A&I CONSTRUCTION

Construction Management Plan

The proposed residential development of
8 Pilgrims Lane
Hampstead
London
NW3 1SL

July 2012

CONTENTS

Appendices:

1.0 INTRODUCTION AND PROJECT DETAILS

A & I Construction Ltd has prepared this construction management plan (CMP) in relation to the proposed alterations including construction of an extended/new basement at 8 Pilgrims Lane, Hampstead, London, NW3 1SL

The proposed development consists of a small loft extension, conservation rooflights, internal alterations including a luggage lift, external alterations including rear bay window, and a new/extended basement.

The purpose of the CMP is to ensure that the impact of demolition and construction work on the local residents and the immediate highway network is kept to an absolute minimum. The CMP provides details of all measures that are considered appropriate at this time; however, the CMP is a live document that will evolve as necessary to address issues that may be identified through ongoing consultation with local residents as the project progresses.

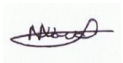
The Construction Project Manager will be responsible for implementing measures contained in the CMP and will be the point of contact for local residents. They will ensure that all contractors working on site have valid public liability cover in place before starting on the site and that they are registered with the Considerate Constructors Scheme. The Project Managers name, telephone number and email address will be added to the CMP once he/she has been appointed.

This document has been prepared with input from the project architects, structural engineers and civil engineers to ensure that the CMP can comprehensively address all issues that may arise during demolition and construction works.

Project: 8 Pilgrims Lane
Hampstead
London
NW3 1SL

Architects: Brod Wight Architects
75 Haverstock Hill
London
NW3 4SL

Telephone: 0207 722 0810

CMP Prepared by	REVIEW BY:		Authorisation for Issue
Sign:  Print: N.Norval Date: 24.07.12	Sign: Print: Date:	Sign: Print: Date:	Sign: Print Date:

2.0 CONTACTS AND RESPONSIBILITIES

Contacts

Telephone numbers are available for the general public to contact the project team, most of these telephone numbers are manned 24-hours.

Posters for these schemes are displayed in various locations around the property including the boundaries to the site. Notable numbers are:

- Considerate Constructors: 0800 783 1423
- Independent 24-hour care line: 0800 138 5479

Public relations exercises will also be undertaken to advise the public and authorities of current and future works, in conjunction with the above mentioned project.

The site must be registered with the Considerate Contractors scheme and pass the 2 inspections resulting in receiving the Considerate Construction Certificate at the end of the project.

Responsibilities

Noise incorporating vibration

Project Manager	Overall responsibility
Engineer	Records of percussive piling operations
Site Manager	Day-to-day implantation of RAMS and mitigation measures

Construction lighting

Project Manager	Overall responsibility
Engineer	Visual monitoring (if required)
Site Manager	Light monitoring

Dust and general nuisance

Project Manager	Overall responsibility
Engineer	Visual dust monitoring
Site Manager	Day-to-day implantation of RAMS and mitigation measures

Construction traffic

Project Manager	Overall responsibility
Engineer	Visual traffic monitoring
Site Manager	Day-to-day implantation of RAMS and mitigation measures

Concrete pouring

Project Manager	Overall responsibility
Engineer	Visual inspections, water quality sampling (if required)
Site Manager	Ensuring RAMS are worked to and controls implemented

Pollution Control

Project Manager	Overall responsibility
Engineer	Inspections, sampling (if required)
Site Manager	Ensuring RAMS are worked to and controls implemented

3.0 PROGRAMME

As planning approval has yet to be granted, the programme below provides an indication of the duration of each phase of the works, the programme will be updated with the dates envisaged for each phase of works once planning permission has been granted and the date for works to start on site has been determined.

Activity	Weeks	Workers on Site
Site Preparation, building Regulations and Health & Safety Documentation	2	5
Demolition	2	6
Excavation	6	6-10
Concrete footing, Slab and Retaining Walls	8	6-10
Building Frame	7	8
Roof	4	6
Mechanical & Electrical	4	6
Internal Finishes	20	6-10
External Landscaping	4	5

4.0 HOURS OF WORK

The hours of construction, must be restricted as follows:

a) Between 8am and 6pm, Mondays to Fridays inclusive
b) Between 8am and 1pm, Saturdays (or as modified, STCA)
c) No work on Sundays and public holidays

All deliveries, either from Builders Merchants, Rubbish/Soil Removal, Concrete, Steel etc need to be restricted as follows:

a) Between 9am and 4:30pm, Mondays to Fridays
b) Only small deliveries on a Saturday between 9am and 1pm, no lorries

Activity likely to generate significant external environmental effects (piling etc.) to be scheduled only between the following hours unless approved otherwise:

a) 9am to 12pm, Monday to Friday
b) 1pm to 5pm, Monday to Friday
c) 9am to 1pm, Saturdays

5.0 NOISE AND VIBRATION MANAGEMENT

Noise

Bureau Veritas will be employed to provide predicted noise levels for the specific construction phases and ensure that the monitoring stations are located in appropriate areas. A specific location plan showing monitoring points will be produced in association with the Local Authority EHO and Section 61 application.

They will also conduct noise monitoring and provide records to show compliance with set noise levels.

Records of percussive piling operations, which would detail the type of hammer, location, time and number of blows will be kept as appropriate and filed with this control plan.

Trees and walls that surround the property will assist in acting as a noise barrier.

Deliveries to the site will take place between the hours of 9:00am and 16:30pm and scheduled to distribute vehicle movements throughout these hours so as to avoid periods of intensive activity therefore limiting noise and vehicle emissions.

Noisy work on site will be carried out in accordance with guidance provided by Camden Council, e.g.

- Restricting the hours that all work is carried out from 08:00 until 18:00, Monday to Friday and 08:00 until 13:00 on Saturdays. No works should be carried out on Sundays and Bank Holidays.
- Using well-maintained and silenced plant and equipment including compressors, generators and power tools.

The use of electrically powered modec vehicles has been considered but this had to be discounted as most materials requiring movement will be in bulk and heavy and no commercially available vehicles of the size needed are yet available. In addition, there will be no power supply high enough on site for safety reasons; therefore on site charging of electrical vehicles would not be possible.

The project shall not exceed the following noise levels: -

a) 70 dB LAeq 1 hr during the hours of 08:00 to 18:00 on Monday to Friday (excluding Bank Holidays)
b) 55 dB LAeq 1 hr during the hours of 18:00 to 08:00 on Monday to Friday (excluding bank holidays)
c) 70 dB LAeq 1 hr during the hours of 08:00 to 13:00 on Saturdays; and
d) 50 dB LAeq 1 hr at all other times
Daytime free-field equivalent sound pressure levels

In the event that the noise levels prescribed are not being exceeded, the complaint will be reviewed and discussions held with the third party to understand the problem

further and evaluate whether the particular problem can be rectified or at least improved. Communication will be maintained in conjunction with the interested authorities.

Vibration

Bureau Veritas will be employed to monitor vibration levels from piling and/or other construction activities. This will be assessed at the same time and locations as for noise monitoring.

Vibration levels shall not exceed:

- A peak particle velocity of 2mm/s as measured immediately adjacent to the nearest residential property or vibration sensitive structure and
- 12mm/s measured immediately adjacent to 8 Pilgrims Lane.

In the event that a complaint or concern is raised, an immediate review will be completed to remove the problem wherever possible and to establish what levels of noise and vibration have been emitted from the site. The interested parties will also be notified.

In the event that the limits have been exceeded the operation will be modified and the noise and/or vibration rechecked from that operation to verify that the corrective action has been effective. These actions may include reducing the operating hours, resetting the equipment, changing the method of working or temporary barriers.

On individual piles, particularly on any piling in the vicinity of the fort, equipment will be provided with a shroud. The main quay wall piles will be driven as far as possible with vibratory hammers to reduce the impact hammer driving. Detailed piling logs are maintained, which would detail the type of hammer, location, time and number of blows.

6.0 GROUND MOVEMENT AND BUILDING STABILITY

Ground Movement

Accolade Measurement Ltd will be employed to monitor the ground to determine the effects of natural and man-made ground movements.

Monitoring the movement of the ground will assist in ensuring quality of ground work completed and safety on-site and the surrounding urban environment during the construction phase.

Accolade would initially need to come to site and conduct a survey of the project, then would consult with the engineer and contractor to establish what monitoring is required and at what stage of the project.

They have 2 methods:

1. Install automatic data monitors which send feedback to there office every 15minutes.

2. Conduct manual readings as often as specified by the engineer.

During construction any movement detected can be assessed and decisions made on the best way to proceed.

Building Stability

Accolade Measurement Ltd will be employed to monitor the building stability

Accolade provides building instrumentation and monitoring services, to evaluate the performance of safety critical structural elements of part or all of a building.

Various factors effect buildings and understanding these help identify associated risks and inform how they can be managed.

Using equipment such as tilt sensors, strain gauges, LVDTs, total stations, lasers, tell tales, pressure transducers or a combination thereof, a monitoring system to suit site requirements can be designed.

Information generated can then be used to guide follow on action as required.

7.0 CONSTRUCTION LIGHTING

The construction lighting will be limited and task specific to the specification in Appendix 1

All temporary lighting will be directed towards site and only put on when necessary, particularly during winter.

No external lighting (other than safety/hazard lighting) will operate outside the hours of construction and controlled by a timer if necessary.

Procedures will be put in place for monitoring the lighting, and adjustments will be made to lighting to ensure minimal environmental and social impacts occur.

8.0 DUST MANAGEMENT

General Control Measures

Monitor weather reports to ensure appropriate dust suppression or road cleaning is available when required

Mud on Roads

- Sweepers to be employed to clean roads where appropriate and on a daily basis, if necessary.
- Banksman to clear large debris immediately
- Only designated routes are to be used (not via local towns) – site directions to be provided to supplier and sub contractors
- Wagons to be covered before setting of to prevent materials being blown into the road during transport.

Dust and Emissions

- Select suitable haul routes away from sensitive areas
- Good quality access track to be provided
- Set vehicle speed limits and enforce them
- Water dampening measures will be used during the demolition process, which will significantly control dust generation, however consideration must be given to proximity of drains
- Dust screens could also be incorporated during this element of the project.
- A Temporary garbage chute will be used in construction if required. At the base of the chute bulk bin will collect the waste. The chutes will be fitted with devices that hose down the garbage as it is dropped into the chutes
- Whenever possible, wet processes will be used during cutting, drilling and grinding to limit dust emissions

Materials handling and storage

- Locate stockpiles out of the wind where possible
- Keep stockpiles to a minimum practicable height and use gentle slopes
- Damp down stockpiles using water misting/sprays as appropriate
- Store materials away form the site boundaries and downwind of sensitive areas. **Note:** Materials should not be stored in close proximity to drains, water or trees
- Minimise the height of all fall materials (demolition works)
- Waste will be stored in a designated area within the identified compound away from site boundaries
- Use covered containers for waste whenever possible
- No burning of materials on site

Plant

- All plant to be maintained and checked on a daily basis
- Ensure exhausts do not discharge directly at the ground
- Ensure engines are switched off when not in use
- Keep refuelling areas away from public

Monitoring location points to be determined and detailed on a location plan.

The trigger values for the project have been confirmed with the EHO and are detailed below. The amount of dust and whether it will cause a nuisance to people or not will depend greatly on the site conditions, local authority interpretation and weather conditions.

- Open Areas less than 100mg/m2/day
- Residential areas less than 150mg/m2/day
- Urban areas less than 200mg/m2/day
  (Ref – London Best Practise Guide – Control of dust and emissions from Construction and Demolition)

Glass slides will be exposed for 7 days and analysed on a daily basis against trigger levels, the records of this to be held with this control plan.

9.0 TRAFFIC MANAGEMENT, TRAVEL PLAN, PARKING SURVEY AND SWEPT PATH ANALYSIS

The following traffic plan has been prepared for the delivery of construction materials and for the travel of contractors on site.

The travel plan and traffic management are designed to reduce the impact of the construction works on the existing road network. Traffic reduction measures are preferred to routing or increasing capacity. However some increase in traffic volumes will be inevitable and this plan details the specific measures to mitigate these effects.

Pedestrians
Jersey kerbs will be provided on work zones for pedestrian access in the event of public domain works. Signs and safety devices will be in place for those works.

Cyclists
The movement of cyclists will be managed as part of the traffic management relating to the project. During certain loading and unloading events, personnel will direct and halt traffic as required to ensure that these activities do not conflict with each other and that a safe environment is maintained.

Lorries
The average number of truck loads (Crane lorries – 4.5mh x 10ml x 2.5mw) moving or delivering general builders materials from/to the site is estimated to 2 trucks a week when the job first start then declining to once every 2-3 a week.

Grab Lorries (4mh x 7ml x 2.5mw) for soil removal during excavation will be at least once a day for 6 weeks

After excavation a covered skip will be placed directly outside the site for general builder's rubble which will be exchanged once per week.

The above estimated movement of the trucks will increase on the days when the large concrete slabs are proposed to be poured in one continuous operation. The number of extra trucks will also depend on the size of the structural elements poured at the time.

It is proposed that vehicles will be directed to access the site from East Heath Road, Willow Road and westbound into Pilgrims Lane. Lorries will leave the site down Pilgrims lane and into Rosslyn Hill.

1. Trucks will be unloaded/loaded at the front entrance to the site on Pilgrims lane and as long at the crane is not mid-way though lifting something will be able to reverse in order to let any traffic though which may be struggling to pass.
2. All Deliveries will be timed as to avoid any queuing vehicles as much as possible, it was witnessed that the Recycle lorry passes through at approx.

9:30am on a Thursday; deliveries need to be avoided at this time as far as possible.

3. There will be signage placed at either end of the works
4. The signage will notify traffic of operations

The following list provided details of the type of vehicles that will need to gain access to the site during the demolition construction process:

- Concrete Delivery Vehicle 6 Wheel, 24 Tonne, G.V.W
- General Building materials 4 Wheel, 17 Tonnes, G.V.W, HIAB Flat Bed or 7.5 tonne Rigid Vehicle.
- Sundry Materials 4 Wheel, 3 Tonne, GVW, Van/Flatbed
- Piling Rig, exact nature of equipment to be determined by detailed piling design

Construction vehicle movements will not be permitted at weekends or during public holidays and will be scheduled to take place between the hours of 9am and 4:30pm.

Travel Plan

There will typically be about 10 construction workers on site, although at times, this will increase to accommodate the work needed on site. To minimise the potential impact of construction workers travelling to the area, a Travel Plan will be implemented to promote and encourage the use of sustainable modes of travel to and from the site and minimise the use of private cars.

Construction workers will be encouraged to share transportation to the site in a van, those that do need to drive will be instructed to find the nearest pay and display bays to No 8 Pilgrims Lane

The Travel Plan will take the form of a leaflet that will include details of local public transport services, promote walking and cycling and encourage car sharing. Consideration will be given to the operation of a shuttle bus service to and from the site from nearby public transport nodes.

Parking Survey and Swept Path Analysis

A Parking Survey and Swept Path Analysis has been compiled by Paul Mew Associates – see Appendix 3

10.0 CONSTRUCTION ZONES AND MATERIAL LOADING/STORAGE AREAS

The main loading areas include the space directly in front of the property, once excavation is complete and all soil has been removed, smaller delivery vehicles could pull into the driveway at No8 Pilgrims Lane.

Construction materials such as cement, oils and fuels for site plant etc have the potential to cause pollution. All fuel, oil and chemical storage must be sited on an impervious base within a secured bund of adequate storage capacity. The risk of fuel spillage is greatest during refuelling of plant. Mobile plant would be refuelled either off site or within a designated area on hard standing and away from site boundaries. All pumps, hoses etc would be checked regularly.

Provision would be made for the washing out of concrete and cement Lorries and mixing plant. These washings would be disposed of to foul sewer. All waste materials created during construction would be stored in designated storage areas isolated from surface drains and away from site boundaries.

The proposed general layout of the site including Welfare facilities, Offices, Material Storage etc can be seen in Appendix 5

The CMP is a live document which includes a commitment to ongoing consultation with local residents. In the event that hazardous materials are present in the existing building, the materials and the appropriate procedures for their disposal will be detailed in the CMP and local residents advised accordingly.

11.0 EXCAVATION WORKS AND CONCRETE WORKS

For the excavation phase the required equipment will be a piling rig for the installation of the temporary works either bored piles or sheet piles.

Approximately 102 square metres of soil and clay will be excavated. It is proposed that in the order of 30% of this will be retained on site for landscaping purposes. This will leave in the order of 70% of soil and clay to be removed from the site.

Spoil will also be produced during the installation of the piles. The type and specification of the piles to be used will be determined once a specialist piling contractor has been appointed.

At present an allowance of 10% of the total excavated material amount has been made, which allowing for bulking.

Material removed from the site will be loaded onto trucks efficiently within timed slots for collection in order to minimise disruption to local residence.

Concrete pouring and filling will be fully controlled to ensure that cement bound materials do not pose any pollution issues. Batching plant will be located as far north as possible, and therefore downwind of the nearest local residents.

Concrete Lorries will be parked kerbside Outside No 8 and the concrete either hand-barrowed to the pouring areas or fed into a small pump parked in the carport and pumped to the pouring areas.

12.0 POLLUTION CONTROL AND ENVIRONMENTAL IMPACT

Pollution control measures will be implemented on site to include the following:

- Drip trays to be used for all static equipment, including pumps to ensure no escape of oil and diesel into drains.

- Mobile plant shall be refuelled in a designated area on an impermeable surface away from drains and watercourses

- Spill kits to be available to contain spillages

Site Vehicles will have wheels wiped down prior to leaving so as to reduce unwanted debris from being transferred from the site to the public highway. A track mat will be used which can be easily cleaned and washed down to minimise the potential transfer of debris onto the road.

Procedures will be set up for immediate removal of mud, including provision of a mobile mud clearing appliance during the excavation part of the building programme, and cleaning down of the roadway after every skip/soil removal.

General builders rubbish will be separated in to Timber, metal, plastic, paper and recycled wherever possible as per the Site Waste Management Plan in Appendix 4

Environmental impact will be reduced by the various procedures outlined in this CMP.

Registering the site with Considerate Contractors Scheme, implementing the Site Waste Management Plan, taking into account the Tree Report (Appendix 7), and following this CMP will all result in reducing the environmental impact.

13.0 SOIL AND WATER MANAGEMENT PLAN

Welfare & Silty Water

- Welfare water will be discharged to the nearest sewer under permission from the sewerage undertaker or if a private sewer system the land owner.

- Water from excavations will also be discharged to the sewer system under the same permission. Treatment (settling) may be required to remove solids

Chemicals/Substances etc

- The use of biodegradable oils will be considered wherever possible

- Leaky or empty drums shall be removed from site immediately

- All spills will be reported to the Site Manager regardless of extent or nature.

All pollution control devices will be regularly maintained. Any liquid wastes such as paints or similar chemicals will be retained for recycling and other liquids will be disposed.

Barriers will be installed where necessary to prevent the generation of erosion and sediment during the construction period.

14.0 SITE WASTE MANAGEMENT PLAN

SWMP's aim to address three key issues:

1. Improving materials resource efficiency, by promoting the economic use of construction materials and methods so that waste is minimised and any waste that is produced can be re-used, recycled or recovered in other ways before disposal options are explored; and

2. Reducing fly-tipping, by restricting the opportunities available for illegal disposal of waste by ensuring compliance with existing legal controls and providing a full audit trail of any waste that is removed from the construction site.

3. Increase environmental awareness of your workforce and management, your environmental management performance is likely to improve the more your workers are aware of their responsibilities. Including Site Waste Management Plan information in induction training or as part of environmental awareness training can help with this aim

   Although it is a legal requirement to write and implement a SWMP, the greatest cost savings are likely to be achieved as a result of the consideration of materials resource efficiency which will be a necessary part of the preparation, before the SWMP is completed.

See Appendix 4 for the preliminary Site Waste Management Plan at No 8 Pilgrims Lane

15.0 SITE SECURITY

All construction materials will be stored towards the back of the site and as far as possible away from neighbours property and adjoining walls. It is proposed that a fully laminated hoarding will be erected along the site boundary. This will be 2.4 metres high with access gates formed in the fence to serve the site.

The site will be locked outside of working hours to ensure that all materials and equipment are stored securely.

The Construction Project Manager will be responsible for site security and emergency procedures. Once the Construction Project Manager has been appointed, residents will be advised of appropriate procedures and contact information for out of hour's incidents.

All tools and valuable materials will be stored in lockable containers on site and sub-contractors will be required to either make use of these containers or take their tools of site at the end of each day.

Temporary alarm system will be installed with a phone number to one of the management.

Any scaffolding required during the project will be equipped with a scaffold alarm and have safety checks conducted at least once a week.

16.0 PEDESTRIAN AND ROAD USER SAFETY

It is proposed to implement measures to ensure that pedestrian and road user safety is maintained throughout the construction process.

To enable consideration to be given to the types of measures appropriate, reference has been made to pedestrian and vehicle movement count data.

The following table provides a summary of results:

	Travel Mode				
Period	Pedestrian	Car	HGV	Cycle	Motorcycle
26th July 2012 7:00 – 8:00	36	18	0	1	0
02nd Aug 2012 14:30 – 15:30	40	10	0	0	0

The survey shows that there is a steady flow of pedestrian and vehicle movement on this section of site. To ensure that pedestrian and road user safety can be maintained, it is proposed to implement a banksman strategy, which will be managed by a Banksman Co-ordinator, the strategy will comprise of the following measures:

- The Banksman Co-ordinator will keep a log of all construction vehicle movements to and from the site in order to monitor them closely.
- No construction vehicles will be permitted to stop, be held or wait in the public highway in any way that blocks the normal flow of vehicles. They will instead be waived on by a banksman stationed at the site and be told to go round the block if site is occupied by an existing construction vehicle.
- Vehicle manoeuvres into and out of the site will be monitored and assisted by a banksman stationed outside the entrance to the site. This will allow vehicles to manoeuvre to and from site with minimal disruption to traffic on site.
- A banksman will be required to walk in front of, and monitor all lorries along site to ensure they only travel at walking speed (4mph) and to assist pedestrians, cyclists and other vulnerable road users that may need to pass the approaching construction vehicle.
- Temporary road signage will be positioned on site at either end of the construction vehicle route warning road users of the presence of construction traffic.

17.0 CONSTRUCTION METHOD STATEMENT

Construction Method Statement for Works

Project Name: Pilgrims Lane
Site Address: 8 Pilgrims Lane
London
NW3 1SL

Date: 16.08.12

Start Date/Time: TBC
Finish Date/Time: TBC

Revision no: -

Prepared By: A & I Construction

Scope of the Works: small loft extension, conservation rooflights, internal alterations including a luggage lift, external alterations including rear bay window, and a new/extended basement.		
Personnel Involved:	**Name**	**Role/Trade**
	TBC	

Parking:
Any staff or contractors will be required to find the nearest pay and display bays or to share a van
Loading and Unloading:
As far as possible all deliveries will be scheduled for between 9:00am and 4:30pm, we will co-ordinate with the suppliers to deliver at set times in order to avoid a queue. Most orders are made in bulk to limit the amount of deliveries.
Skips:
Soil will be taken away directly from site via grab lorries, other rubbish will be collected on a wait and load

basis at the beginning, after excavation skips will be put at the front of the site and collected once a week.

Storage:

All plant and materials with be stored on our site behind secure hoarding

Dust Emissions:

The carriageway will be swept daily and we will use water to dampen down any works that will create dust. If any vehicles do enter site, they will be washed down before leaving

Recycling/Disposing:

Materials that can be re-used will be kept on site, we will obtain a monthly recycling report as well as waste transfer notes from our disposal company. All information is stored on site in the “Site Waste Management Plan”

Lighting:

External spots lights only to be used when needed, especially during winter months,

Internal fluorescent lights and temporary festoon lights

Plant & Equipment:

Digger, Conveyor Belt, Kango

Shovels, Wheel Barrows, Concrete Mixer

Water Pump (to pump ground surface water to manhole)

Concrete Vibrator

Grinder, Bolt Cutters, SDS Drills

Temporary Support Members (Acros etc)

Small Excavator

Materials:

4 to 1 Sand/Cement Mix Concrete (Sulphate resisting Cement)

Steel Reinforcing Bars

Dry pack 1 to 1 Mix Sharp sand/Cement

4x2 Sawn Treated Timber

18mm WBP Ply.

Other Essential Equipment:

Trench Sheets, Trench Props, Shoring Props, Needles, Piling Rig , Skips

Specific Identified Residual Hazards:	Lifting/Removal of soil Collapse of Trench Wall Moving of Support Props & other Heavy Members including steel reinforcing Operatives working on level above/ from height
Specific Staff Training Requirements:	All site based operatives to be inducted Regular tool box talks with all operatives Safety briefing on all key plant

Temporary supports and Props needed to facilitate the Works:	Acro props and steel girders/waling as required and designed by the engineer.						
Method of Access and Egress to the Work Area:	Access to the site via front door & side hoarding to right of way. Deliveries and materials loaded in through front door and side hoarding as required. Steel beams and temporary support to be stored down side of property behind A & I Hoarding.						
Fall Protection Measures: (Where work at height cannot be eliminated – consider both Personnel & Materials)	Guard Rails and Exclusion Zones Covering of holes (150 x 50 timber supporting 18mm WBP) when not in use.						
Hazardous Substances: (Attach COSSH Assessments and MSDS)	ie: Lubricants/Solvents/ Flammable Materials/ Refrigerants/ Welding Gases etc						
	 Very Toxic	 Harmful or Irritant	 Corrosive	 Dangerous for the environment	 Oxidising	 Highly Flammable	 Explosive
Applicable:	No	Yes	No	No	No	Yes	No
Required Personnel Protective Equipment (PPE):	F Safety Boots	J Hard Hats	H Safety Gloves	G Hearing Protection	K Respiratory Protection	I Eye Protection	**Other:** 1. Hi-Viz Vest 2. . 3. . 4. . 5. . 6. .
	Yes	Yes	Yes	No	No	Yes	

Emergency Procedures:	In case of fire, raise alarm and if possible, locate extinguisher in front entrance and put out fire. Alternatively alert the emergency services (Dial 999) and evacuate the property. Assemble on the pavement immediately outside the front gate. Contact the Site Manager	
First Aid Facilities:	**Name of On-site First Aider:**	
	First Aid Box Location:	At the H & S Stand in the front Entrance
	Location of Nearest A & E Hospital:	Royal Free Hospital Pond Street London NW3 2QG 0207 794 0500

Technical Information:

All operatives as well as site manager and foreman are to read this document in conjunction with:

- All appended diagrams
- Site Safety Plans
- Construction Management Plan
- Health & Safety Site Plan
- All workplace risk assessments

Other Information & Comments:	• West Hampstead Police Station number is – 0207 404 1212

All work will be undertaken by qualified competent persons with experience of the type of work described above, and in all cases in full accordance with safety procedures specified in the companies Health and Safety Policy.

Prepared by:
Position:
Date:

Reviewed by:
Position:
Date:

18.0 INCIDENT RESPONSE & EMERGENCY ACTION PLAN

Health, Safety and Environmental ('SHE')
Incident Response & Emergency Action Plan (incorporating fire)

Site Name: Pilgrims Lane

Site address with directions:

8 Pilgrims Lane,
Hampstead,
London,
NW3 1SL

Directions:

1. Head South on North End Way/A502 toward Heath Brow
2. Go through 1 roundabout
3. Turn left onto Hampstead High St/A502
4. Turn left onto Willoughby road
5. Take the 1st right onto kemplay road
6. Turn right onto Pilgrims Lane
7. Exit through Pilgrims Lane into Rosslyn Hill

Emergency Contact Details

In the event of an incident or a suspected incident, the Site Manager/Appropriate Person will assume control of the situation and direct the immediate response through delegation, if necessary**.**

Emergency Services

Local Police: 26 Rosslyn Hill, Greater London NW3 1PD T: 020 7230 1212
Local Hospital: The Royal Free Hospital, Pond Street, London, Greater London NW3 2QG T: 020 7794 0500
HSE London: 0845 300 9923
Environmental Agency: 0800 807 060

	Contact Name	Office Hours	Out of Hours
Local authority Camden Council		0207 974 4444	0207 974 4444
Gas British Gas		0800 111 999	0800 111 999
Water Thames Water		0845 9200 800	0845 9200 800
Telephone BT	Customer Care	0800 800 151	0800 800 151
Electrical EDF		0800 028 0247	0800 028 0247
Specialist Clean Up Contractors Rainbow		0208 902 1980	0208 902 1980

	Company Contacts		
	Contact Name	**Office Hours**	**Out of Hours**
Project Manager			
Site Manager			
Site HSE Advisor			
Client Contact			
Contractor			
Contractor			

The contact order will be:
First: Site Manager – number (please enter here): _____
Second: Project Manager – number (please enter here): _____

Control of Substances Hazardous to Health (COSHH) Inventory

Refer to Site Plan for Location of Stores and Spill Kits

Name of product	European Waste Code ('EWC')	Name of Waste	Waste Classification	Supplier	Name of sub-contractor

Note: The information above is to be completed as applicable during the contract when detailed design and specifications are set.

Actions to be taken in the Event of a Health and Safety Emergency

THOSE DIRECTLY INVOLVED SHOULD:

- Make the area safe for themselves and others who may be exposed (where safe to do so)
- Raise the alarm and instigate Site Incident Response Plan/Fire Plan as necessary
- Apply First Aid to those who may need attention
- DO NOT make changes to the scene apart from those making the area safe – evidence will be required to aid investigation.

Taking command of the Situation

The following should occur:

1.0 IMMEDIATE REPORTING:

- To a member of Site Management

OR

- To your manager or supervisor who should then report to a member of Site Management

Site Management will then put into action the Incident Response Plan and report to the associated enforcing authorities and/or others as appropriate.

2.0 EVALUATE THE AREA FOLLOWING THE SITE DESIGNATED PROCEDURE

3.0 INSTIGATE THE ACCIDENT/INCIDENT REPORTING PROCEDURE TO ASCERTAIN WHY THE INCIDENT OCCURRED – THIS WILL NOT BE ASSIGN BLAME BUT TO PREVENT RECURRANCE

4.0 REVIEW RISK ASSESSMENTS AND METHOD STATEMENTS TO ENSURE THAT THE CINTENT STILL REFLECTS THE SITUATION ON SITE.

5.0 SITE MANAGEMENT MUST MONITOR THE SITUATION UNTIL SUCH TIME THAT THE INCIDENT IS PASSED AND THE SITE HAS RETURNED TO NORMAL WORKING CONDITIONS. THIS IS IN ADDITION TO THE CONTINOUS MONITORING OF ALL OTHER SITE ACTIVITIES.

6.0 A CLOSE-OUT MEETING SHOULD TAKE PLACE IN ORDER TO LEARN FROM THE EVENT AND ENABLE SUCH INFORMATION TO BE FED BACK INTO THE COMPANY TO AID CONTINUOUS IMPROVEMENT.

UNDER NO CIRCUMSTANCES SHOULD A MEMBER OF STAFF DISCUSS THE INCIDENT DURING OR AFTER EVENTS WITH THE PRESS OR OTHERS. ALL SUCH COMMUNICATIONS MUST BE DONE THROUGH THE MANAGEMENT.

Actions to be taken in the Event of an Emergency involving percussive piling outside of allowed hours

The local authority shall be notified and details provided in writing within 48 hours of any event (see below) where percussive piling took place outside the permitted hours.

Events include:

a) In the case of an emergency or
b) Where piling is required on the grounds of safety or environmental protection
c) In either case the situation would otherwise be dangerous to life or limb

Percussive piling cannot take place outside these permitted hours:-

a) 8:00 to 18:00, Monday to Friday and
b) 9:00 to 13:00, on Saturday or

At any time on a Sunday or a Bank/Public holiday

Actions to be taken in the Event of an Environmental Emergency

In the event of an actual or suspected pollution incident involving:

- Spillage of oils or chemicals or
- Discharge of silty water or other pollutant such as concrete (watercourse or land)
- Flood
- Fire (emissions to air); firewater runoff
- Discovery or potentially contaminated land

The following should occur:

1.0 REPORT IMMEDIATELY

- To a member of Site Management

OR

- To your manager or supervisor who should then report to a member of Site Management
- Site Management will then put into action the Incident Response Plan and report to the associated enforcing authorities and/or others as appropriate.

2.0 TRY TO IDENTIFY THE SOURCE OF THE POLLUTION AND STOP THE FLOW IMMEDIATELY

- Switch off sources of ignition
- Identify the material which may be burning and, if it can be done safely, extinguish with an appropriate fire extinguisher.

3.0 AVOID THE SPILLAGE OR FIRE WATER RUNOFF SPREADING

- Check the site drainage plan – where will the spillage go?
- Stop the flow if possible
- Dam the flow with earth/sand/polythene/absorbent materials
- Divert the flow from drains/watercourses where possible
- Use drain covers if available

4.0 GET A SPILL KIT

- Use absorbent material if appropriate
- Place a boom across watercourses if applicable

5.0 DO NOT WASH SPILLAGE OR FIREWATER RUNOFF INTO THE DRAINAGE SYSTEM – IT ONLY MAKES IT WORSE

- Never use detergents
- Use sand or absorbent pads to mop it up and dispose of as Special Waste.

6.0 IF THE SPILL HAS ALREADY ENTERED THE DRAINS – BLOCK THE DRAINS OFF IF AT ALL POSSIBLE

7.0 SEEK SPECIALIST ADVICE OR SEEK AUTHORISATION FROM THE ENVIRONMENTAL ADVOSOR BEFORE MOVING CONTAMINATED MATERIAL

8.0 AN INVESTIGATION WILL BE CARRIED OUT BY MANAGEMENT TO ASCERTAIN WHY THE INCIDENT OCCURRED.

Site Fire Safety Plan

Nominated Personnel:

The appointed Site Fire Safety Co-ordinator for the Project is: _____

The appointed Fire Marshall is: _____

DUTIES:

The Fire Safety Co-ordinator and Fire Marshall shall:

1. Ensure that all procedures and safety measures as defined in the Site Safety Plan are understood and complied with by all those on site.
2. Ensure that a HOT WORK Permit is established and monitor compliance.
3. Carry out daily/weekly checks on fire fighting equipment, alarms, detection devices, escape routes, emergency access and work areas.
4. Liaise with the local Fire Brigade, HSE, Police and site security
5. Maintain records of all checks, inspections, tests, fire patrols and fire drills. See attached Fire Log Book.
6. Execute the duties for the safe evacuation of the site and ensure that all staff, contractors and visitors report to the assembly points.
7. Ensure suitable and sufficient fire risk assessment is completed for all operations.
8. Ensure that the emergency services are provided with site drawings plans and all information required.

Fire Precautions – General Site Area

The following arrangements have been introduced:

- Fire extinguishers

Site Stores Office -	1 x Dry Powder
	1 x Foam
Fuel Storage Area -	1 x Dry Powder
	1 x Foam
Basement -	1 x Dry Powder
	1 x Foam
Fire Point one -	1 x Dry Powder
	1 x Foam
Fire Point two -	1 x Dry Powder
	1 x Foam

- Battery operated smoke detectors have been fitted.
- Test Certificates for permanent electrical installations.
- Test Certificates for temporary electrical supplies and distribution to each unit.

Fire Precautions – Existing building

The following measures have been introduced:

- Fire extinguishers have been located on each floor of the building
  Ground Floor - 1 x Foam
  1 x Water
  1 x CO2
  First Floor - 1 x Foam
  1 x Water
  1 x CO2
- Battery operated smoke detectors have been fitted.
- Test Certificates for permanent electrical installations.
- Means of raising alarm in the event of fire is by sounding the air horn on the ground floor at the bottom of the staircase.
- Emergency fire precautions and means of escape are communicated to all site operatives means of':
  - Induction Training Sessions when they arrive on site.
  - The arrangements are indicated on the attached drawing.
  - In the event of fire, personnel will leave the building and report to the assembly point outside the main entrance next to the car park.

Hot Work Permits:

Before commencing work the operative shall fill in the Hot Works Permit form in Appendix 6. This will detail the work, the area where the work will be carried out and a safety assessment when the works have been completed.

The completed form is to be taken to the site office where it will be signed by a competent member of staff detailed in the Organisation Chart.

A copy will be taken and issued to the operative carrying out the work. The original will remain in the H & S file.

Upon completion of the work at least one hour will pass, whereupon the operative shall return to the area of 'hot work' and check for any signs of fire. Having completed the check the operative will return to the site office and the original form will be 'signed off'.

In addition, if the work continues through a break period, an operative has to be in attendance for at least 60 minutes after the cessation of the hot work.

Escape Routes:

The emergency plan for action in the event of fire (Appendix 2) will be part of the induction given to all site operatives. The Plan will be displayed at the Fire points adjacent to the landing of the escape staircase.

Escape route plans will be displayed at each Fire point. The plans will be changed as the demolition/construction continues. For the latest version of the escape routes, please see the fire points or copies displayed on site Notice Board.

A copy of the plans showing the position of gas bottles, fire fighting aids, fuel stores and areas of high risk (i.e. voids in slabs, danger of label etc) will be displayed in the security hut and will be issued to the Fire Brigade on arrival in the case of an emergency call.

The Site Fire Officer will keep and maintain a weekly register of inspections of fire extinguishers, alarm/detection devices, escape routes, fire brigade access and fire fighting facilities.

Fire Drills:

Regular fire drills will be instigated allied with the training in the use of fire fighting equipment (also to be organised for new trades as they start on site). A record should be kept.

.

Appendix 1
Construction Lighting Specification

Construction Lighting Specification

			
Mini POD 500W	Festoon Light 30M	Fluorescent Light 2FT	Fluorescent Light 5FT
The Faithfull Site lights will suit both commercial and domestic use. Each lamp is constructed from a die-cast body and is equipped with a metal grille to prevent accidental contact with the hot lens and to protect it against damage. The leads to all lamps are fitted with plugs. These Faithfull Lights are free standing, portable and come in 240 Volt, 110 Volt and with 150 or 500 watt lamp versions. Mounted on a strong tubular steel frame for added stability. A 'tilt and lock' facility, this allows the head to be adjusted to a variety of positions to optimise the powerful light output . 500 Watt 240 Volt	Festoon lighting strings meet the requirements of BS7375: 1996 abd are designed for 110V operation.	Built for demanding construction tasks. Assembled using low temperature cable (-30 to +70 degrees) and Defender plugs and sockets. IP65 rated. Tough polycarbonate lens. Fully powder coated stand.	Built for demanding construction tasks. Assembled using low temperature cable (-30 to +70 degrees) and Defender plugs and sockets. IP65 rated. Tough polycarbonate lens. Fully powder coated stand.

Appendix 2
Site Fire Emergency Plan

SITE FIRE EMERGENCY PLAN

ACTION IN THE EVENT OF FIRE

1. Raise the Alarm

Operate the audible alarm bell call point (If Available) or use the air horns situated on the ground floor
and
Shout **FIRE, FIRE**

2. Call the Fire Brigade

Dial **999** and tell the operator that the fire brigade is required at the Construction Site at: No 8 Pilgrims Lane, NW3 1SL

3. On Hearing the Site Fire Alarm

. All personnel to leave the site and assemble at the designated fire assembly point

. Foreman to take charge of teams and report to the Site Manager

. Contractors Site Managers to check off employees/visitors against the sign in sheets and report to the Fire Marshall with the list of names.

. Do not stop to collect personal belongings

. Turn off generators, compressors and other powered equipment

. Turn off all heat producing equipment and shut cylinder valves provided if it is safe to do so

. Report locations of any cylinders, fuel containers or flammable/explosive liquids to site management

. Obey instructions from the Site Fire Safety Co-ordinator and supervisory staff.

. Do not re-enter the site until it is safe.

Appendix 3
Parking Survey and Swept Path Analysis

MRS IYABODE ABIOLA

PROPOSED DEVELOPMENT AT
8 PILGRIM'S LANE LONDON, NW3 1SL

PARKING SURVEY & SWEPT PATH ANALYSIS

August 2012

Report Author: Dónal Emerson
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Checked by: Nick Ferguson

Ref: File path P:\ P968 Pilgrim's Lane Parking Survey & Swept Path Analysis August 2012

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Appendices

1.0 INTRODUCTION

1.1 Paul Mew Associates is instructed by Mrs Iyabode Abiola to undertake a parking survey and swept path analysis study in relation to the temporary construction phase of a proposed development at 8 Pilgrim's Lane, NW3 1SL.

Site Location

1.2 The application site's location is presented on a map in Figure 1 of this report; the site's boundary is displayed on an Ordnance Survey (OS) map base in Appendix A.

1.3 The site is situated on the east side of Pilgrim's Lane approximately 103m to the north of the junction with the A502 Rosslyn Hill.

The Proposal

1.4 The proposed development involves the construction of a new basement floor at the rear of the building, and an increase in depth of the existing front basement. The proposed site plan is presented in Appendix B.

1.5 The purpose of this report is to supplement the Construction Management Plan produced by A&I Construction for this development. It will assess the potential impact of the temporary construction work on parking supply locally, as well as presentation of vehicle swept paths to assess the temporary impact of the construction work on the flow of traffic along Pilgrim's Lane.

Background

1.6 A planning application (reference: 2011/0526/P) was submitted to the London Borough of Camden (LBC) in February 2011, for the following:

> *Excavation of basement extension with ground floor roof light, raising the ridge of the existing roofline to the south west elevation and erection of boundary wall and*

railings to front elevation as well as alterations to the fenestration and associated alterations to existing dwelling house (Class C3)

1.7 The planning application was refused, part of the reasons for refusal related to highways impact matters, refer to the refusal notice extract as follows:

The proposed development, in the absence of a legal agreement to secure the provision of a Construction Management Plan, would be likely to contribute unacceptably to traffic disruption and dangerous situations for pedestrians and other road users contrary to CS11 (Promoting sustainable and efficient travel) of the London Borough of Camden Local Development Framework Core Strategy and policy DP21 (Development connecting to the highway network) of the London Borough of Camden Local Development Framework Core Strategy and Development Policies.

2.0 PARKING SURVEY

Construction Traffic

2.1 A&I Construction has produced a Construction Management Plan (CMP) for submission with the planning application. The CMP document describes the expected construction traffic movements generated by the temporary construction phase of the proposal.

2.2 The predicted flow of construction related traffic is set out as follows based on assessment by A&I Construction:

- Around 10 workers would be on-site at any one time; they would commute in together by van/car. They would be dropped off and the cars/vans would have to find the nearest pay and display bays in proximity to the site as the bays closest to the house are permit holder only bays;
- General builders merchant Crane Lorries (height 4.5m with the crane completely down, length 10m and width 2.5m) would visit the site around twice a week when the job first starts, declining down to once every 2-3 weeks thereafter;
- Grab lorries (2.5 wide, 7m long, 4m high) for soil removal during excavation at the beginning of the project;
- A&I Construction estimates that the Crane and Grab lorries would be on-site for about a half hour each time, this would be planned for mid morning or early afternoon to avoid the early morning rush and afternoon rush;
- Standard transit vans (couriers) to make the odd delivery once or twice a week; and
- The road directly outside the property is on double yellows so it will only be used for off-loading vehicles. There are resident parking bays, to the left of the property (As you look at the front door). A skip licence

would be required to put the skip directly inform of the house on the double yellow lines, which Camden Council say is allowed on this road.

2.3 The construction phase of this development may give rise to a minimal temporary additional parking stress in the local area. To assess any potential impact, a parking survey has been carried out.

2.4 The entire survey parking area consists of residential streets. The following parking survey's design and execution has been undertaken in accordance with Lambeth Transport's *Parking Survey Methodology*, a copy of which is presented in full in Appendix C. The Lambeth methodology is the generally accepted standard for London parking surveys and for Camden Council.

2.5 All kerb space within a 200m distance of the site, to the north of the A502 Rosslyn Hill, has been measured using a measuring wheel and any on-street regulations recorded. An extract from Lambeth's guidance note, which sets out clearly how a parking survey area should be defined, is extracted as follows:

> *"Extent of survey*
>
> *• The survey is to cover all roads within 200 m walking distance of the site.*
>
> *• All places where someone might park if they are driving around looking for a parking space should be included. People are unlikely to stop half way along a road at an imaginary 200m line so the survey should be extended to the next junction or shortened to the previous one, or taken to a suitable location along a road. Common sense should be applied in all cases and the extent of the survey area and justifications for amending it are to be included in the survey and will be checked.*
>
> *• Survey areas can be amended in the following cases:*
>
> *a) If there is no possibility of parking somewhere within the 200m boundary or people would not wish to park their although clear justification for this must be provided.*
>
> *b) If the site is in a CPZ any parking bays in an adjoining CPZ are to be excluded.*
>
> *c) If the site lies adjacent to, but not in, a CPZ then all roads in that CPZ are to be excluded.*
>
> *d) Areas that fall outside of Lambeth are to be excluded.*
>
> *• Some factors may not become apparent until the survey has been submitted to the Council for consideration. For instance, the survey itself may reveal anomalies that require further investigation, or a subsequent Officer site visit may reveal*

> *circumstances that require amendments. These will be taken into consideration in assessing the survey and a further survey may be required.*
> *• If inadequate justification is provided for a survey area then amendments may be required or a recommendation made accordingly. "*

2.6 The extent of survey area covered within this parking assessment is shown in Figure 2. The survey area has been split into individual streets comprising the following:

- Pilgrim's Lane
- Kemplay Road
- Carlingford Road
- Willoughby Road

2.7 All vehicle crossovers, kerb space within 5m of junctions, and double yellow line kerb space has been eliminated from the surveys. The remainder of the parkable kerb space within the survey area has been measured on-site; the total number of parking spaces within the survey area has been derived using the following criteria from Lambeth Transport's *Parking Survey Methodology*.

> *"To calculate parking capacity each length of parking bay must be measured and then converted into parking spaces by dividing the length by 5 and rounding down to the nearest whole number (e.g. a parking bay measuring 47m in length would provide 9 parking bays – 47-2=45, 45/5=9). The capacity of each separate parking bay must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area."*

2.8 The parking survey inventory is presented in Table 1 below. Figures 3 and 4 show the locations of the different kerb side restrictions within the parking survey area. Note that Pilgrim's Lane to the south of the application site consists entirely of double yellow lines, and as such has been eliminated from this assessment.

Table 1. Parking Survey Inventory

Streets	INVENTORY					
	Resident Zone 'CA-H (b)'		Disabled		Motorbike	
	Total length of parking bay (m)	Total spaces	Total length of parking bay (m)	Total spaces	Total length of parking bay (m)	Total spaces
Pilgrim's Lane	187.5	35	6.3	1	3.6	-
Kemplay Road	224.4	43	-	-	-	-
Carlingford Road	232.2	46			-	-
Willoughby Road	103.7	20	-	-	-	-
Total	747.8	144	6.3	1	3.6	

Notes:
Resident Controlled Parking Zone (CPZ) 'CA-H (b)'; resident permit holders only Monday to Saturday 09:00- 20:00.

Source: PMA Survey

2.9 The survey inventory demonstrates that there are 144 on-street parking spaces within the survey area, all in CPZ Zone 'CA-H (b); furthermore there is one disabled parking bay and a 3.6 m motorcycle parking bay. No unrestricted parking spaces or pay-and-display bays are within the survey area.

Daytime Surveys

2.10 Should the temporary construction phase have any impact at all on parking stress on the local streets, it would be during the daytime.

2.11 Table 2 presents the results of the first weekday daytime parking survey which was carried out at 15:00; Table 3 presents the results of a survey at 17:00. Both surveys were carried out on Wednesday 27th June 2012.

Table 2. 15:00 Daytime Parking Survey Results; Resident Zone 'CA-H (b)'

Streets	Average Daytime Parking Survey Results - Resident Zone 'CA-H (b)'			
	Length of parkable kerb (m)	Total spaces	Cars Parked	Parking Stress (%)
Pilgrim's Lane	187.5	35	24	69%
Kemplay Road	224.4	43	30	70%
Carlingford Road	232.2	46	43	93%
Willoughby Road	103.7	20	17	85%
Total	747.8	144	114	79%

Source: PMA Survey

Table 3. 17:00 Daytime Parking Survey Results; Resident Zone 'CA-H (b)'

Streets	Average Daytime Parking Survey Results - Resident Zone 'CA-H (b)'			
	Length of parkable kerb (m)	Total spaces	Cars Parked	Parking Stress (%)
Pilgrim's Lane	187.5	35	23	66%
Kemplay Road	224.4	43	41	95%
Carlingford Road	232.2	46	31	67%
Willoughby Road	103.7	20	12	60%
Total	747.8	144	107	74%

Source: PMA Survey

2.12 The results in Table 2 demonstrate that the observed parking stress at 15:00 within the survey area is 79%, of the 144 total permit holder parking spaces, a total of 30 were observed to be available.

2.13 The in Table 3 demonstrate that the observed parking stress at 17:00 within the survey area is slightly less at 74%, of the 144 total spaces, a total of 37 were observed to be available.

2.14 The results of our daytime surveys show that local residents who may have left work for the day and would be returning home from 15:00 to 17:00 on a typical weekday have a sufficient reserve parking capacity within the local streets. Therefore on the off chance that the temporary construction phase of the proposal may generate some added parking stress on the local streets, the results of our daytime surveys demonstrate that the impact on neighbouring amenity will be unaffected.

3.0 SWEPT PATH ANALYSIS

3.1 As set out in Chapter 2, asides from occasional delivery vans, the largest and most prevalent construction related traffic accessing the site during the temporary construction phase of the proposed development will be crane lorries and grab lorries.

3.2 Crane lorries (height 4.5m with the crane completely down, length 10m and width 2.5m) would visit the site around twice a week when the job first starts, declining down to once every 2-3 weeks thereafter, whereas grab lorries (2.5 wide, 7m long, 4m high) for soil removal during excavation at the beginning of the project would also visit the site say once or twice a week. It should be noted that the CMP will ensure that at one time no more than one construction related vehicle will access the site.

3.3 Crane and grab lorries would be on-site for about a half hour each time, this would be planned for mid morning or early afternoon to avoid the early morning rush and afternoon rush. It is therefore clear that the amount of time that a large construction related vehicle will be positioned outside of the application site will be minimal throughout a typical week during the construction phase.

3.4 In order to test the impact of construction vehicles on Pilgrim's Lane the AutoTrack swept path analysis program has been utilised. The purpose of the AutoTrack assessment is to determine whether construction vehicles parked by the site would obstruct the flow of traffic along Pilgrim's Lane.

3.5 The overall road width remaining on Pilgrim's Lane adjoining the application site with a crane lorry or grab lorry positioned on the kerb side to the front of the site is around 6.3m. As such cars and LGV's would be able to pass a parked construction vehicle unhindered.

3.6 Our analysis is based on a worst case scenario. The largest likely vehicle that would be passing the site is a Council refuse collection vehicle, a Mercedes

Econic 2629LL 6x2 rear steer model, which is used for refuse collection in the local area. The Council's waste collection contractors, Veolia Environmental Services (UK), confirmed the size and specification of its vehicles utilised in the Hampstead area in an email exchange in June 2012.

3.7 It should be noted however that for most of the day nothing larger than a car or a transit van/light goods vehicle (LGV) will pass down Pilgrim's Lane.

3.8 A refuse vehicle is used as a worst case scenario, the likelihood of a refuse vehicle requiring access along Pilgrim's Lane at the same time as a large construction related vehicle is parked to the front of 8 Pilgrim's Lane is expected to be minimal.

3.9 The dimensions of a Camden Council refuse vehicle are shown in Table 5 below:

Table 5. Dimensions of the Mercedes Econic 2629LL 6x2 Rear Steer Model

Dimension	Size of dimension (m)
Overall Length	8.6
Overall Height	2.885
Overall Width	2.49
Minimum Body Ground Clearance	2.45
Turning Circle (Wall to Wall)	16.9

Source: LB Camden

3.10 The largest construction vehicle used will be a mobile crane which will visit the site for half hour periods, twice per week at first, later dropping to visits once every two to three weeks. The mobile crane dimensions are detailed in Table 6 below:

Table 6. Dimensions of the Mobile Crane Used by A&I

Dimension	Size of dimension (m)
Overall Length	10m
Overall Height	4.5m
Overall Width	2.5m

Source: A&I Construction

3.11 As the swept path analysis in Figure 5 demonstrates, it is possible for the refuse vehicle detailed in Table 5 above to pass by a mobile crane as detailed in Table 6 when it is parked in front of 8 Pilgrim's Lane. The mobile crane would not be left unattended for the time that it is stationed to the front of the application site; it will therefore be possible to reverse the vehicle slightly if necessary to allow large vehicles past on Pilgrim's Lane.

3.12 As mentioned above, for a refuse vehicle to pass a mobile crane, the mobile crane would need to reverse slightly in such a way that it could potentially temporarily block the driveway of 10 Pilgrim's Lane. The chances of this manoeuvre being necessary are highly unlikely and the associated impacts will be minimal. It would take less than a minute for the crane to be moved to allow a refuse vehicle to pass and then return to its position away from the neighbouring driveway.

3.13 The most frequent vehicle used for construction will be a 20 yard grab lorry. It will be arriving daily to pick up the soil which will be heaped on the driveway of 8 Pilgrim's Lane. The dimensions of the 20 yard grab lorry are shown in Table 7 below:

Table 7. Dimensions of the 20 Yard Grab Lorry

Dimension	Size of dimension (m)
Overall Length	9.12m
Overall Height	4.74m
Overall Width	2.52m

Source: A&I Construction

3.14 As Figure 6 shows the 20 yard grab lorry can also be passed by a refuse vehicle detailed in Table 5.

3.15 According to information attainable from the Council's website, domestic rubbish collection on Pilgrim's Lane occurs on Monday's and recycling collection occurs on Wednesdays. The CMP will ensure that, as far as is possible, visit by mobile cranes and grab lorries during the temporary construction phase are managed so as not to coincide with rubbish and recycling collections.

3.16 Irrespective of the above, the results of our analysis conclude that the temporary construction phase of the proposed development will not have a material impact on the existing flow of vehicle traffic on Pilgrim's Lane, or on highway safety and neighbouring amenity.

4.0 SUMMARY

4.1 The proposal will see a new basement constructed at 8 Pilgrim's Lane, NW3 1SL.

4.2 This report has been prepared to appraise the potential impacts of the temporary construction phase of development on the adjoining highway, specifically with regard to highway safety and neighbouring amenity in relation to existing on-street parking conditions and vehicle thoroughfare.

4.3 It is not expected that the temporary construction phase of the proposed development will result in parking spaces within the adjoining CPZ being unavailable for residents.

4.4 However, the results of the on-street parking surveys demonstrate that on a typical weekday afternoon parking stress is at around 79%. This means that the area is safely below the 90% threshold over which London Borough of Camden historically considered an area to suffer from parking congestion. There are up to 33 free parking spaces on the streets within close proximity to the application site during the day.

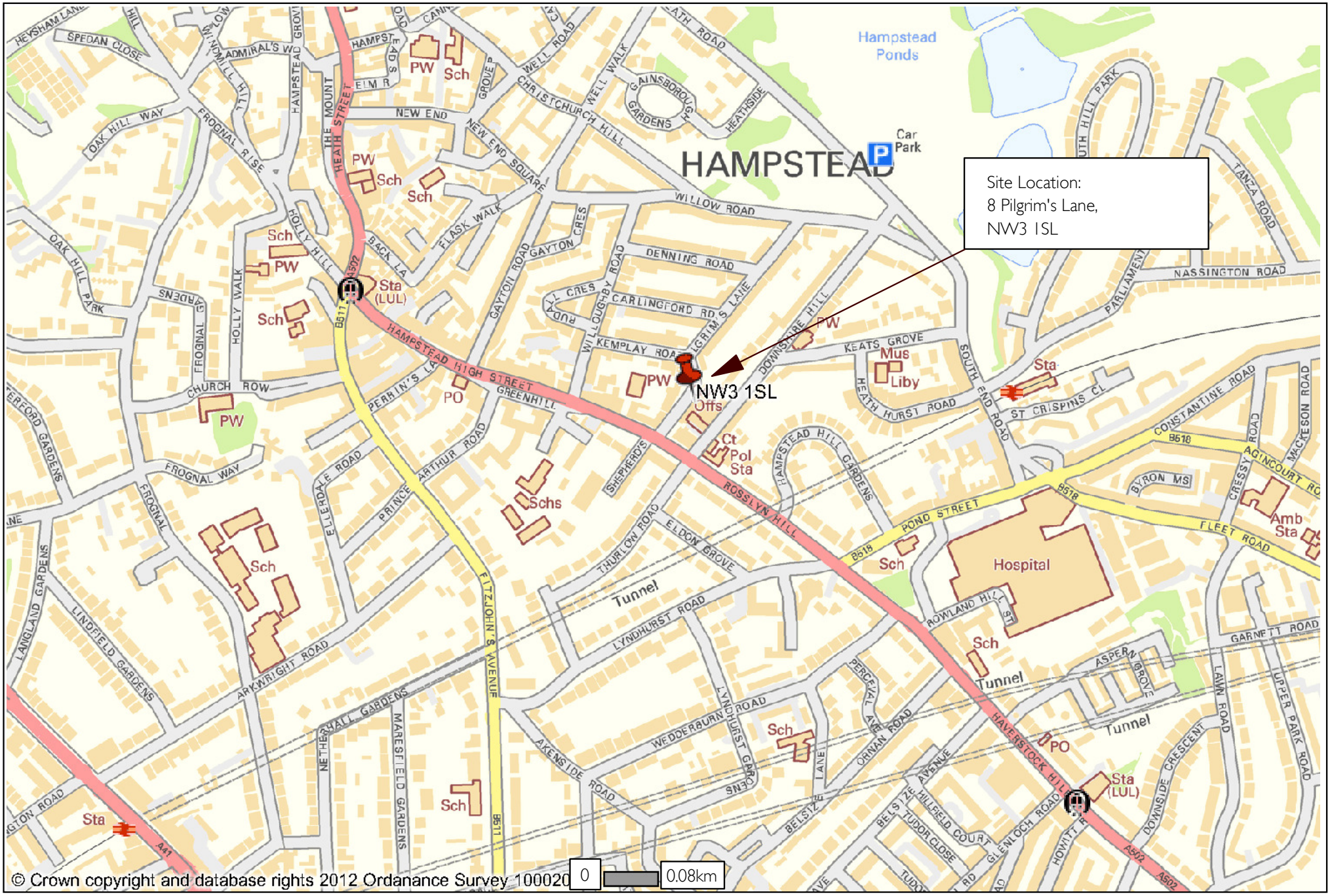
4.5 The construction vehicles used can be parked/positioned to the front of the site without disrupting the flow of traffic along Pilgrim's Lane.

4.6 It is not expected that anything larger than a transit van or light goods van will require access along Pilgrims Lane at the same time as a mobile crane is parked to the front of the application site, which would be at designated times during the construction phase of the development only.

4.7 The largest size of vehicle that may require access along Pilgrim's Lane at the same time as a mobile crane is parked to the front of 8 Pilgrim's Lane is a Council contracted refuse vehicle. Visits by mobile cranes will be managed so as to not coincide with the local refuse collection days/times as far as is possible. However on the very unlikely and worst case scenario that a refuse vehicle

needs to pass a mobile crane outside the application site, the crane would need to be reversed slightly and in doing so would for a short period block access to the driveway to the adjoining property No. 10 Pilgrim's Lane. Should this highly unlikely scenario occur, the blocking of the neighbouring driveway would be for say less than a minute. The resultant impact on neighbouring amenity would therefore be nominal.

FIGURES

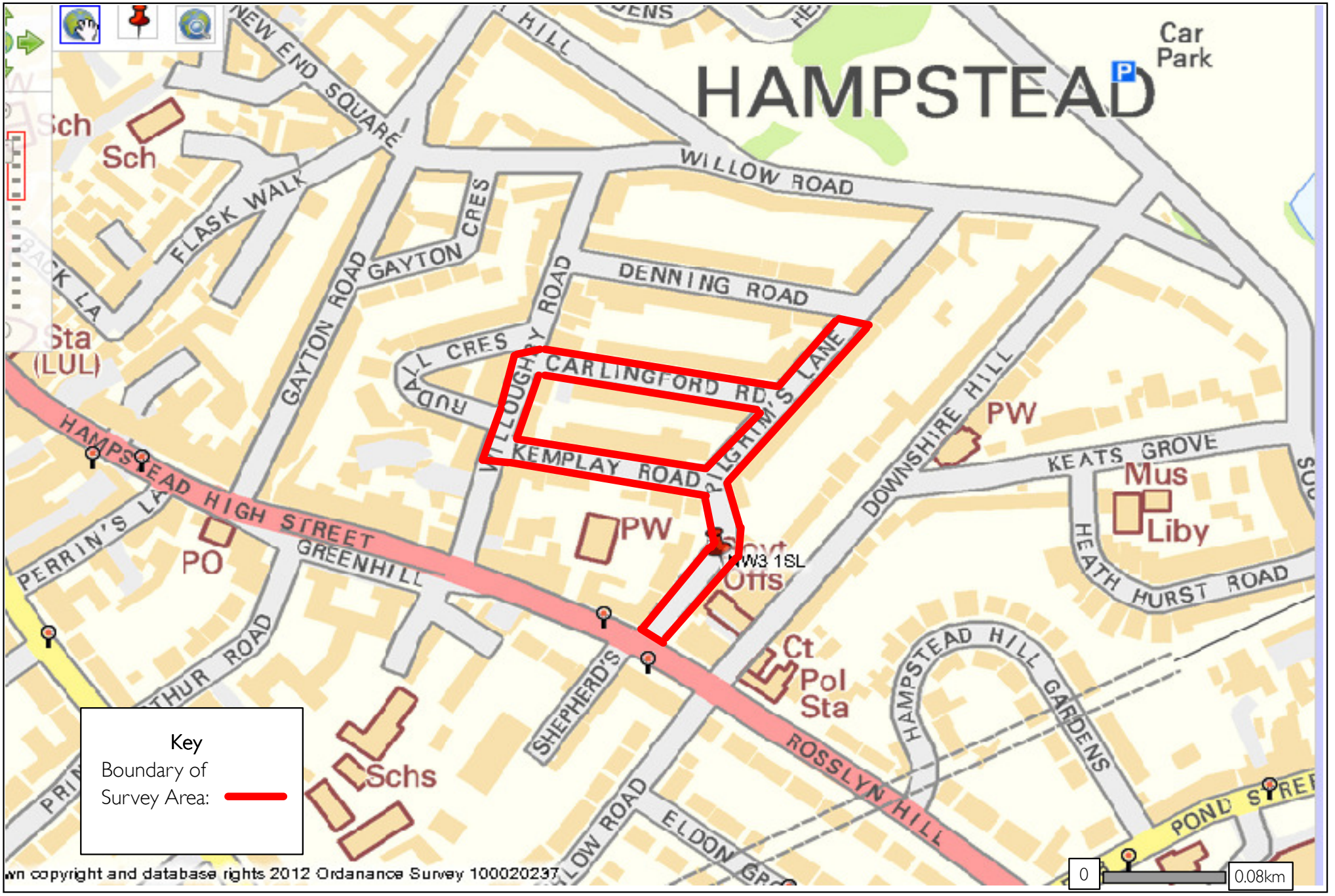


Date: 2-July-2012
Scale: As shown on map
Source: Transport Direct
Drawing No: P968/PS/01

N

P968:8 Pilgrims Lane NW3 1SL
Figure 1
Site Location

PAUL MEW ASSOCIATES
TRAFFIC CONSULTANTS

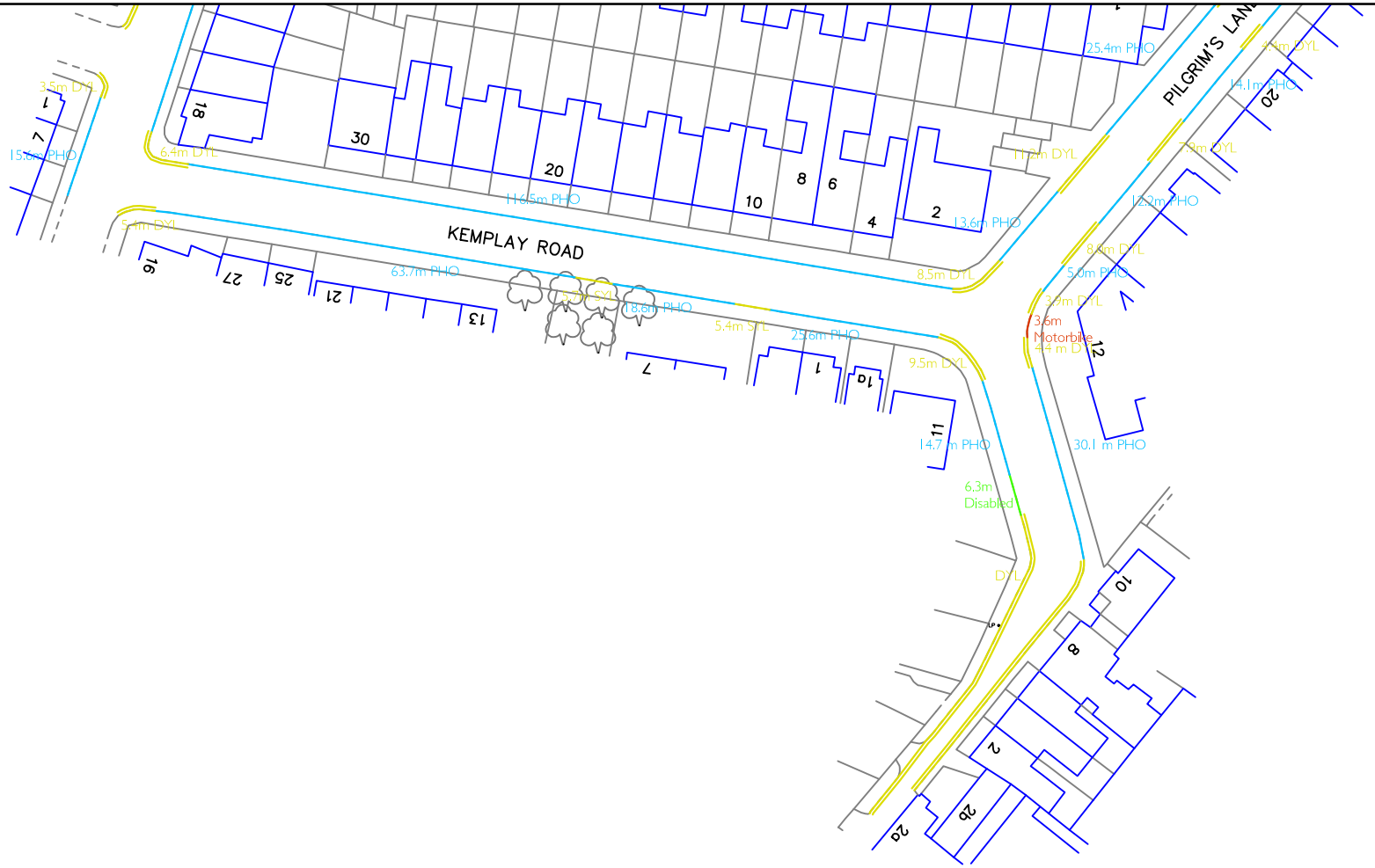


Date: 2-August-2012
Scale: As shown on map
Source: Transport Direct
Drawing No: P968/PS/02

N

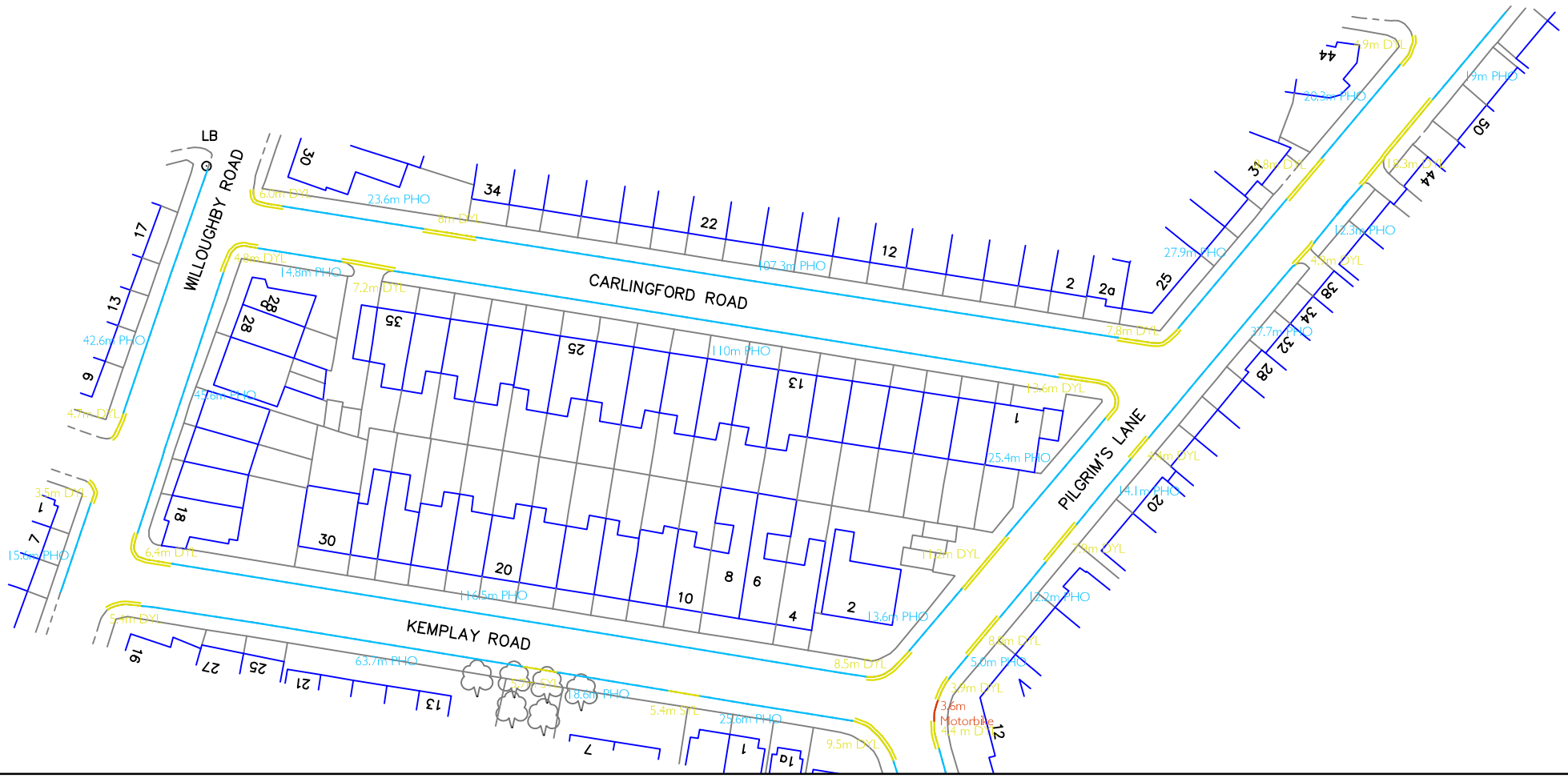
P968:8 Pilgrims Lane NW3 1SL
Figure 2
Extent of Parking Survey Area

PAUL MEW ASSOCIATES
TRAFFIC CONSULTANTS



Date: 2-July-2012 Scale: 1:1000@A4 Source: OS/PMA Drawing No. P968/PS/3	N	P968: 8 Pilgrim's Lane NW3 1SL Figure 3 Kerb Side Parking Inventory; Part of Pilgrim's Lane & Kemplay Road

PAUL MEW ASSOCIATES
TRAFFIC CONSULTANTS
The Mission Hall, Walkers Place, Putney, London SW15 1PP
Tel: 0208 780 0426 Fax: 0208 780 0428
E-mail: paul.mew@pma-traffic.co.uk Website: www.pma-traffic.co.uk



Date: 2-July-2012 Scale: 1:1000@A4 Source: OS/PMA Drawing No. P968/PS/04	N	P968: 8 Pilgrim's Lane NW3 1SL Figure 4 Kerb Side Parking Inventory; Remainder of the Study Area

PAUL MEW ASSOCIATES
TRAFFIC CONSULTANTS
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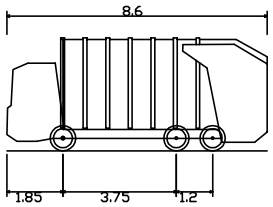
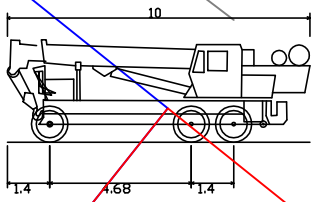
Tel: 0208 780 0426 Fax: 0208 780 0428
E-mail: paul.mew@pma-traffic.co.uk Website: www.pma-traffic.co.uk



Copy of Camden Spec Refuse Vehicle (with wing mirrors)

Overall Length	8.600m
Overall Width	2.490m
Overall Body Height	3.734m
Min Body Ground Clearance	0.286m
Track Width	2.400m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	7.100m



A&I Mobile Crane (with wing mirrors)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.386m
Min Body Ground Clearance	0.590m
Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	10.000m

Date: 1-August-2012
Scale: 1:250@A4
Source: OS/AutoTrack
Drawing No. P968/PS/05

N

P968: 8 Pilgrim's Lane NW3 1SL
Figure 5
AutoTrack; LB Camden Refuse Vehicle Passing a Parked Mobile Crane

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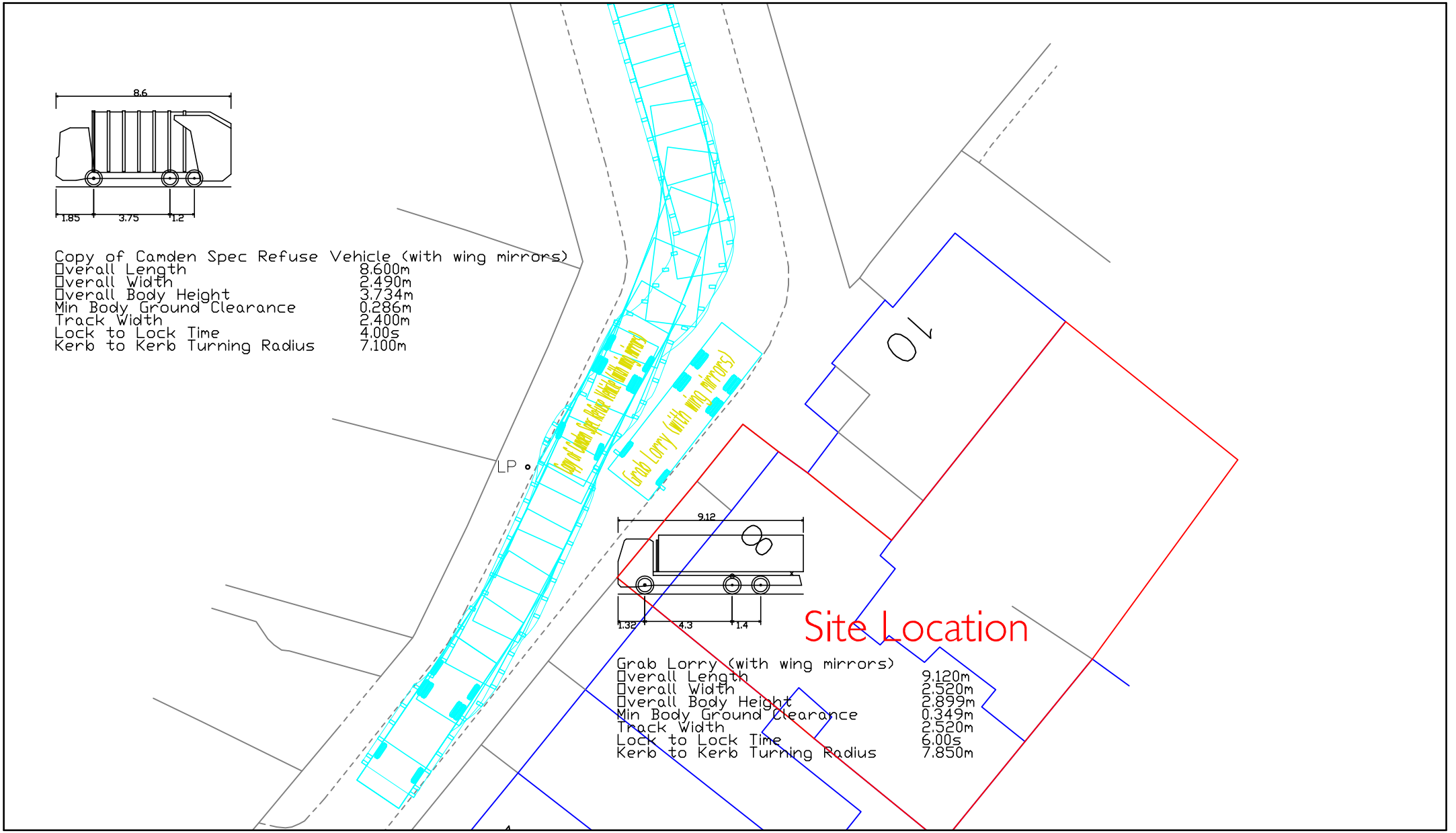
Tel: 0208 780 0426 Fax: 0208 780 0428
E-mail: paul.mew@pma-traffic.co.uk Website: www.pma-traffic.co.uk



Date: 1-August-2012
Scale: 1:250@A4
Source: OS/AutoTrack
Drawing No. P968/PS/06

N

P968: 8 Pilgrim's Lane NW3 1SL
Figure 6
AutoTrack; LB Camden Refuse Vehicle Passing a Parked Grab Lorry

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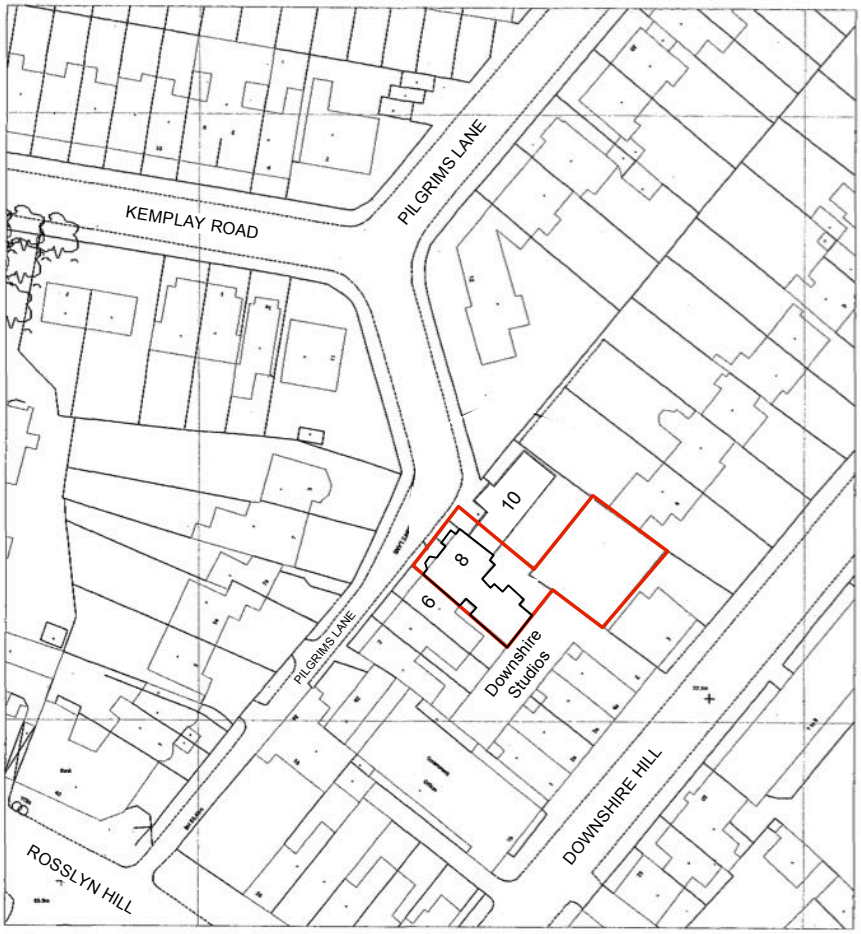
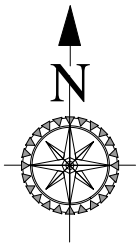
E-mail: paul.mew@pma-traffic.co.uk Website: www.pma-traffic.co.uk

APPENDIX A
Site Boundary



LOCATION PLAN 1:1250



8 PILGRIMS LANE
HAMPSTEAD
LONDON NW3 1SL

Drawing Ref: 999-AP2-10

Brod Wight
ARCHITECTS
75 Haverstock Hill London NW3 4SL
Tel 020 7722 0810
Fax 020 7722 0939
E mail office@brodwight.co.uk
Web www.brodwight.co.uk

APPENDIX B
Proposed Site Plan

8 PILGRIMS LANE - HAMPSTEAD - LONDON NW3

NO 3 DOWNSHIRE HILL
REAR GARDEN

existing 1.55m hw slatted fence with bamboo matting on No 8 side

purple plum
T3 removed

NO 4 DOWNSHIRE HILL

this area replanted

grass
78.39

T1
JAPANESE CHERRY
11mH

void under steps

DOWNSHIRE STUDIOS

78.47

ELEVATION C1

new stone steps up to terrace

up

glass balustrade

No 8 REAR GARDEN

E

grass

replacement tree

existing fence

T5
PARROTIA PERSICA
Persian Ironwood

new stone steps up from playroom patio

78.56

B

up

T2
EUONYMUS
JAPONICA (shrub)
4mH

existing 800 high (approx) brick wall with 1300 high close boarded fence and 900 high trellis over

existing blind steps retained

NO 4 DOWNSHIRE HILL
REAR GARDEN

ELEVATION C

TERRACE

79.90
approx

flat walk-on glass rooflight

level threshold for wheelchair access

existing skylight

A

E

NO 6 - REAR PATIO

81.27
approx

80.10

LIVING-ROOM

B

ELEVATION E

REAR INSERTION POINT

level threshold for wheelchair access

79.90

F

No 10 REAR PATIO

raised timber deck

80.80
approx

stone paved patio & grass

80.50
approx

existing 1900 high (approx) brick wall with 900 high trellis over

gates

paving over plant room roof

up

ELEVATION D

new white-painted timber doors with leaded glass over

79.22

FAMILY ROOM
PATIO

brickwork wall to match existing facing bricks

gates removed

door converted to window

80.80

up

luggage lift

GUEST
WC

window bricked in

LIGHT
WELL

obscured glass

81.10

existing window

corbel over

81.20

timber fence

new bay window

up from playroom

window bricked in

D

FAMILY

STORAGE

UTILITY

up

up to ground floor

dumb waiter

D

No 10

new riven york stone pavers

CARPORT
(existing)

GRILLE

kitchen extract fan

CONTINUES ON GROUND FLOOR

79.32

coats

WC

COMMON INSERTION POINT

No 6

C

KITCHEN
floor lowered
by 600mm

MUDROOM

STORAGE

C

79.32

floor lowered
by 400mm

79.32

up

grille

grille

bin/recycling storage

up

79.92

existing ceiling ht

cupboard

up

FRONT AREA

80.61

bin storage

ELEVATION A

A

KEY TO PROPOSED WORK

- existing walls
- new walls
  with thermal insulation to external walls
- existing walls to be removed
- insulation added to existing walls

  As the house is in a Conservation Area, Building Control requirements for improving the thermal performance of existing external walls by adding insulation to interior surfaces, are not required.

  This is subject to verification with Camden Building Control during the building stage of the project.

A1-size drawing
1:50

PRELIMINARY REVISION D - 17th May 2012

Rear garden tree species updated and re-named to align with Cromar report - T3 removed - T5 replaced

Level thresholds for wheelchair access added to living-room terrace doors

South wall of living-room amended

New stone pavers on ramp and car space

PRELIMINARY REVISION C - 23rd January 2012

falsework wall in living-room relocated

PRELIMINARY REVISION B - 13th December 2011

living-room fireplace profile simplified

blind garden steps now retained

access to No 10 cupboard in carport removed

front basement changed - utility-room enlarged and cinema relocated to new basement

PRELIMINARY REVISION A - 1st December 2011

pool patio re-named playroom patio - trees/grass shown

steps from family-room patio to upper terrace widened

PROPOSED UPPER BASEMENT AND REAR GARDEN

LEVELS 79.32 & 80.10

0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

0 10ft 20ft 30ft

NORTH

PRELIMINARY

Brod Wight
ARCHITECTS

TEL 020 7722 0810 FAX 020 7722 0939 E MAIL office@brodwight.co.uk WEB www.brodwight.co.uk
75 Haverstock Hill London NW3 4SL

8 PILGRIM'S LANE - HAMPSTEAD - LONDON NW3 1SL

PROPOSED UPPER BASEMENT PLAN **999-AP3-03D**

Date October 2011 Scale 1:50 @ A1 Revisions

APPENDIX C

Lambeth Transport's *Parking Survey Methodology*

LAMBETH COUNCIL PARKING SURVEY GUIDANCE NOTE

1. INTRODUCTION AND POLICY BACKGROUND

An increase in parking demand is a key impact of many new developments. Investigation of this impact forms an important part of the Council's analysis of proposed developments and therefore it is essential that enough information is submitted by a developer to allow a full analysis of the issue.

There is only a finite supply of on-street parking space and most forms of development have the potential to increase the amount of on-street parking, more commonly known as parking stress. High parking stress can affect highway safety, the free-flow of traffic, amenity, access by emergency services, refuse collection and delivery of goods. Any increase in the likelihood of these situations occurring can lead to a recommendation for refusal of a planning application. In assessing a planning application, therefore, the Council needs to ensure that further development will not add significantly to parking stress.

The Council's Unitary Development Plan 2007 (UDP) sets out Lambeth's policies on parking related to new development. Developers are particularly advised to read policies 14 and 17 although policy 39 may also relevant. The UDP can be viewed on the Council's website at the following address:

http://www.lambeth.gov.uk/Services/HousingPlanning/Planning/PlanningPolicy/AdoptedUnitaryDevelopmentPlan2007.htm

The Planning Department will request that a Parking Survey is submitted as part of a planning application for a residential development and in some cases for commercial developments as well. Ordinarily residential planning applications will not be validated without this information. This is so that the Council is able to make an informed decision, within statutory planning timescales. This also benefits applicants in obtaining a quick decision.

In relation to commercial developments, the requirement for a parking survey will depend on the scale and nature of each development.

Advice on whether a survey is required can be obtained from the Council's Transport Planning team by writing to the address at the bottom of this note or preferably by emailing **transportplanning@lambeth.gov.uk** with details of the proposed development. A written response is required and this should be submitted with a planning application if a survey is not required.

A developer can propose on-site parking bays up to the maximum stated in Policy 14 of the UDP but even where on-site parking provision is at the maximum allowed this may still not be enough to accommodate all cars generated by a development so a parking survey may still be required. An assessment of likely car ownership of future occupants will then be undertaken using local census information to understand the scale of any overspill parking

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1st Floor Blue Star House
234-244 Stockwell Road
London SW9 9SP

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Fax: 020 7926 9001
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www.lambeth.gov.uk

2. UNDERTAKING A SURVEY

Residential Developments

The Council requires a parking survey to cover an area where residents of a proposed development may want to park. This generally covers an area of 200m (or a 2 minute walk) around a site. This area is **NOT** a circle with a 200m radius but a 200m walking distance as measured along all roads up to a point 200m from the site.

The time a survey is undertaken is also important. It needs to be done when the highest number of residents are at home which is generally late at night during the week.

The following are guidelines that need to be followed when doing a survey. If these guidelines are not followed then the Council is unlikely to be able to make a full and proper assessment of a proposal.

Commercial Developments

Surveys for commercial developments should generally be done during proposed opening hours on an hourly beat basis. The extent of the surveys should cover an area within 500m walking distance (or 5 minute walk) of a site. Excluding the time and extent of the surveys the same principles apply as a survey for a residential development as set out below.

Developers should contact the Council for further advice.

Survey times

- One survey between the hours of 0030-0530 must be undertaken on two separate weekday nights (ie. Monday, Tuesday, Wednesday or Thursday).

- Weeks that include Public Holidays and school holidays must be avoided and it is advised that weeks preceding and following holidays should also be avoided. Undertaking a survey on or close to a date when an event taking place locally may impact the results of the survey must also be avoided.

- For sites that are in and/or close to town centres surveys should be undertaken Monday-Wednesday only.

- Where there are commercial uses close to the site, including town centres, morning and early evening surveys may also be required due to conflict with commuter parking. In these cases surveys between the hours of 0700-0830 and 1800-1900 may be required, noting the amount of parking on a 15-minute basis over this time.

- If there are regular specific evening uses close to a site then an additional survey should be undertaken when these uses are in operation (eg. church, etc).

- In areas close to railway stations and in other areas where it is known that commuter parking occurs additional morning and evening peak hour surveys will be required in order to assess the impact of commuter parking. These should be done between 0700-0800 and 1730-1830.

- **In some cases, the hours of the survey may need to be extended or amended. Applicants should contact the Council prior to undertaking a survey if there is any doubt.**

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London SW9 9SP

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www.lambeth.gov.uk

Extent of survey

- The survey is to cover all roads within 200 metres walking distance of the site.

- All places where someone might park if they are driving around looking for a parking space should be included. People are unlikely to stop half way along a road at an imaginary 200m line so the survey should be extended to the next junction or shortened to the previous one, or taken to a suitable location along a road. Common sense should be applied in all cases and the extent of the survey area and justifications for amending it are to be included in the survey and will be checked.

- Survey areas can be amended in the following cases:

  a) If there is no possibility of parking somewhere within the 200m boundary or people would not wish to park there although clear justification for this must be provided.
  b) If the site is in a CPZ any parking bays in an adjoining CPZ are to be excluded.
  c) If the site lies adjacent to, but not in, a CPZ then all roads in that CPZ are to be excluded.
  d) Areas that fall outside of Lambeth are to be excluded.

- Some factors may not become apparent until the survey has been submitted to the Council for consideration. For instance, the survey itself may reveal anomalies that require further investigation, or a subsequent Officer site visit may reveal circumstances that require amendments. These will be taken into consideration in assessing the survey and a further survey may be required.

- If inadequate justification is provided for a survey area then amendments may be required or a recommendation made accordingly.

Required Information

- In all cases a note should be made of the date and time of the survey.

- A description of the area should be provided noting any significant land uses in the vicinity of the site that may affect parking within the survey area (eg. churches, restaurants, bars and clubs, train stations, hospitals, large offices, town centres etc).

- Any unusual observations, e.g. suspended parking bays, spaces out of use because of road works or presence of skips, etc should also be noted.

- A drawing (preferably scaled at 1:1250) showing the site location and extent of the survey area is to be provided.

- Those areas where residents can legally park for 24 hours need to be recorded and shown on a plan together with measurements if the plan is not to scale. These are the areas that will be included in the calculation of parking stress so must be accurately recorded. In a CPZ this includes all Resident Permit Holder parking bays and Shared parking bays. Outside a CPZ this will be all areas of kerb where there are no restrictions on parking.

- Areas where cars can be legally parked overnight need to be marked separately. These are generally Single Yellow Lines or Single Red Lines (SYL/SRL) or short term

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parking or Pay-and-Display bays (ST). The number of cars parked in these areas should be counted, however.

- All other parking and waiting restrictions such as Double Yellow Lines and Double Red Lines, bus lay-bys, kerb build-outs, and crossovers (vehicular accesses) etc should also be shown on the plan.

- If possible, photographs should be taken of the parking conditions in the survey area to back-up the results. **This is not a requirement** and should only be undertaken if the surveyor is happy to do so. If submitted, the location of each photograph should be clearly marked.

- The number of cars parked on each road within the survey area on each night should be counted and recorded in a table as shown below. It would be helpful, but is not essential, if the location of each car could be noted approximately on the plan (marked with an X).

- For the purposes of calculating parking stress, it is assumed that each vehicle measures 5m in length.

Areas Within A CPZ

Resident Permit Holder (RPH) Bays and Shared Bays which allow residents parking (these may be shared with Pay-and-Display parking and/or Business Permit Holders) are the only bays which are counted in the calculation.

To calculate parking capacity each length of parking bay must be measured and then converted into parking spaces by dividing the length by 5 and rounding down to the nearest whole number (eg. a parking bay measuring 47m in length would provide 9 parking bays – 47-2=45, 45/5=9). The capacity of each separate parking bay must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area.

The results should be presented generally in the following format:

Street Name	Total Length (m) of parking spaces	No. of RPH parking spaces	No. of cars parked in RPH bays	RPH Parking Stress (%)
A Street	**350**	**70**	**70**	**100**
B Street	**250**	**50**	**40**	**80**
C Street	**150**	**30**	**10**	**33**
Total	**750**	**150**	**120**	**80**

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A separate note should be made of any parking which occurs in other areas.

Areas Not In A CPZ

All areas of unrestricted parking will be counted.

To calculate parking capacity each length of road between obstructions (such as crossovers, kerb build-outs, yellow lines, etc) must be measured and then converted into parking spaces by dividing the length by 5 and rounding down to the nearest whole number (eg. a length of road measuring 47m in length would provide 9 parking bays – 47-2=45, 45/5=9). The capacity of each section of road must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area.

In particular the distance between crossovers is to be measured in units of 5m. For example, if the distance between 2 crossovers or a crossover and a junction is 12m then only 10m is to be counted in the survey. If the space between crossovers is less than 5m this length is to be discounted from the calculation. This is because a car could not park in that space without blocking a crossover.

It is extremely important that a map or plan showing the measurements used in calculating parking capacity is supplied so that this can be verified by the Council. If this is not supplied then the parking survey may not be accepted.

For reasons of highway safety, the first 5m from a junction should also be omitted from the calculation. Additional parking at junctions can affect safety. This should be clearly shown on the plan.

The results should be presented generally in the following format:

Street Name	Total Length (m) of kerb space	Length of unrestricted parking (m)	No. of parking spaces	No. of cars parked on unrestricted length of road	Unrestricted Parking Stress (%)
A Street	**400**	**350**	**70**	**70**	**100**
B Street	**300**	**250**	**50**	**40**	**80**
C Street	**200**	**150**	**30**	**10**	**33**
Total	**900**	**750**	**150**	**120**	**80**

UNDERSTANDING THE RESULTS

It may be found that some locations are over 100% stress (or 100% occupancy level). This is because small cars may need less space than 5 metres to park, meaning that additional cars can be accommodated.

The results of the parking survey will be analysed by the Council in accordance with the policies in the Council's UDP, any Supplementary Planning Documents produced by the

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Council in relation to parking, and any other Transport policy guidance produced by the Council, Transport for London, or nationally.

The Council will also take into consideration the impact of any recently permitted schemes in determining the acceptability or not of each proposed development.

FURTHER ASSISTANCE

For further assistance or explanation please contact the Council's Transport Planning and Strategy team at the address below.

Spanish
Si desea esta información en otro idioma, rogamos nos llame al 020 7926 2618.

Portuguese
Se desejar esta informação noutro idioma é favor telefonar para 020 7926 2618.

Yoruba
Tí ẹ ba fẹ ìmoràn yìí, ní èdè Òmíràn, ejọ, ẹ kàn wà l'ágogo 020 7926 2618.

French
Si vous souhaitez ces informations dans une autre langue veuillez nous contacter au 020 7926 2618.

Bengali
এই তথ্য অন্য কোনো ভাষায় আপনার প্রয়োজন হলে অনুগ্রহ করে ফোন করুন 020 7926 2618.

Twi
Se wope saa nkaeboy yi wo kasa foforo mu a fre 020 7926 2618.

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1st Floor Blue Star House
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www.lambeth.gov.uk

Appendix 4
Site Waste Management Plan

A & I Construction Ltd

Site Waste

Management Plan

8 Pilgrims Lane
Hampstead
London
NW3 1SL

A & I Construction Ltd VAT
Reg No. 778 51 25 93
Incorporated in England
Company Reg No. 4269014

CONTENTS

NB This plan must be kept on site for the duration of the project. The Principal contractor must ensure that every Contractor knows where the plan is kept and it must be made available to any Contractor carrying out work described in the plan.

Declaration

We declare that all reasonable steps will be taken to ensure that:

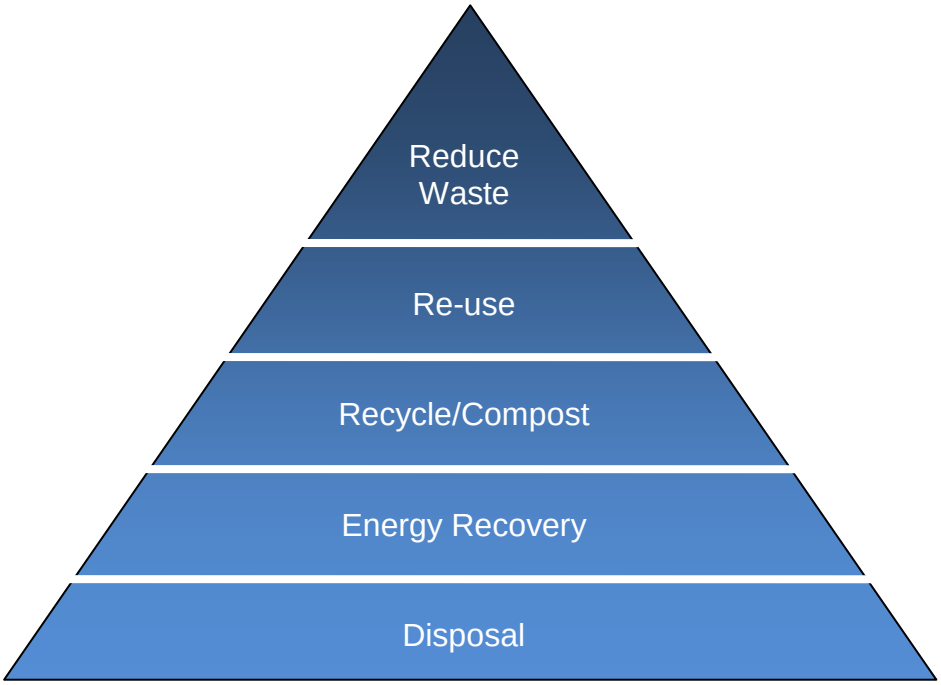
a) All waste from the site will be dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection Act 1990 (3) and the Environmental Protection (Duty of Care) Regulations 1991 (4); and

b) Materials will be handled efficiently and waste managed appropriately.

c) The SWMP will be prepared, monitored and updated throughout the project.

.....
(Principal Contractor)

(Date).....



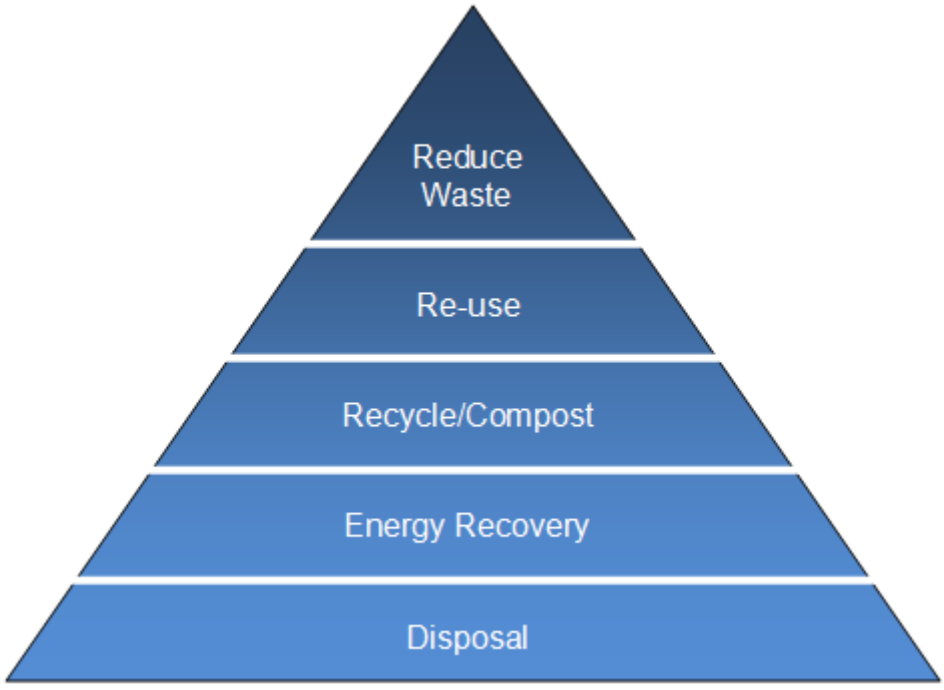
Revision Record

Description of Revision:	Revised By:	Date:
Plan Created	Gaby	26.07.12

Section

1

Administration & Planning



Project Information

Guidance Note – Section 1

This section deals with the Administration and planning of waste minimisation for the project and should be used to record a description of the site, details of the project and details of those involved in the project. It is important that these include details of the

- Client
- Principal Contractor; and
- The author of the plan

It is Good Practice to provide a Waste minimisation Statement of Intent.

NB a statement must be provided if the client wishes to claim the available credit (Credit A) allowed by The Code for Sustainable Homes for including procedures and commitments to reducing waste generated on site.

Example 'At.....we have considered waste minimisation at a very early stage. This includes using standard sizes for plasterboard, elements of offsite fabrication and close working with our supply chain to avoid ordering materials and reduce excessive packaging. We will seek to reuse materials onsite wherever feasible and excess materials will be sent back to suppliers'

It is good Practise for the Project Team to discuss practical methods of achieving waste minimisation and management throughout the Project. This can be achieved through regular meetings and these should be recorded on the template provided.

Such meetings provide a useful source of local information, a way of sharing experiences and exchanging ideas. They also provide an opportunity to discuss appropriate waste management procedures and will assist in producing a Site Waste Management Plan that is effective and appropriate to the local environment and which will be Site Specific.

Project Information

Client:	**Mrs Lyabode Abiola**			
	Address: 4L Portman Mansions Chiltern Street London			
	Postcode:	W1U 6NS	**Telephone:**	02079359122

Principal Contractor:	**(enter main contractor)**			
	Address:			
	Postcode:		**Telephone:**	

Plan Author:	**A & I Construction Ltd**			
	Address: Unit 3 London Business Park 715a North Circular Road London			
	Postcode:	NW2 7AH	**Telephone:**	0208 452 9400

Site Details/Location:	**Pilgrim's Lane**			
	Address: 8 Pilgrim's Lane London			
	Postcode:	NW3 1SL	**Telephone:**	
	Site Manager for Project:			

Project Information

Estimated Cost of work (excluding VAT):	TBC

Start Date:	TBC	**Completion Date:**	TBC

Project Description	Small loft extension, conservation rooflights, internal alterations including a luggage lift, external alterations including rear bay window, and a new/extended basement.

Description of Project Scope (Please Tick)	**Demolition**	✔	**Traditional Build**	✔
	Timber Frame		**Modern Method of Construction**	
	Concrete Frame		**Other (Please Specify)**	
	Other:			

Waste Minimisation Statement (required if credit 'A' under The Code for Sustainable Homes is to be claimed)	**Not required for this development.**

Project Information

Waste Management Planning Meetings

(Record of waste reduction methods adopted during conception, design, specification and build phases, if appointed after design complete, get confirmation from designer on key steps taken during design and planning to reduce waste at site)

Record of decisions made:

Meeting Date	Attendance	Decisions Made	Actioned By:
	(Set up meeting between main contractor and project/site manager to had over the SWMP)	Reviewed/ Received: • General site details • Development details • Sub contractors • Waste removal • Waste carrier • SWMP compliance	

Project Information

Meeting Date	Attendance	Decisions Made	Actioned By:

Project Information

SITE WASTE MANAGEMENT PLAN – PRE-START IMPLEMENTATION CHECKLIST

Project Description	Small loft extension, conservation rooflights, internal alterations including a luggage lift, external alterations including rear bay window, and a new/extended basement.
Project Address/Location	8 Pilgrim's Lane, London NW3 1SL

PROJECT STAGES		QUESTIONS TO CONSIDER	Y/N	COMMENT If 'Yes' descried action or proposals If 'No' explain why not
Policy	1	Has a waste management policy been adopted?	Y	SWMP initiated by A & I construction Ltd
	2	Has the Main Contractor signed the Site Management Plan?		
	3	Have relevant sub-contractors producing significant waste streams been identified?	Y	Indentified in section two of SWMP
	4	Has a careful evaluation of materials been made so that over-ordering and site wastage is reduced?	Y	SM will order as required. Limited waste predicted based on type of build.

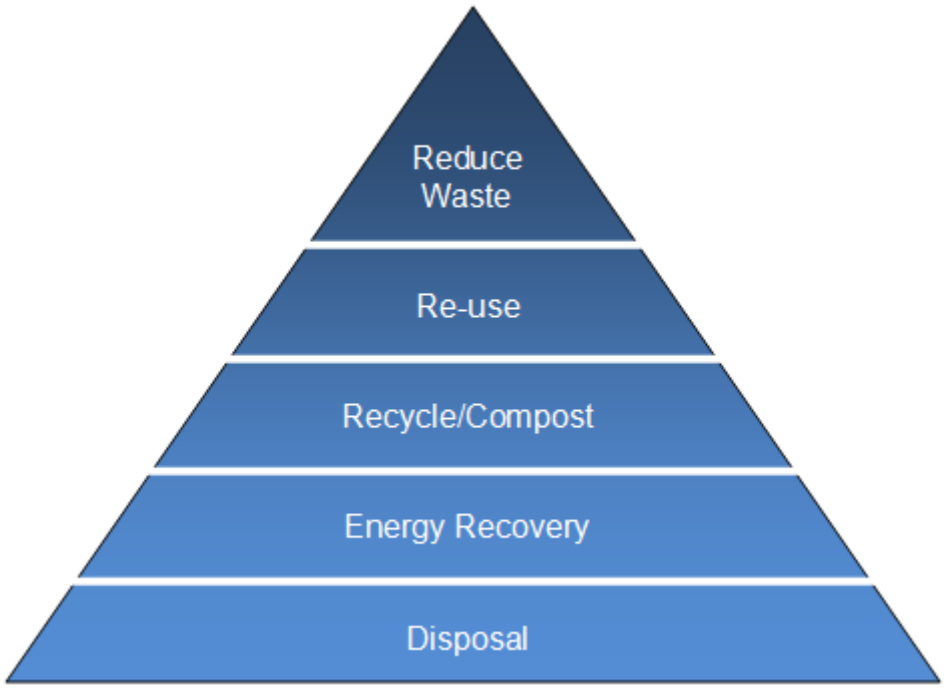
Project Information

PROJECT STAGES		QUESTIONS TO CONSIDER	Y/N	COMMENT If 'Yes' descried action or proposals If 'No' explain why not
Procurement	5	Has full consideration been given to the use of secondary and recycled materials?	N/A	Not practicable based on type of build (refurbishment and extension)
	6	Is unwanted packaging to be returned to the supplier for recycling or re-use?	Y	Site Manager for PC to monitor compliance
	7	Can unused materials be returned to purchaser or used on another job?	N/A	Build materials will be ordered as required. Limited waste predicted due to type of build. (refurbishment and extension)
Project Planning	8	Has responsibility for waste management planning and compliance with environmental legislation been assigned to a named individual at both main contractor and identified sub-contractors?		
	9	Has a project programme been developed to include likely waste arising (how much, when and what types	Y	Indentified in section three of SWMP Will be reviewed/amended by SM during development
	10	Have copies of all the relevant licences been obtained?	Y	Kept in SWMP on site

Section

2

Responsibilities & Planning



Responsibilities

Guidance Note – Section 2

Section 2 deals with the identification of responsibilities and acts as a location for the recording and storage of Waste Carrier Licences, permits and waste transfer notes.

The responsibilities for site waste management would normally be assigned to one of the parties listed below depending on the size of the project.

- Principal Contractor
- Trade Contractor (Sub-contractors and trade contractors will need to be checked for legal compliance before being allowed on site. Their commitment to waste management could be made a legal contractual agreement)
- Waste Management contractor (the contractor will need to be checked for compliance with environmental legislation including, which include compliance with the duty of care and the requirements under the Environmental Protection Act 1990) They will also be required to provide:

    1. Accurate records
    2. Waste transfer notes
    3. Hazardous waste consignment notes
    4. Copies of Waste carrier licences
    5. Waste management licences and exemption details
    6. Provision, collection and delivery of suitable containers.
    7. Monitoring and monthly reporting of accurate information on quantities of waste recycled, reused and sent to landfill for each material type
    8. Records of materials sent to suppliers via take back schemes or returned to stock

Example:

Site Activity/Trade Contractors	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance
Demolition and site clearance	Hardcore, spoil, timber and plastics.....	A B Demolition Ltd	Site/Project Manager

European Waste Catalogue Code:

The Code has evolved from a survey on the arising and management of Construction and Demolition waste. An example would be reference Code 17.09.04 which relates to other mixed construction and demolition waste that is not hazardous. A reference document has been provided in Annex C.

Responsibilities

RESPONSIBILITIES FOR WASTE MANAGEMENT ON SITE

Site Activity/Trade	Contractor (If known)	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance
Site Clearance Partial demolition Engineering works		Subsoil General building waste (inert/non hazardous)		Site Manager
Ground and infrastructure works		Topsoil Subsoil General waste (inert) Concrete Plastic pipes (services) Brick/ block/ cement & mortar		Site Manager
Underpinning works		Concrete Steel Subsoil		Site Manager
Over site works Flooring		Mortar Cement & Bags Blocks/Beam cuts		Site Manager
Brickwork		Mortar Cement Masonry)bricks & blocks) Insulation off cuts Metal Bands Polythene brick wrapping		Site Manager

Responsibilities

Site Activity/ Trade	Contractor (If known)	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance
Carpentry		Timber off-cuts Sheet materials off cuts (ply, chipboard, etc.) MDF off-cuts (skirting, architrave, window board etc) *Mastic adhesive containers (Gripfill) Insulation board off cuts Polythene wrapping from off site cut door liners, architrave and skirting		Site Manager
Plastering Dry lining		Plaster off cuts Tape Packaging Metal stud off cuts Jointing compound containers		Site Manager
Floor Screed		Floor Screed waste Insulation material off cuts Screed container waste		
Insulation		Insulation off cuts Polythene wrapping		Site Manager
Plumbing		Plastic Pipe and gutter off cuts Copper tube off cuts Packaging materials		Site Manager

Responsibilities

Site Activity/ Trade	Contractor (If known)	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance
Electrical		Cable off cuts Cable drums Packaging materials		Site Manager
Roof Tiling		Tiles, Cement, *Mastic sealant tubes Mortar, wet verge and ridges Tile batten wood cut offs Roofing membrane off cuts Metal and plastic bands		Site Manager
Decorator		*Paint containers *Mastic sealant tubes		Site Manager
Wall tiling		Glazed wall tile off cuts *Adhesive containers *Mastic sealant tubes		Site Manager
Glazing (windows) Sealed units		*Glazing mastic containers Glass (broken units) Polythene and possible polystyrene or cardboard protective wrapping		Site Manager

Responsibilities

Site Activity/ Trade	Contractor (If known)	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance
Glazing (doors)		*Glazing mastic containers Glass (broken units) Polythene and possible polystyrene or cardboard protective wrapping		Site Manager
Installation of sanitaryware		Packaging materials (cardboard and polythene sheet) *Mastic tubes, putty/sealant containers		Site Manager
Kitchen fitting		Packaging materials (cardboard, polythene sheet and polystyrene) Work surfaces to have reusable packaging Work surface off cuts and sink cut out *Adhesives		Site Manager
*Mastic pointing		*Mastic containers		Site Manager
Floor Laying		Sheet flooring off cuts Carpet off cuts Underlay off cuts Packaging materials *mastic adhesive tubes Adhesive containers*		Site Manager

Responsibilities

Site Activity/ Trade	Contractor (If known)	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance
Fencing		*Treated timber off cuts from posts 6ft close board fence, all pre treated Augured posts and concrete fill waste		Site Manager
External Works		Concrete (Kerb, path edging, paving block off cuts etc). Concrete Sand		Site Manager
Soft Landscaping		Soil		Site Manager
Cleaners		N/A		Site Manager
Floor Laying		Sheet flooring off cuts Carpet off cuts Underlay off cuts Packaging materials *mastic adhesive tubes Adhesive containers*		Site Manager

Responsibilities

Site Activity/ Trade	Contractor (If known)	Primary Waste	Responsibility for waste management	Responsibility for monitoring compliance

TBA: To be advised...Please action TBA's as contractors are appointed

Responsibilities

Waste Description	List of Waste (LOW) code	Origin of waste	Waste Carrier Details			Disposal Site: Transfer Station	
			Name	Licence No.	Expiry Date	Name/ Add	Licence No
Possible demolition waste from this type of build (Based on works and age of hotel)	17 09 04 17 08 02 17 04 07 17 04 03 17 04 01 17 02 03 17 02 02 17 01 07 17 01 03 17 01 01 17 01 02 17 06 05* 07 06 04	Demolition Company					
Clearance wastes	17 09 04	Site clearance workers					
Underpinning	17 01 01 17 05 04 17 09 04	Ground Workers					
Block Waste	17 01 02 17 01 01	Bricklayer Ground Workers					

Responsibilities

Waste Description	List of Waste (LOW) code	Origin of waste	Waste Carrier Details			Disposal Site: Transfer Station	
			Name	Licence No.	Expiry Date	Name/ Add	Licence No
Mortar (mix)	17 09 04	Bricklayer Ground Workers					
Timber & Cladding	07 02 01	Carpenters					
Roof Materials	17 01 03 17 09 04 17 06 04 17 03 02 17 04 02	Roofer Carpenter					
Plasterboard Jointing compound containers	17 08 02	Dry Liner					

Responsibilities

Waste Description	List of Waste (LOW) code	Origin of waste	Waste Carrier Details			Disposal Site: Transfer Station	
			Name	Licence No.	Expiry Date	Name/ Add	Licence No
Metal Plastic plumbing waste	17 04 01 17 04 02 17 04 03	Plumbing Flashing works					
Insulation board/material	17 06 04 17 02 01	Carpenters Block workers					
Cable off cuts Cable drums	17 04 11 15 01 03	Electrician					
Mastic tubes* Paint Tins	*15 01 10	Carpenter Wall Tiller Glazer Floor layer Mastic Pointer Painting Kitchen Fitter (various $1^{st}/2^{nd}$ fix trades)					

Responsibilities

Waste Description	List of Waste (LOW) code	Origin of waste	Waste Carrier Details			Disposal Site: Transfer Station	
			Name	Licence No.	Expiry Date	Name/ Add	Licence No
Wall/Floor tiles	17 01 07	Tiller					
Glass (Windows/door sealed units)	17 02 02	Carpenters					
Fascia and soffit boards, PVC guttering systems	17 02 03	Carpenters Builder Plumber					
Packaging materials	15 01 01 15 01 02 15 01 03 15 01 04	All trades					

Responsibilities

Waste Description	List of Waste (LOW) code	Origin of waste	Waste Carrier Details			Disposal Site: Transfer Station	
			Name	Licence No.	Expiry Date	Name/ Add	Licence No
Paints and sealants	15 01 04 17 09 04	Decorator					
Sheet Flooring	17 09 04	Floor layer					
General Waste	15 01 01 15 01 02 15 01 04 (food & domestic waste)	Office and Welfare					
Carpet & underlay Flooring adhesive containers* (Empty containers only)	17 03 02 15 01 02	Carpet, floor fitters					

Responsibilities

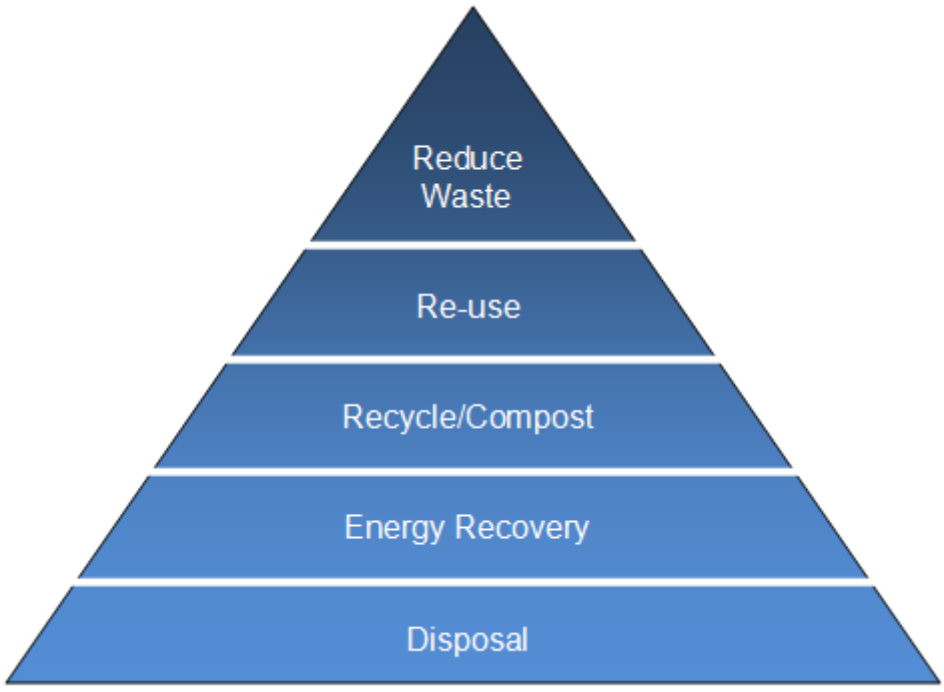
Waste Description	List of Waste (LOW) code	Origin of waste	Waste Carrier Details			Disposal Site: Transfer Station	
			Name	Licence No.	Expiry Date	Name/ Add	Licence No
TBA							
TBA							
TBA							
TBA							

***Denotes possible hazardous wastes**

Section

3

Forecasting, Estimating & Recording



Forecasting, Estimating & Recording

Guidance Note – Section 2

Section 3 is the heart of the Site Waste Management Plan and focuses on identifying estimated quantities as against the actual quantities generated for the project. It also provides for the recording of the measures taken for the reuse, recycling, recovery or disposal of site waste.

This section focuses on the waste generated throughout the project from enabling works (including demolition) through to completion of the construction phase and as such, is a live document. *It must include details of how all waste is managed, including waste generated, recovered, re-used/re-cycled or disposed of by trade contractors who take responsibility for managing their own waste*

Forecasting and Estimating

All projects over £300,000 are required to estimate the quantity of each different type of waste likely to be produced and identify the proposed action to minimise waste. These waste management options need to be considered for The Code for Sustainable Homes. If the available credit is to be claimed, Section 3 of this plan must clearly identify five streams of waste that will be recycled, together with a description of how this will be achieved. *The estimation exercise must be carried out prior to construction work commencing on site.*

A best estimate of quantities should be sufficient and should assist in prioritising the key wastes relevant to the project and will assist the person responsible for managing waste on site e.g. the site or project manager to focus on the site specific issues of waste and the options for managing it. This section also assists in the setting of targets and planning waste minimisation as recommended in The Code for Sustainable Homes.

Once this exercise has been completed the checklist can be used in the tender documentation for waste management contractors.

Throughout the life of the project the actual quantities of waste generated by the site and the methods/options for disposal should be recorded in this section and these will be used in the assessment of the effectiveness of the management processes.

Waste Categories

- ***Inert Waste*** – Waste that should not harm or cause adverse effects to the environment or does not decompose. (Rock, concrete, mortar etc.)

- ***Non Hazardous*** – Waste that will break down/decompose resulting in the waste production of landfill gases (timber, paper, cardboard, green waste etc.)

- ***Hazardous waste*** – Waste that contains hazardous properties i.e. is harmful to health or the environment (see examples in Appendix D)

Under the Site Waste Management Plans Regulations 2008, waste types must be identified as these 3 levels as a minimum requirement.

Forecasting, Estimating & Recording

Waste Minimisation opportunities

- ***Re-use*** – Re use involves putting an item to another use after its original function has been fulfilled. It offers the prospect of added value and utility before final disposal. Re-use will usually represent an environmental gain. There are two types of re-use.

    1. The first is a conventional re-use where products are designed to be used a number of times before they are discarded (e.g. pallets)

    2. The second form of re-use occurs when alternative uses are found for products once they have served their original purpose (e.g. demolition rubble being crushed and used as fill material or bricks being cleaned and sold as a recovered building material)

- ***Recycling*** – Recycling involves processing waste to produce a usable raw material or product. Recycled material such as some types of plastic can, in principle, be re-used many times, unlike material which has been burnt to have the energy recovered from it or composed. Potential advantages of recycling include

    1. Extending the life and maximizing the value extracted from raw materials.

    2. Energy savings – the recycling of secondary materials generally uses less energy than extracting and processing raw materials.

    3. Reduced disposal impacts – although modern landfill sites are engineered to high standards, the leaking of synthetic chemicals, heavy metals and bacteria into the soil and water table remains an environmental concern.

- ***Recovery*** – Recovery is the term used to represent the process by which waste is converted into either a useable form, or energy is derived out of the waste (e.g. timber waste could be recovered to be used in chipboard i.e. a usable form, or shredded to form biomass fuel i.e. energy is formed from the waste)

NB Always consider when thinking about Re-use, Recycling and Recovery opportunities, manufactures "take-back" schemes. As an example "take-back" schemes are operated by plasterboard manufacturers and wholesalers of white-goods who will collect and recycle polystyrene and polythene waste.

Forecasting, Estimating & Recording

Pre-Construction Estimates

Inert Waste

Waste Materials	Total Estimated Quantity (Kg)	Waste Minimisation Targets			Sent to Landfill (Kg)
		Re-use (Kg)	Recycle (Kg)	Recover (Kg)	
Demolition Wastes					
Ground Clearance Limited works					
Blocks					
Mortar					
Roof Tiles					
Paving Blocks					
Concrete					
Ceramics (wall/floor)					
Other construction wastes (inert) from stripping/clearance					
Other (describe)					
Sub-Total					

Please note: Partial demolition to allow for refurbishment and extension to hotel

(Please action Kg once removed)

Forecasting, Estimating & Recording

Pre-Construction Estimates

Non-Hazardous Waste

Waste Materials	Total Estimated Quantity (Kg)	Waste Minimisation Targets			Sent to Landfill (Kg)
		Re-use (Kg)	Recycle (Kg)	Recover (Kg)	
Site clearance (soft)					
Canteen Waste for whole of project					
Metal (e.g. off cuts, copper, lead, mild steel etc)					
Paper					
Plasterboard					
Plastic					
Polystyrene					
Timber/board/cladding					
Polythene					
Wiring Cable					
Other (describe)					
Sub-Total					

Forecasting, Estimating & Recording

Pre-construction Estimates

Hazardous Waste

Waste Materials	Total Estimated Quantity (Kg)	Waste Minimisation Targets			Sent to Landfill (Kg)
		Re-use (Kg)	Recycle (Kg)	Recover (Kg)	
Waste engine/gear oil					
Hydraulic fluid					
Fluorescent tubes					
Polyurethane paint					
Paint containers (if empty before disposal not classed as hazardous, SM will monitor)					
Mastic tubes (If empty before disposal not classed as hazardous, SM will monitor)					
Bituminous mixtures containing coal tar					
Paslode Gas Carts	*To be removed off site by user				
Other (describe)					
Sub-Total					

1. *****SM to ensure all users are aware of their responsibility to dispose of waste Gas cartridges as per the hazardous waste regulations. (Contact supplier for advice/disposal procedures).
2. ****** Paint containers and mastic tubes will only be classed as hazardous if not empty. SM to ensure all site operatives are fully aware of this control.

Forecasting, Estimating & Recording

Procedures and commitments for sorting and recycling site waste

Waste Group	Materials Note: list them all if more than the 3 required for Code point. Link to Appendix D.	Recycling/Recovering/ Reusing Strategy
Hazardous	Paint tins/ mastic tubes/aerosols (fluorescent tubes – Contact Waste Carrier) (If above tins/tubes/cans are empty they will not be classed as hazardous by waste carrier. SM to ensure this information is passed on during site inductions and controls are monitored throughout build.)	Engage Specialist contractors
Non-Hazardous	Timber, plywood, chipboard, noggins, battens, doors, windows, MDF, timber off cuts, and surplus materials	Segregated and 75-90% recycled at waste station
Non-Hazardous	Ferrous and non-ferrous metals	Segregated and recycled at waste station
Non-Hazardous	Plasterboard and plaster waste (Contact Waste carrier for disposal details)	Recycle/ recovered (100%)
Non-Hazardous	Top/Sub soil	Reused off site (Waste Carrier)
Non-Hazardous	Timber pallets, quality, return to manufacturer distributor for re-use	Return
Non-Hazardous	Cardboard, plastic (rigid), Polythene, electrical cables (Ltd re-use on site)	Segregated and recycled at waste station
Inert	Blocks/bricks (limited waste based on type of build)	Recovery/ recycle off site

A minimum of three waste groups must be identified in the table above if the second available credit from the Code for Sustainable Homes is to be claimed

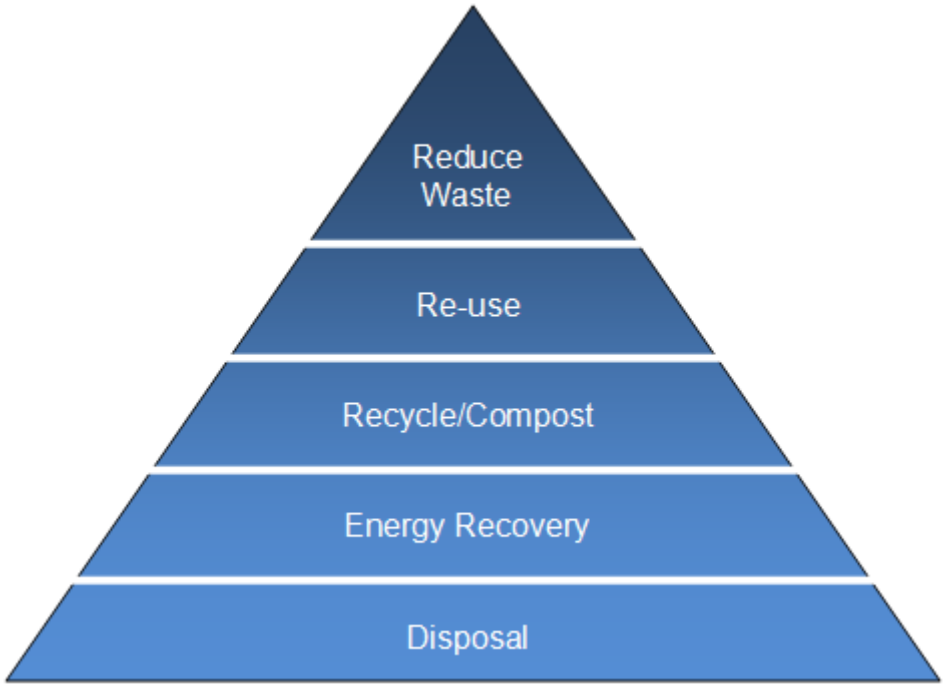
Forecasting, Estimating & Recording

Construction Work					
Waste Category	**Total Volume (Kg)**	**Waste Minimisation opportunities**			**Sent to Landfill (Kg)**
		Re-use (on/off site) (Kg)	**Recycle (Kg)**	**Recover (Kg)**	
Inert					
Pre-construction Estimate					
Actual					
Difference					
Non-hazardous					
Pre-construction Estimate					
Actual					
Difference					
Hazardous					
Pre-construction Estimate					
Actual					
Difference					

Section

4

Costing & Implementation



Costing & Implementation

Guidance Note – Section 4

Section 4 concentrates on the implementation of the Plan for which a checklist with a tick box and an area for comment has been provided. It also allows for costings to be applied to the waste management activity and estimated quantities.

Prior to implementing the Site Waste Management Plan the waste champion should complete all necessary checks (using the checklist in appendix B) to ensure the effective operation, monitoring and reporting of the Plan.

By using the waste estimate and the waste contractor's rates it is possible to calculate the total estimated waste costs involved for the project expressed in pounds (£)

For example if the waste has a scrap value the project could be paid for by the waste (recorded as a credit) or the waste could be removed free of charge. The value of some waste should be considered during waste management package negotiations as the waste management contractors may gain a resale value for the waste.

This information will have a knock-on effect in the next section where the review of the actual costs involved will be compared with the estimated costs and the overall effectiveness of the Waste management Plan will be analysed.

Example

Waste Material	Contractor Details	Minimisation Activity	Est. Total (Kg or tonnes)	Actual Total (Kg or tonnes)	Unit price paid £		Cost £ (+/-)
					Price Paid per Kg for removal	Price Gained per KG be re-using	
Concrete		Re-used as fill on site					
Timber		Recycled					

Costing & Implementation

Construction Work							
Waste Material	**Waste Management Contractors Details**	**Waste Manage-ment Activity**	**Forecast total (Kg or tonnes)**	**Actual Total (Kg or tonnes**	**Unit price paid £**		**Cost £ (+/-)**
					Price paid per KG for Removal	**Price Gained per KG by re-using**	
Site clearance		Site clearance					
Canteen Waste		General Build					
Metal		General Build					
Paper		General Build					
Plasterboard		General Build					
Plastic		General Build					
Polystyrene		General Build					
Timber/board /cladding		General Build					
Polythene		General Build					
Wiring cable		General Build					

Costing & Implementation

Construction Work							
Waste Material	**Waste Management Contractors Details**	**Waste Manage -ment Activity**	**Forecast total (Kg or tonnes)**	**Actual Total (Kg or tonnes**	**Unit price paid £**		**Cost £ (+/-)**
					Price paid per KG for Removal	**Price Gained per KG by re-using**	
Demolition Wastes		General Build					
Ground Clearance		General Build					
Blocks		General Build					
Mortar		General Build					
Roof Tiles		General Build					
Paving Blocks		General Build					
Concrete		General Build					
Ceramics		General Build					
Other construction wastes (inert) from stripping /clearance		General Build					

Costing & Implementation

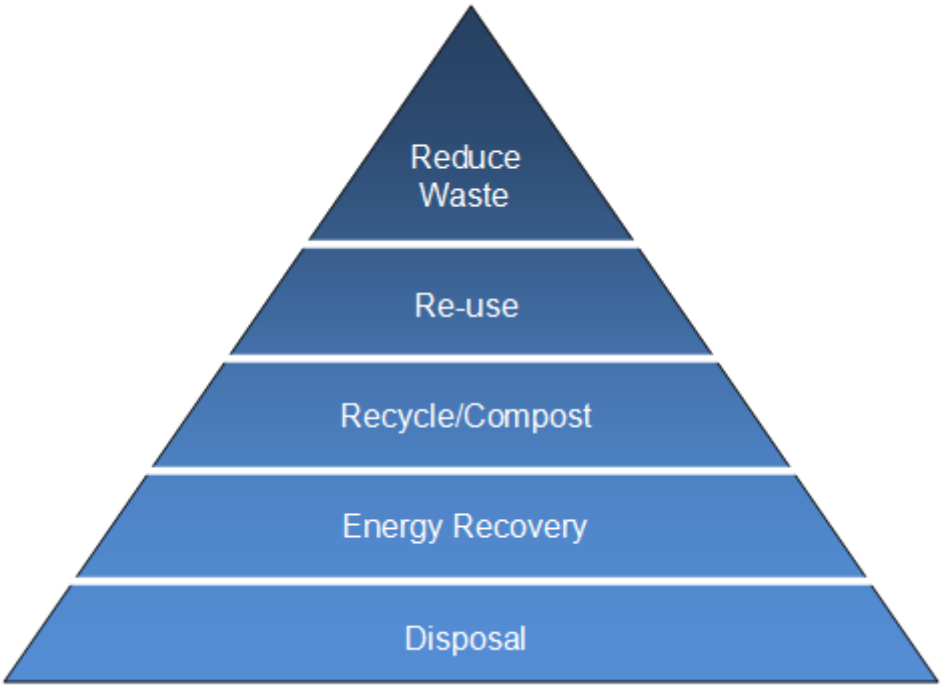
Construction Work							
Waste Material	Waste Management Contractors Details	Waste Manage -ment Activity	Forecast total (Kg or tonnes)	Actual Total (Kg or tonnes	Unit price paid £		Cost £ (+/-)
					Price paid per KG for Removal	Price Gained per KG by re-using	

Please note: minor Demolition wastes are to be added once amounts are known

Section

5

Post Completion Review & Analysis



Post Completion Review & Analysis

Guidance Note – Section 5

Section five is an important part of managing the Site Waste management Plan as it reviews how waste has been managed through the project comparing the estimated quantities with the actual quantities and records the reasons for the differences.

These can be quantified in pounds (£'s) giving an overview of the results and the cost savings.

- Compare the estimations of waste with the actual waste arising's and note down the reasons for any variance (this is a legal requirement for projects with costs greater than £500,000)
- If targets have been set, calculate any deviations
- Use these figures as a basis for your next project
- Record lessons learned from writing and implementing the plan and recommendations
- Record lessons learned
- Write down any cost savings from implementing the plan (this is a legal requirement for projects with costs greater than £500,000)
- Report on the success of any waste reduction actions (projects of £500,000+)

On projects of £300,000 - £500,000 this section can be as simple or as complex as the client wishes as long as the basic information is recorded. For projects greater than £500,000 there is a requirement for this section to be detailed showing cost savings, improved efficiency and enhanced company and social responsibility. To illustrate these issues the document can be supplemented by graphs and statistics if this is what the client decides.

Post Construction

Within three months of the construction work being completed it is important that the Client/Waste Champion signs a compliance declaration which can be found at the end of Section Five.

The Site Waste Management Plan must be kept for 2 years following completion of the project in an accessible place (either the Client's principle place of business or site of the project) where it can be made available for regulatory compliance checks)

Post Completion Review & Analysis

Inert Waste

Waste Materials	Estimate Quantity Kg	Actual Quantity Kg	Difference (+/-)	Reason for Difference
Construction Work				
Ground Clearance				
Blocks				
Mortar				
Roof Tiles				
Paving Blocks				
Concrete				
Ceramics				
Other construction wastes (inert) from stripping/clearance				
Other (describe)				
To be actioned if applicable				
Prediction Total				

Post Completion Review & Analysis

Non-Hazardous Waste

Waste Materials	Estimate Quantity Kg	Actual Quantity Kg	Difference (+/-)	Reason for Difference
Construction Work				
Site Clearance				
Canteen Waste				
Metal				
Paper				
Plasterboard				
Plastic				
Polystyrene				
Timber/board /cladding				
Polythene				
Wiring cable				
Other (describe)				
To be actioned if applicable				
Prediction Total				

Post Completion Review & Analysis

Hazardous Waste

Waste Materials	Estimate Quantity Kg	Actual Quantity Kg	Difference (+/-)	Reason for Difference
Construction Work				
Contaminated Soil				
Asbestos materials (ACM)				
Polyurethane Paint				
Paint Tins				
Fluorescent tubes*				Predicted amount from strip/clearance works
Mastic Tubes				
Bitumen (containing coal tar)				
Other (describe)				
To be actioned if applicable				
Prediction Total				

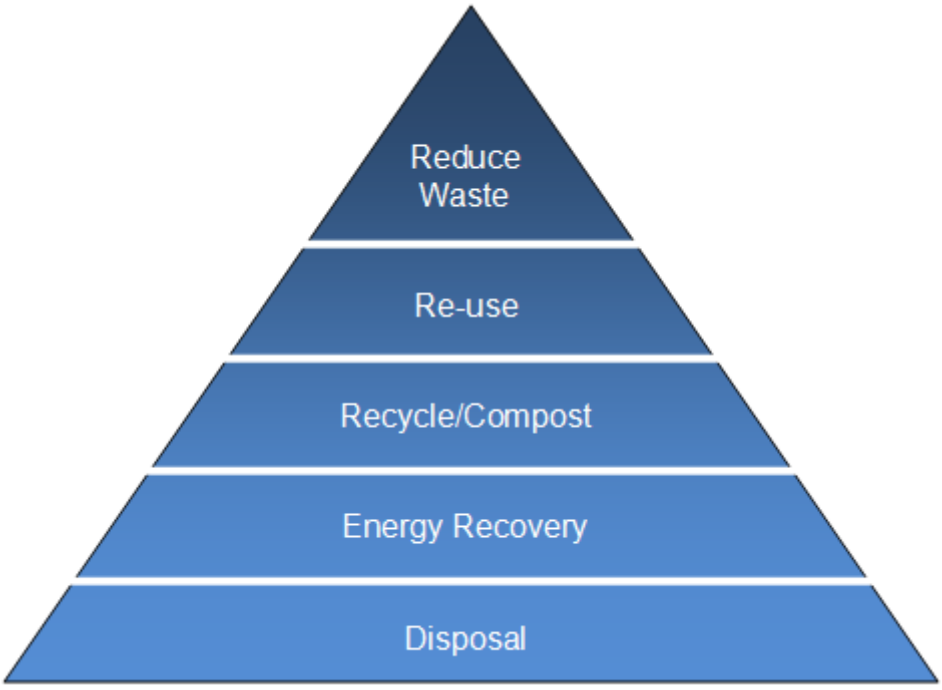
***Contact Waste Carrier for disposal instructions (tubes are classed as hazardous but are fully recyclable)**

Post Completion Review & Analysis

Review results and cost Savings	

CONFIRMATION
This plan has been monitored on a regular basis to ensure that work is progressing according to the plan and has been updated to record details of the actual waste management actions and waste transfers that have taken place
Signature…… **Date**……

Appendices


Reduce Waste
Re-use
Recycle/Compost
Energy Recovery
Disposal

Appendix A

Waste Carriers Licence

Appendix A cont'

Waste Transfer Station Details

Appendix A cont'

Example of type of quarterly report expected

Company Name
A & I Construction

Site Address
8 Pilgrim's Lane
London
NW3 1SL

Month:
tbc

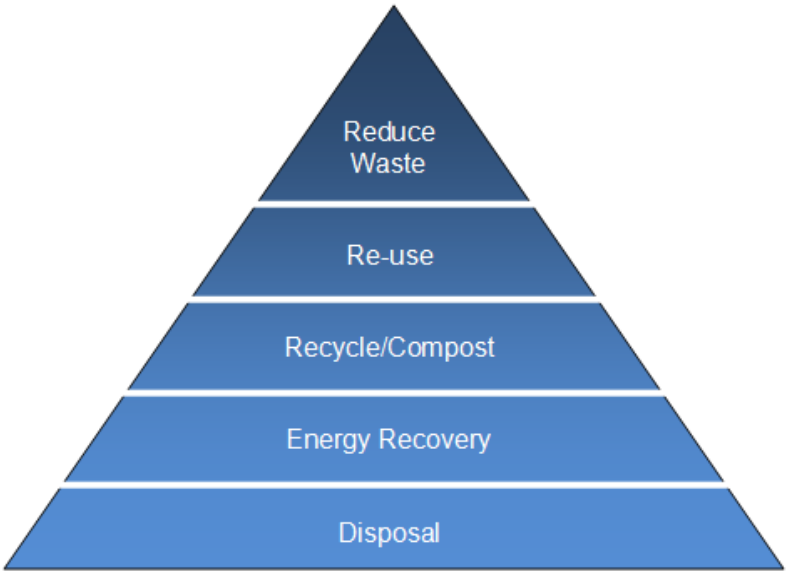
Waste	EWC Code	%	% Recycled
Cardboard	200101	15.21	100
Hardcore	170504	13.96	100
Metals	170407	3.33	100
Plasterboard	170802	1.25	100
Wood	170201	38.75	100
Wood chips	170201	0.00	0
Sub Soil	170504	0.21	100
Concrete	170504	1.88	100
Topsoil	170504	0.00	0
Cable/Wire	140411	0.83	100
Plastics	170203	18.54	100
Green	170904	0.63	100
Roof Tiles	170103	0.00	0
Other	170904	5.41	0

Total Weight	**13.43**
Total Of Skips	**4**

Appendix B

Site Managers Responsibilities

Site Manager TBC (Enter site managers name)
8 Pilgrim's Lane
London
NW3 1SL



Appendix B

Check Sheet

- **Responsibility, planning and preparation for the SWMP**

  - ☐ Have you, or has someone in authority, been assigned overall responsibility for the SWMP?
  - ☐ Have you set aside time to plan and prepare your SWMP?
  - ☐ Has every stage in the project been examined and the processes required for completion been considered?

- **Identify your Waste**

  - ☐ Have those sub-contractors producing significant waste streams been identified?
  - ☐ Has a thorough assessment taken place to identify different types of waste that will be produced – how much, when and what types?
  - ☐ Have you thought about ordering materials that have less or reusable/returnable packaging?

- **Identify your Waste management Options**

  - ☐ Has an area of the site been set aside for storage of new materials and waste management, including separation of different types of waste?
  - ☐ Have targets been set for the different types of waste likely to arise from the project?
  - ☐ Have measures been put in place to deal with expected (and unexpected) hazardous waste?
  - ☐ Has disposal of liquid wastes such as wash-down water and lubricants been considered?
  - ☐ Have you got agreement from the sewerage company for trade effluent discharge?
  - ☐ Have opportunities been considered for re-use of materials on-site and off-site?
  - ☐ Have opportunities been considered for on-site and off-site processing and re-use of materials?
  - ☐ Have you considered where the most appropriate sites for disposal of residual waste from the project are located?
  - ☐ Are there opportunities for reducing disposal costs from waste materials that may have a commercial value?

- **Materials needed and waste handling**

  - ☐ Has there been a careful evaluation of materials so that over-ordering and site wastage is cut down?
  - ☐ Can unused materials be returned to the supplier or used on another job?
  - ☐ Has using secondary and recycled materials been fully considered?
  - ☐ Will unwanted packaging be returned to the supplier for recycling or re-use?
  - ☐ Are selected waste materials segregated to allow you to get best value from good waste management practices?
  - ☐ Are containers/skips clearly labelled to avoid confusion?
  - ☐ Are you complying with Duty of Care procedures, including providing transfer notes and checking the authorisation of registered carriers, registered exempt sites and licensed waste management facilities?
  - ☐ Has everyone who will be handling waste been told about the requirements of the SWMP?

- **Measuring and monitoring your waste**

  - ☐ Are you making regular checks on the SWMP and making sure that targets are being reached?
  - ☐ Are the agreed waste management procedures being checked and monitored on a regular basis?
  - ☐ Are reports on waste quantities and treatment/disposal routes and the cost incurred being regularly produced?
  - ☐ When construction is underway, are you making note of any problems that come up and recording them for your next plan?

- **After project completion, review and learn lessons for the future**

  - ☐ Have you completed a final report on the use of recycled and secondary materials, waste reduction, segregation, recovery and disposal, with costs and savings identified?
  - ☐ Have important waste management issues been taken into account for action at future projects?
  - ☐ Have you built the results into your business to help with competitive bidding that could help you win work next time?

Appendix C

European Waste Catalogue Codes for common types of construction waste:

EWC	Waste Description
15 01 01	Cardboard or paper packaging
15 01 02	Plastic packaging e.g. polythene sheeting
15 01 03	Wooden packaging e.g.' timber pallets
15 01 04	Metallic packaging e.g. drink cans, paint tins
15 01 10*	Packaging containing dangerous substances e.g. old paint & chemical tins
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and Ceramics
17 01 06*	Concrete, bricks, tiles and ceramics containing dangerous substances
17 01 07	Non-hazardous mixtures of concrete, brick, tile and ceramics e.g. mixed
17 02 01	Wood from construction or demolition e.g. timber trusses, supports, frames,
17 02 02	Glass from construction or demolition e.g.' window panes
17 02 03	Plastic from construction or demolition e.g. UPVC plastic off cuts
17 02 04*	Hazardous glass, plastic and wood e.g. telegraph poles
17 03 02	Bituminous mixtures that do not contain coal tar e.g. road planning's, tarmac
17 04 01	Copper, bronze, brass from construction or demolition e.g. used copper tube
17 04 02	Aluminium from construction or demolition e.g. off cuts, aluminium guttering
17 04 03	Lead from construction or demolition e.g. lead flashing
17 04 05	Iron and steel from construction or demolition e.g. steel scaffolding poles, iron
17 04 07	Mixed metals from construction or demolition
17 04 11	Cables that do not contain dangerous substances e.g. electrical cabling
17 05 03*	Soil and stones containing dangerous substances e.g. contaminated soil
17 05 04	Soil and stones that do not contain dangerous substances e.g. clean soil
17 06 01*	Insulation materials containing asbestos
17 06 04	Insulation waste that does not contain asbestos or other dangerous
17 06 05*	Construction materials containing asbestos e.g. bonded asbestos
17 08 02	Gypsum based construction materials that do not contain dangerous
17 09 03*	Other construction or demolition wastes containing dangerous substances
17 09 04	Other mixed construction or demolition waste that is not hazardous

***denotes hazardous wastes**

Appendix D

Examples of Hazardous Properties

Property	Description	Warning Symbol
Corrosive	Any Waste consisting of substances and preparations which may destroy living tissue on contact. For example, products with COSHH warning labels	
Explosive	Waste consisting of substances and preparations which may explode under the effect of flame, or are more sensitive to shock or friction that dinitrobenzene and represents products having the COSHH warning label opposite	
Flammable	Waste that consists of liquid substances and preparations having a flashpoint equal of greater that 21^{0}C and less than or equal to 55^{0}C	
Highly Flammable	Waste that consists of: – Liquid substances and preparations having a flashpoint below 21^{0}C – Substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature – Solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn – Gaseous substances and preparations which are flammable in air at normal pressure – Any substance and preparation which, in contact with water of damp air evolve highly flammable gasses in dangerous quantities –	
Infectious (biohazard)	Waste that consists of substances containing viable micro-organisms of their toxins which are known or reliably believed to cause disease in humans or other living organisms	
Asbestos	Any waste consisting of substances that contain asbestos. Asbestos had many applications and was widely used in the construction industry. Examples of where asbestos was commonly used include ceiling tiles, pipe insulation and corrugated roof sheets.	
Carcinogen	Any waste consisting of substances that contain Carcinogenic substances. For example, coal tar products, used engine oil and certain arsenic salt.	
Oxidising	Waste that consists of substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances	

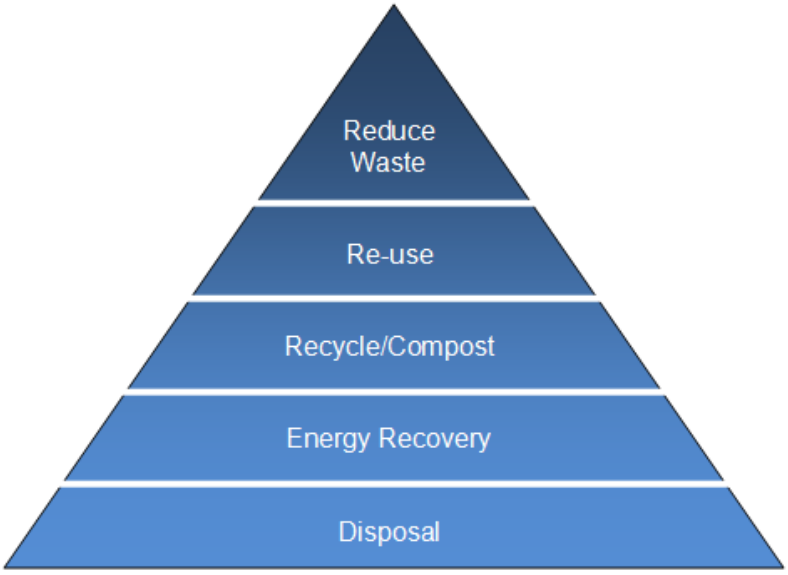
Appendix E

Waste Stream Colour Coding

National colour coding scheme for source segregation of recyclates.

Appendix F

Induction, Information and Training to ensure Site Waste management compliance



Recommended controls and actions to be undertaken by Site Manager

- Induction can be carried out alongside regular site induction required under CDM Regulations 2007.
- Induction to identify the need for responsible waste management
- Minimisation of waste production at site
- Explanation of re-use, recycle, recovery strategy
- Safe storage of waste
- Not mixing waste types
- Hazardous waste procedures
- Plan for waste segregation and colour coding as relevant
- The location of the SWMP and how it will be managed
- Paperwork requirements for Waste Transfer notes etc.
- The need to notify PC regarding and unexpected Wastes or changes to end disposal facilities
- An explanation and discussion of the waste expected from each contractor and how it will be handled
- Agreement for early notification of PC regarding any change in expected waste
- Location of any waste/environmental notice board
- Explanation of any return schemes in operation

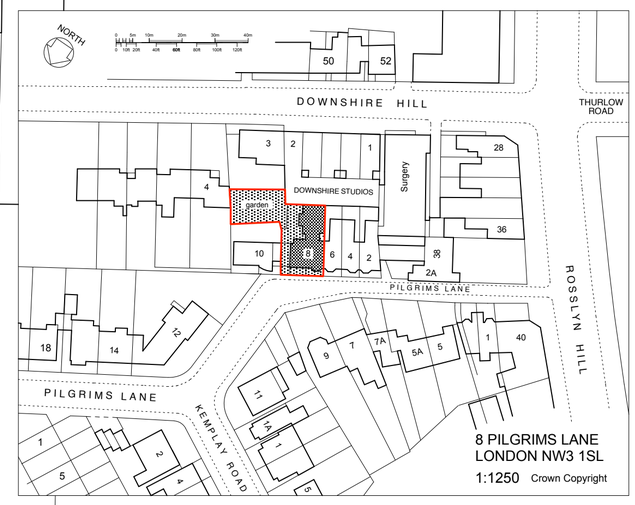
Other update training or information should be planned and implemented as required e.g. where there are major changes on site or to site arrangements or where it has been a significant period since induction training or the PC identifies a need, e.g. contractors mixing waste

Appendix 5
Site Plan
General Layout

1. Where underground services are shown, all reasonable care has been taken within the spirit of the original specification and requirement. Before use of this information the user should consult EDI and satisfy themselves of the completeness and accuracy of such detail before undertaking any works. Due to the nature of this work and the limitations imposed by ground conditions and the detection equipment no guarantee can be given that all services have been recorded.

3. All reasonable care has been taken in the survey detail represented on this drawing but any discrepancies must be reported to EDI immediately. Our aim is to produce the best possible results within the specification and cost constraints of our clients. Any comments are most welcome.

4. All levels and co-ordinates are related to the datums described. Levels shown at kerbs are channel level unless stated. The horizontal control of this survey is arbitrary. The vertical control of this survey is based on OS datum as translated from GPS coordinates using the OSGM02 transformation as supplied by the OS. This may differ from existing OS benchmarks in the area which should be disregarded; all levels should be taken from EDI survey stations.



Station Schedule				
Station	Easting	Northing	Level	Type
1	1008.630	2000.151	81.949	Hilti Nail
2	1014.842	2006.145	81.691	Hilti Nail
3	1020.116	2015.627	82.139	Temporary
4	1013.312	2028.242	79.871	Hilti Nail
4A	1015.230	2035.084	79.851	Hilti Nail
5	1014.110	2014.969	81.615	Hilti Nail

- Site Hoarding
- Site Office
- Mess Room
- Designated Smoking Area Covered
- Site Male and Female Toilets

A1-size drawing
1:100

LEGEND

Features:

AB	Air Brick	UR	Urinal
BD	Bollard	UTL	Unable to lift
BS	Basin	V	Vent
CL	Cover Level	VP	Vent Pipe
DCH	Drainage Channel	WM	Water Meter
DPC	Damp proof Course	WP	Waste Pipe
ER	Earth Rod		
G	Gully		
GV	Gas Valve		
IC	Inspection Cover		
IL	Invert Level		
JBX	Junction Box		
PM	Parking Meter		
RAD	Radiator		
RE	Rodding Eye		
RNP	Road Name Plate		
RSJ	Rolled Steel Joist		
RWP	Rain Water Pipe		
SD	Service Duct		
SV	Stop Valve		

Finishes:

B	Brickwork
BB	Breeze Block
C	Concrete
CLT	Ceiling Tiles
CP	Carpet
CPT	Carpet Tiles
CR	Concrete Render
CT	Ceramic Tiles
FT	Floor Tiles
HBD	Hardboard
L	Linoleum
P	Plaster
S	Steel work
T	Timber
VT	Vinyl Tiles

Building Level Details

D	Door
EL	Eave Level
FFL	Floor Level
FRL	Flat Roof Level
HL	Head Level
PPL	Parapet Level
RL	Ridge Level
SL	Sill Level
SP	Springer of Arch
TA	Top of Arch
W	Window
12.34	Ceiling/Beam Soffit

AutoCAD 2007

No.	Job No.	Date.	Revision Detail	Surveyor	Checked

EDI SURVEYS LTD.
163-165, RANELAGH ROAD, IPSWICH, SUFFOLK, IP2 0AH.
www.edisurveys.co.uk
Tel : (01473) 211222
Fax: (01473) 221660
Email: enquiries@edisurveys.co.uk
ISO 9001 REGISTERED FIRM

Job No.	11943
Scale	1:100
Surveyor	M.CABLE
Date	June 2010
Checked	GMP

PROJECT
8 PILGRIMS LANE
HAMPSTEAD
LONDON NW3 1SL

CLIENT
MRS I ABIOLA c/o
BROD WIGHT ARCHITECTS
75 HAVERSTOCK HILL
LONDON NW3 4SL

DRAWING No.
999/S01

DRAWING TITLE
SITE PLAN EXISTING

Appendix 6
Hot Works Permit

Hot Work Permit

Job Location			Date & Time
Grinding or cutting	Soldering	Brazing	Welding
Have any applicable smoke detectors or heat sensors been isolated?			
Is fire fighting equipment immediately available?			
Fire Blanket	CO2	Foam	Water	Powder	Hose
Has the immediate area been cleaned of all flammable substances?			

ACCEPTANCE by Tradesman

AI Construction
AUTHORISATION TO PROCEED

Signature	Signature
Name	Name
Date & Time	Date & Time

CANCELLATION OF PERMIT & HAND BACK TO AI Construction

The work area has been checked and is clear of hot or smouldering materials?	
Have fire sensing devises been reactivated?	
Signature	Signature
Name	Name
Date & Time	Date & Time

Appendix 7
Tree Report

1-38-2606/2

JOHN CROMAR'S
ARBORICULTURAL
COMPANY
LIMITED

•

SUITE 6D,
BRITANNIA HOUSE,
LEAGRAVE ROAD,
LUTON, BEDS.,
LU3 1RJ
TEL 01582 80 80 20
FAX 01544 231 006
MOB 07860 453 072

•

admin@treescan.co.uk
www.treescan.co.uk

R E P O R T

on the impact on trees

of proposals for development

at

8 Pilgrims Lane, London, NW3 1SL

(18th June, 2012)

Registered Consultant of the Arboricultural Association
John Cromar, Dip. Arb. (RFS), F.Arbor A.

REGISTERED
CONSULTANT

Company Registration No. 5195523. Registered in England and Wales.
Registered Office: 2 Water End Barns, Water End, Eversholt, Beds., MK17 9EA

01
Introduction and Instructions

I am instructed by Brod Wight Architects on behalf of clients to make an assessment of tree amenity value and condition of trees, at 8 Pilgrims Lane, London, NW3 1SL , and of the impact of a proposal for development on such trees. Accordingly, I visited the property on 24th August, 2010 in order to carry out an inspection.

02
Copyright

02.01

03
Notes

03.01
PLANS

1-38-2606/P1 gives an approximate representation (in plan) of actual crown form, and is intended to indicate the relationship of neighbouring trees to each other, and should be read with the comments on crown shape and tree value in TREE DETAILS appended. The plan gives a quick reference assessment of value as per section 4, table 1, of BS 5837:2012. Assessment of value in the TREE DETAILS table appended is, in accordance with British Standard 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' related mainly but not exclusively to the criterion of *visual value to the general public*. The Standard recommends a way of classifying trees when assessing their potential value in relation to proposed development. Some surveys may not include any trees of one or more categories. Table 1 suggests categories 'U', 'C', 'B' and 'A' , in ascending merit. 'R' (RED crown outline on plan) category trees are dangerous \ low value trees that could require removal for safety or arboricultural reasons. 'C' (GREY or black/uncoloured crown outline on plan) category trees are of no particular merit, but in adequate condition for retention. 'A' category trees (GREEN crown outline on plan) are trees of high vitality or good form, or of particular visual importance: 'B' (BLUE crown outline on plan) category are good trees but may be of slightly poorer form or be not sited as importantly as 'A' category trees. See TREE DETAILS appended. Category Assessment appears in column 10. This standard also provides a way of determining an area (see TREE DETAILS column 7) – the RPA – root protection area - around the trunk of the tree in which protective measures should be used in order to prevent significant damage to trees. There are various ways of achieving this. A simple way is to use exclusion fencing, but other methods have been shown by established use to be very effective.

03.02
1-38-2606/P2A shows proposed retained trees and is colour-coded to indicate where arboricentric methods are proposed during the construction process.

04
Sources and Documents

Ground level inspection.
Supplied plans refs:

999/AP3-S01A	Existing Site Plan
999/AP3-01C	Proposed site plan,
999/AP3-02E ,	Proposed Basement floor plan
999/AP3-03D	Proposed Upper Basement floor plan

05
Appraisal

05.01
AMENITY / SCREENING BY TREES AND SHRUBS
The trees on and adjacent to the site are no significant general public amenity value, as they are scarcely if at all visible from any public viewing positions, and then only as 'glimpse' features. (See cover picture) Certain trees are of some strictly local amenity value to owners / users of the site and adjacent owners/users.

05.02
TREES AND LAYOUT - POTENTIAL FOR CONFLICT WITH ROOTS
(Details appear in the tree detail table appended.) The figures in columns 6 and 7 in the tree details table appended indicate the root protection area ('RPA'), and typically the basic exclusion fence position. New materials and methods have been developed and continue to be developed that assist in promoting the successful retention of trees in association with constructed features. It should be noted that BS 5837:2012 (section 7.4.2) supports 'up and over' methods of construction where appropriate. The design principle of this method is outlined within Arboricultural Practice Note 12 (Through the Trees to Development). This method has been used for many years on the recommendation of John Cromar's Arboricultural Co. Ltd. and has successfully allowed the retention of mature trees very close to construction activities.

05.03
An assessment as per BS5837:2012 section 4.6.2 has been carried out in connection with all trees to be retained. (This section requires that site conditions, tree mechanics, etc., are taken into account in determining the likely position of roots.)

05.04
FOOTING DESIGN
Minor encroachment on the RPA of one retained tree is entailed, as analysed in the table below :

No.	Tree	RPA in sq.m.	Area sq.m affected	Percentage affected	Notes
1	Japanese cherry	43.47	2.62	6.03	Area of potential root loss - steps area.

To put the above in arboricultural context, trials made by the Morton Arboretum found that up to 30% of the root system of mature trees could be cut without any difference in shoot elongation or vitality resulting. The use of a piled footing with reduced depth ground beams or fully suspended ground beams is proposed in area indicated on plan and outlined in method below. In this case all trees to be retained can be adequately protected by exclusion fencing and other measures as indicated.

05.05
PERCEPTION OF TREES
The proposals do not entail any change to fenestration relevant to retained trees. In view of the above I conclude that shading by trees has been considered (as section 5.6.2.6 of BS 5837:2012 recommends) and appears insignificant.

05.06
Processing by the LPA of any due application from future owners for permission to carry out tree work will no doubt be carried out with due regard for good arboricultural practice and according to British Standard 3998:2010 'Tree Work – Recommendations'. In any appeal that might arise against refusal of LPA consent to reduce inappropriately, or fell trees, common arboricultural criteria to those of the LPA would be used by any specialist tree inspectors of the Planning Inspectorate, and thus the trees would in my view be thus protected against inappropriate work. I consider that any such notional issues are very likely to be dealt with appropriately as no doubt in the past they have been within the Borough, as such tree/building juxtapositions are far from rare.

05.07
SUPERSTRUCTURE AND TREE APPRAISAL - TREE PRUNING
I note from the drawings supplied that no conflict with the crown of retained trees will occur.

05.08
TREE PLANTING
Appropriate replacement tree planting will play some minor role in providing for future local amenity. On plan, A= Parrotia persica 14/16cm girth ; 85L pot.

05.09
SUPERVISION
Supervision by an arboriculturist is a desirable (but not always essential) element of site development where trees are present and to be retained. Good communication between site agent and arboriculturist can reduce the need for

such a measure. I propose that this takes place at key points in the construction process, and additionally whenever required by the architect or LPA. These key stages are as per method 1 in section 06.02 below.

05.10
PUBLISHED GUIDANCE IN RELATION TO TREES AND DEVELOPMENT
In conserving trees on development sites, expected best practice is as in B.S. 5837 : 2012. Section 5.1.1 notes :

"Certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification : attempts to retain too many or unsuitable trees on a site can result in excessive pressure on the trees during demolition or construction work, or post-completion demands for their removal."

05.11
The above advice appears to have been considered in formulating proposals for development.

05.12
CONCLUSION
I conclude that the construction proposed, subject to precautionary measures as outlined above and as per the recommendations outlined below, will not be injurious to trees to be retained, nor will require any trees of significant longevity or public amenity value to be removed.

06
<u>Tree Protection Proposals</u>

06.01
TREE PROTECTION - GENERAL
It is highly important to tree health and vitality that construction activities are carried out strictly in accordance with the tree protection methods specified. A single traverse of a root protection area by a mechanical excavator can cause SIGNIFICANT and PERMANENT (albeit temporarily invisible) damage to trees. Such machinery, including piling rigs, shall be kept at ALL times outside the root protection areas as indicated in the tree details table appended, and/or shall be subject to SPECIAL METHODS below. Fences to protect trees shall be respected as TOTAL EXCLUSION fences. Hence, before any site activity, including demolition, the fence lines shall be complete. Protective fencing and any temporary protection of ground surfaces will have to be removed in due course to allow finishing of landscaping, paving, etc., but this shall not take place until all need for vehicular access to the site has passed, and shall be agreed with arboriculturist / planners on site during progress of works.

06.02
TREE PROTECTION – SPECIAL METHODS 1 - 8
PLEASE READ WITH PLAN REFERENCE 1-38-2606/P2A, APPENDED.

Method 1 : Supervision by an arboriculturist shall take place at key points in the construction process, and additionally whenever required by the architect or LPA. These key stages are :

1) **At site possession by contractor, outline all tree protection measures with site agent and resolve any issues arising. Ensure tree work is carried out to specification and sign off. Ensure protective fencing is erected and completed as proposed. Ensure any site hut, mixing sites for mortars, disposal-to-skip sites, etc., are located appropriately, and sign off.**
2) **Approve timing of removal of protective fencing (post main phase) and sign off.**

Method 2 : Tree work shall be in accordance with good arboricultural practice, to BS 3998:2010 'Tree Work - Recommendations'. The stump of tree 3 shall be removed by mechanical stump grinder, not by mechanical excavator.

Method 3 : Tree protection fencing shall be erected, consisting of 'Heras' type fencing (weld-mesh panels), each section securely attached to uprights driven at least 0.6m into ground, as per the layout as shown on the plan (pink lines). The standard rubber supports ('elephant's feet') shall used as per BS 5837:2012 section 6 figure 2. Below the crowns of trees with branches extending to less than 2m above ground level, in order to avoid unnecessary pruning, it is permissible to replace sections with manufactured boards at least 11mm thick (hoarding), attached securely to timber uprights driven at least 0.6m into the ground, providing the finished fence stands at least 1.5m above ground level.

Method 4 : This method shall apply in the zone hatched blue on plan. Heavy-duty impermeable membrane shall be laid over the entire area and then continuously abutted scaffold boards or manufactured boards shall be laid so as to completely cover this area. Polythene sheeting shall be left in position if concrete is to be poured to form a ground bearing slab in this zone.

Method 5 :
This method shall apply in solid orange zone on plan. Trial pits to determine suitable pile/pad locations to support lintels carrying the steps formation shall be dug with hand tools only. The pile heads/underside of lintels shall be placed so as not to require the cutting of roots >20mm diameter. The work shall proceed cautiously from ground level across the full width of the required zone. A skimming horizontal action rather than primarily vertically-orientated use of spade shall be adopted where possible. No roots over 20mm diameter shall be cut. Concentrations of 3 or more roots of 10mm to 20mm diameter within 150mm shall be preserved. Roots 20mm or more in diameter unearthed shall be temporarily protected with bubble-wrap and

insulating or gaffer tape while rest of trench is dug. The use of small probes such as screwdrivers to determine root presence ahead of digging is recommended. If a root > 20mm diameter is inadvertently damaged, it shall be retained *in situ* for appraisal by the arboriculturist. Any smaller roots encountered shall be trimmed to the edge of excavation using a sharp edge tool such as handsaw or secateurs; the cuts shall be made at right angles to the long axis of any such roots. An impermeable membrane shall be placed between exposed soil and any wet concrete to be poured.

Method 6 : This method shall apply after completion of main build only. Soil handling of any kind within the root protection areas shall take place only after a minimum of 3 days after heavy rain, and shall where possible be carried out 7 days or more after such rainfall. Screened topsoil (to BS3882:2007- multi purpose topsoil) shall be laid to a maximum depth of 100mm as required.

Method 7 : The replacement shrub shall be supplied of type ('A' on plan) : *Parrotia persica*. Shrub shall be short-staked, tied with proprietary fixing, and mulched to 100mm depth and 0.75m radius from trunk.

Method 8 : In addition to the above, careful general operation and site handling shall be observed as outlined at 06.03 below.

06.03
GENERAL TREE PROTECTION METHODS

A) No fires shall be made on any part of the site, or within 20m of any tree to be retained.
B) No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.
C) No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
D) No storage of materials shall be made within the protective fences.
E) No breaching or moving of the protective fences without the approval of an arboriculturist.
F) Services, if planned to be laid in the root protection areas, (and which notionally appears unnecessary in this case) shall be laid using trenchless 'no dig' methods or by hand dug trenches to avoid cutting major roots.
G) Alterations in levels within the tree protection fence areas shall be avoided.

06.04
It is recommended that acceptance of the recommendations in this report is demonstrated by, for example, the architect specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of observation of such recommendations have been priced in.

07
General

If conflicts between any part of a tree and the building(s) arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflect poorly on the construction and design personnel involved. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

18th June 2012
Signed:

John C. M. Cromar, **Dip.Arb.(RFS) F.Arbor A.** **01582 808020 / 07860 453072**

APPENDICES

08
Tree details

TREE ASSESSMENT AND ROOT PROTECTION ZONES

Tree number	Tree type	Height (m)	Number of stems	Stem diameter (combined if applicable) (mm)	Radius of RPA if circle (mm)	RPA (m^2)	Comments	Life expectancy (years)	Assessed BS5837 value category
1	Japanese cherry	9	1	310	3720	43	some local screening value; low, decayed limb.	10+	C2
2	*Euonymus*	3.5	1	120	1440	7	Shrub	10+	(C2)
3	purple plum	4	1	130	1560	8	Moribund NOT RETAINED	<10	U
4	western red cedar	14	1	475	5700	102	no access : screening value	40+	B2
5	Japanese cherry	6	1	200	2400	18	Dead NOT RETAINED		U

09
Schedule

Trees at 8, Pilgrims Lane, London, NW3 1SL

Please read in conjunction with plan 1-38-2606/P1.

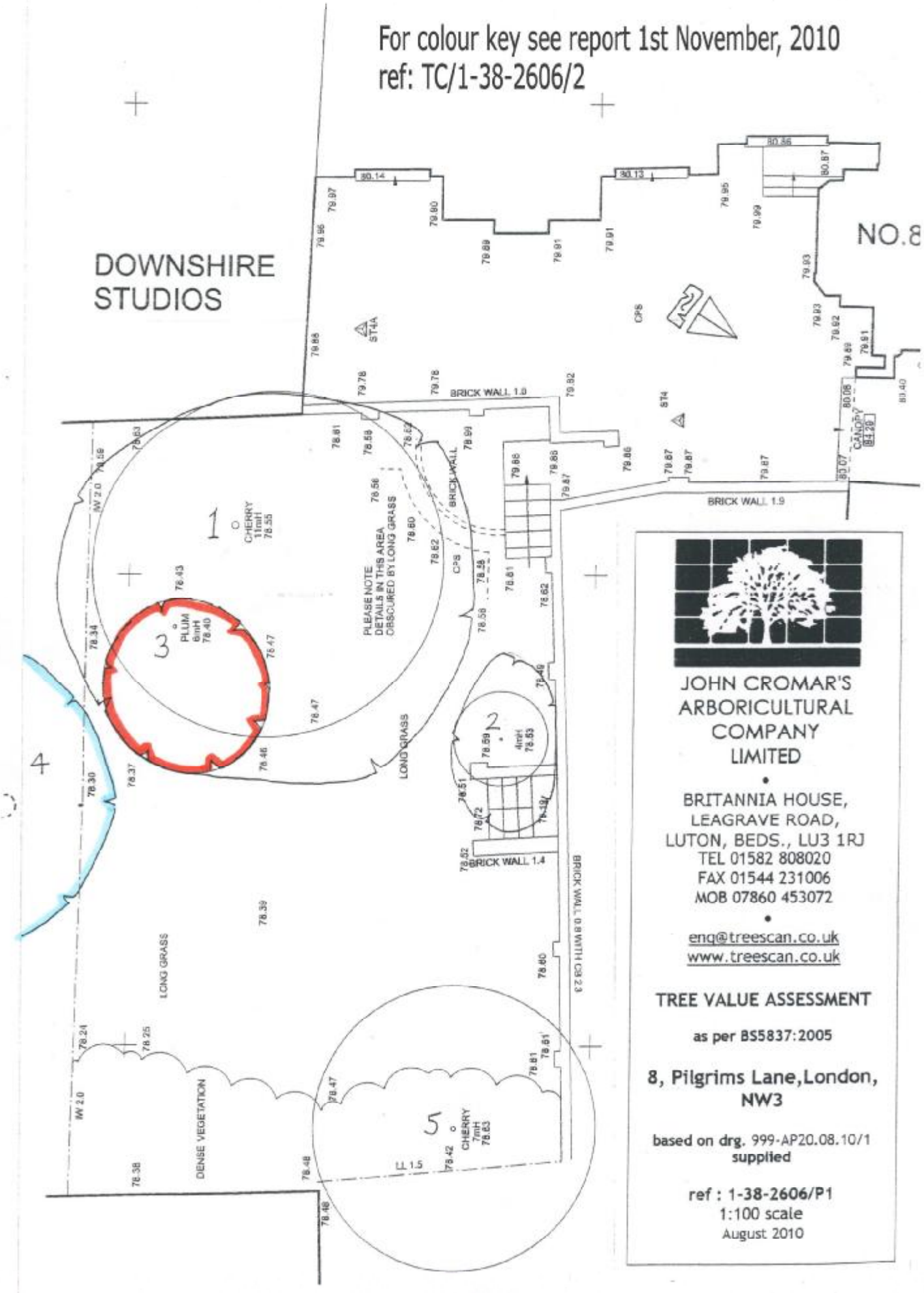
No.	Tree	Height (m)	Trunk / stem count dia. (mm)	Comments
1	Japanese cherry	9	310	remove decayed limb
3	purple plum	4	130	remove, grind out stump
5	Japanese cherry	6	200	remove including stump

NOTES:
All tree work should be carried out to BS 3998 : 2010 'Tree Work - Recommendations'. The Wildlife and Countryside Act 1981 protects with certain exceptions all birds and their nests. It is an offence to destroy such nests or take or injure such birds in the course of tree works operations. If a tree is a bat-roost, a licence to work on the tree must first be obtained from the relevant Statutory Nature Conservation Organization (in England : Natural England 0845 601 4523.) Acting without a licence is likely to be justifiable only in acute emergencies threatening human life and where all other legally available option such as footpath diversion, fencing and warning signs cannot be applied.

10
Plans

1-38-2606/P1
1-38-2606/P2A

For colour key see report 1st November, 2010
ref: TC/1-38-2606/2



JOHN CROMAR'S ARBORICULTURAL COMPANY LIMITED

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TREE VALUE ASSESSMENT

as per BS5837:2005

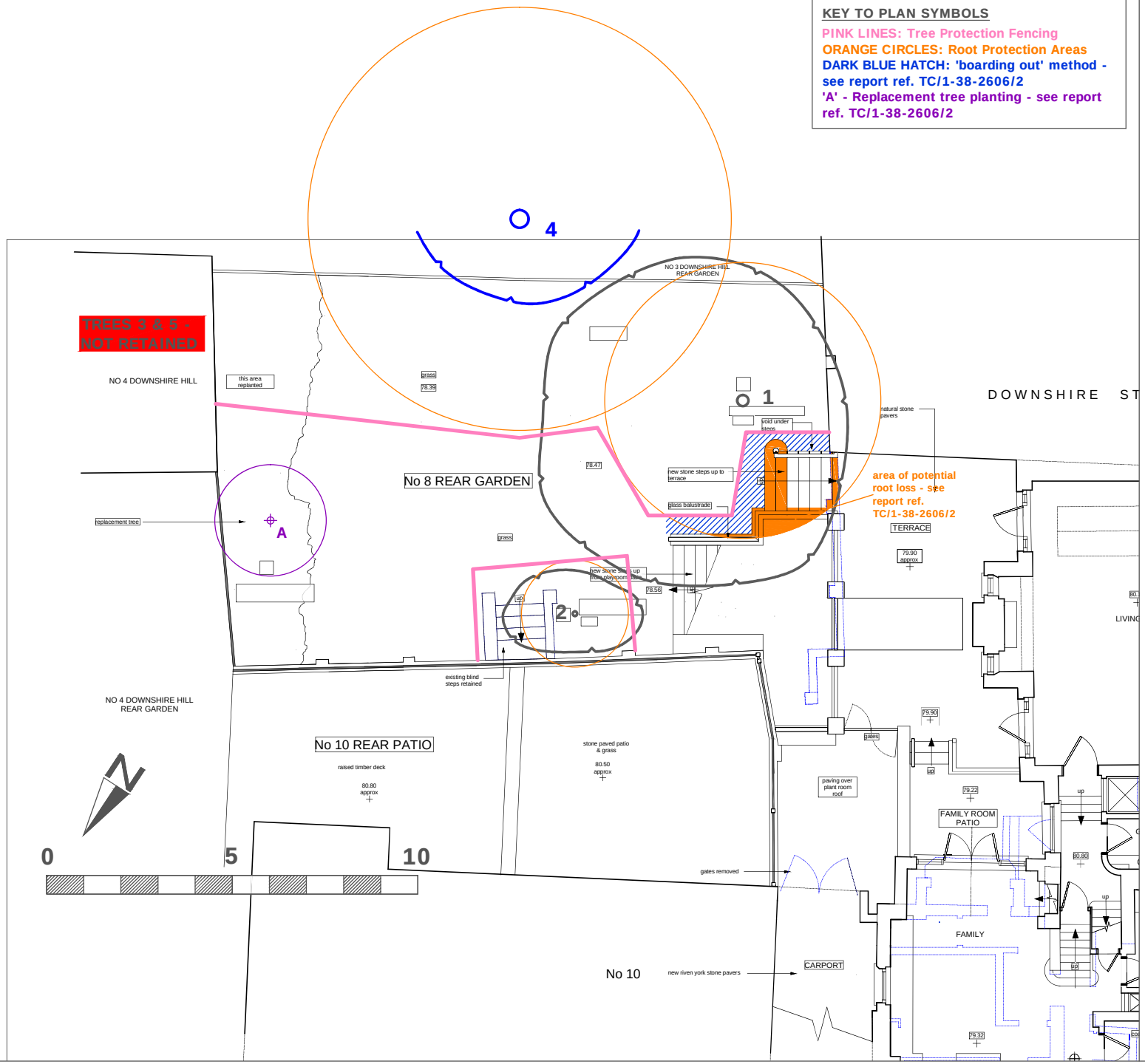
8, Pilgrims Lane,London, NW3

based on drg. 999-AP20.08.10/1 **supplied**

ref : 1-38-2606/P1
1:100 scale
August 2010

KEY TO PLAN SYMBOLS

PINK LINES: Tree Protection Fencing
ORANGE CIRCLES: Root Protection Areas
DARK BLUE HATCH: 'boarding out' method - see report ref. TC/1-38-2606/2
'A' - Replacement tree planting - see report ref. TC/1-38-2606/2



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TREE RETENTION and TREE PROTECTION MEASURES

for fuller details of protection measures see report reference TC/1-38-2606/2

8, Pilgrim's Lane,
London,
NW3 1SL

based on Brod Wight Architects drg. no. 999-AP3-03E supplied

ref: 1-38-2606/P2A
1:100 @ A3 scale
Jun 2012