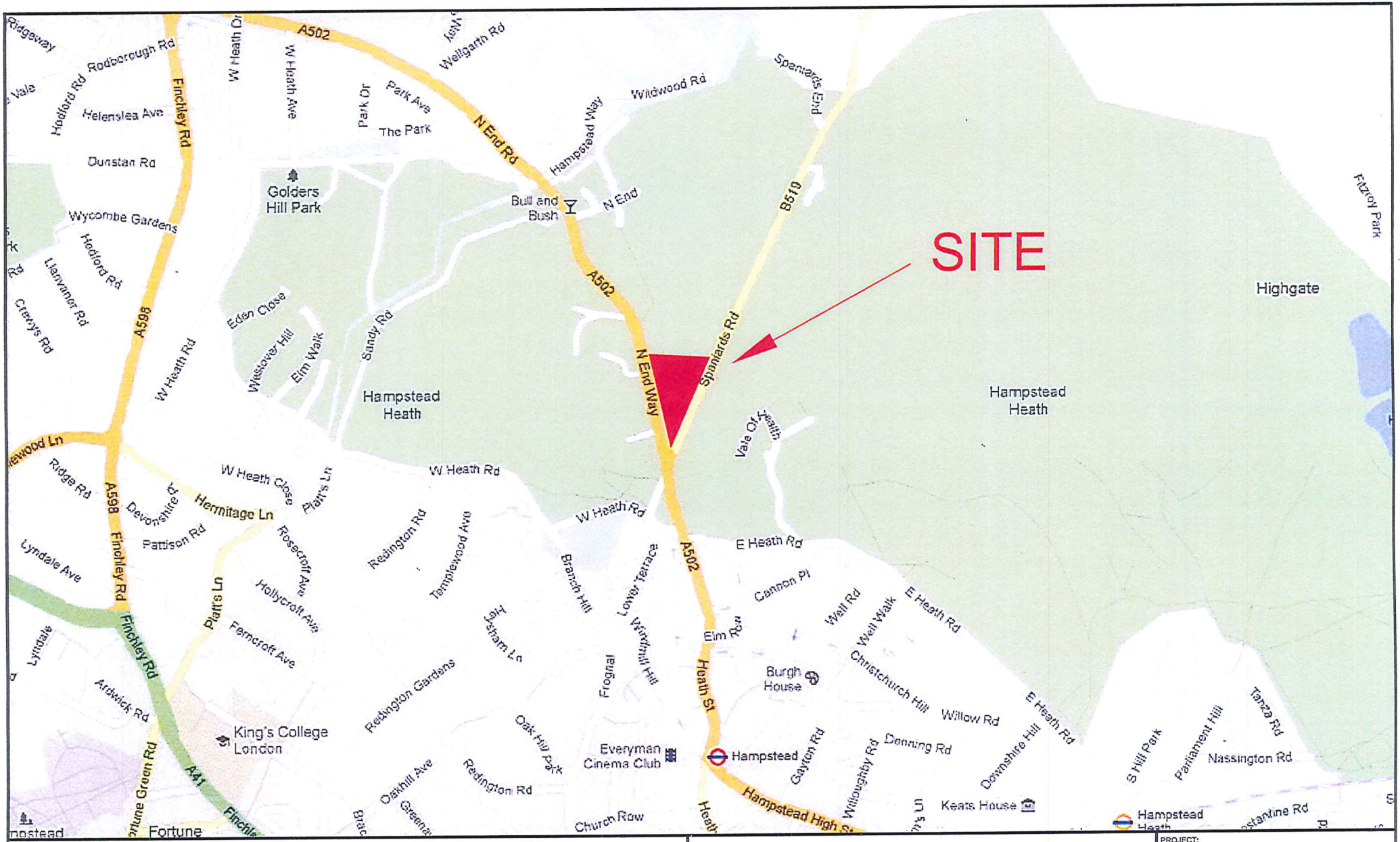
11. Considerate Contractors Scheme

Consero London will register and comply with the requirements of the considerate contractor's scheme throughout the duration of the works.

This will encourage all operatives to carry out their duties in a safe and considerate manner, with due regard to residents, passing pedestrians and road users.

APPENDIX A

Site Location Plan

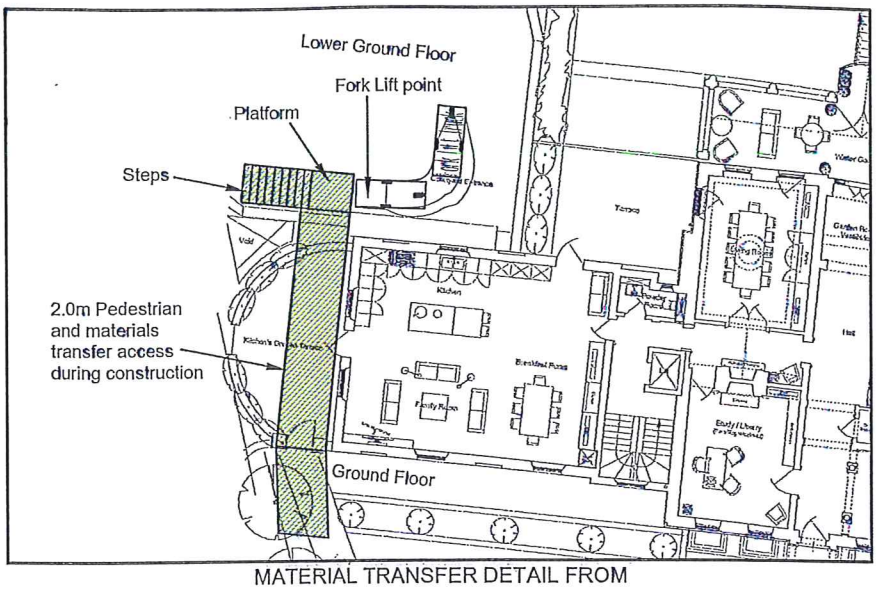


PROJECT:
HEATH HOUSE, HAMPSTEAD

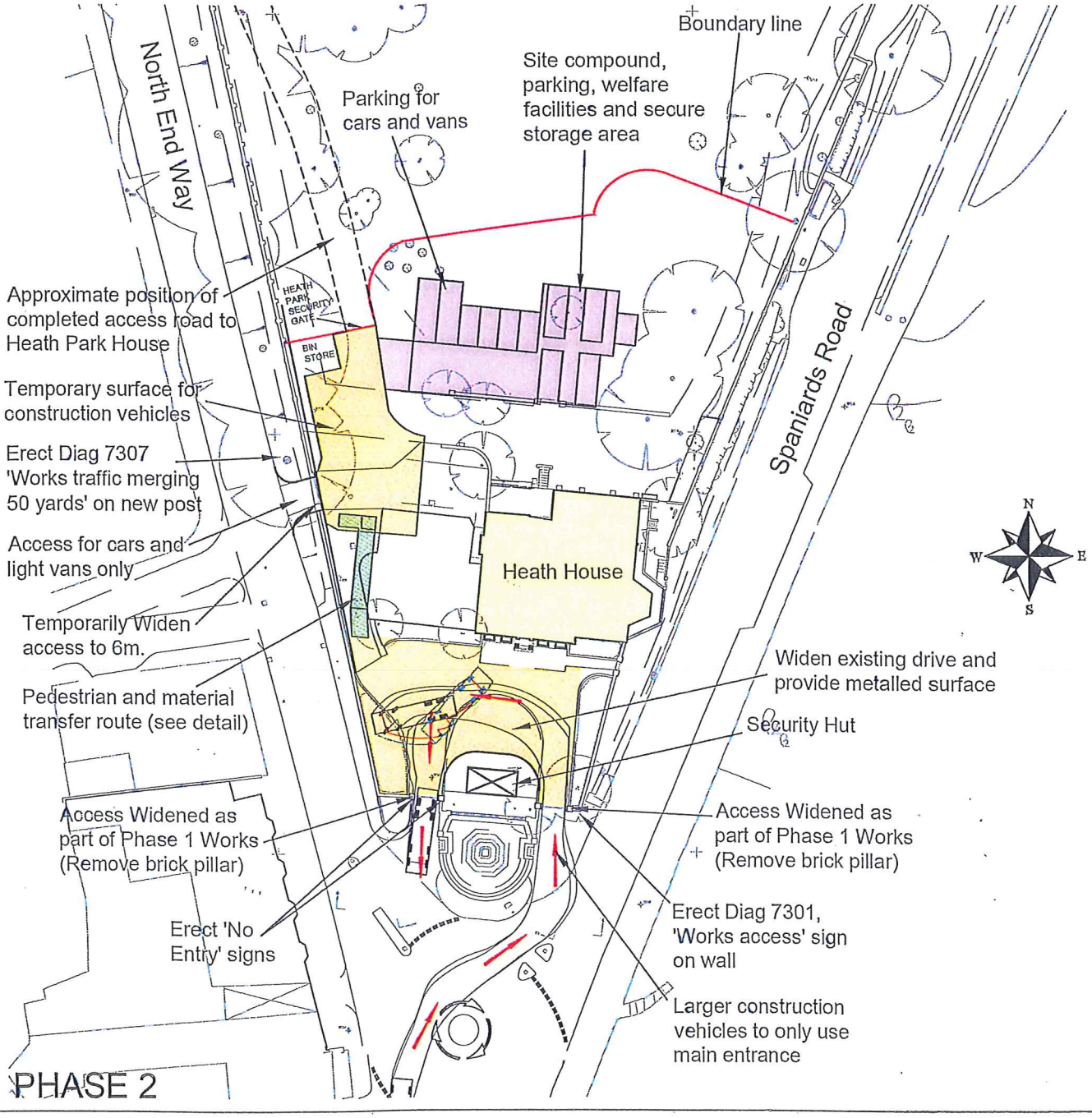
TITLE:
SITE LOCATION PLAN

APPENDIX B

HEATH HOUSE SITE LAYOUT PLAN



MATERIAL TRANSFER DETAIL FROM GROUND TO LOWER GROUND (1:200)



APPENDIX C

HEATH HOUSE SITE ENTRANCE IMAGES

Proposed Site Access

Proposed Site Egress