Construction Management Plan

15 Wedderburn Road
London, NW3 5QS

Contents:

1.0 Introduction

1.1 Objectives of the Plan

The purpose of the Construction Management Plan is to outline our approach to managing the construction works for 15 Wedderburn Road, London. This document includes specific comments on the site establishment, logistics, and the process of managing the overall environment surrounding the property. It will also ensure that the construction works cause the minimum disruption to the adjacent residents with a safe working and living environment maintained.

The agreed contents of the Construction Management Plan must form part of the development plan and be agreed with The London Borough of Camden. The Plan will be constantly reviewed and any changes or improvements will be added and agreed with the Council and the Plan revised and re-issued.

These proposals are to enable third parties to understand the nature of the works and the various construction activities associated with the development.

This Construction Management Plan is subject to third party approvals and therefore amendments are likely. Formal approvals and activity methodology approaches will be addressed in detailed submissions to the design team and the Client. Liaison with the neighbours and interested parties will continue throughout the project, as information is updated and as the project develops. Particular attention will be paid to ensure that the neighbours are kept appraised of progress and future works on the project.

The information provided in this document is an overview of the key project activities at Wedderburn Road. Generic statements herein are to be further developed into plans, procedures, and detailed method statements as the project develops.

This Plan is to inform interested parties. It will be used as the background for the detailed construction method and risk assessments, and will be included in all specialist trade contractor portions of the works.

2.0 Project Overview

2.1 Project Description

15 Wedderburn Road is a large property situated on the corner of Wedderburn Road and Akenside Road. It is located in the London Borough of Camden, in a mainly residential area of North West London. There are adjacent properties on two sides of the building. The current main entrance to the building is off Wedderburn Road and through the existing car park area in the North West corner of the plot. There are no entrances to the property off of Akenside Road.

The proposed development involves creation of a new basement level, lower ground floor car park, general structural alterations and full refurbishment of the existing property at Flat 1, No. 15 Wedderburn Road. The existing swimming pool is being removed at lower ground floor level. A new car park is being formed on the lower ground floor level together with a large swimming pool, cellar, games room, and cinema in the newly formed basement. These works are to be carried out without any alterations at first and second floor which are occupied by different owners.

A fair amount of internal remodelling will be taking place at ground floor level to accommodate the access to the new car park as the existing garage is being demolished. The internal works will comprise of new mechanical and electrical installations, drylining, specialist joinery and finishes etc. The works will finish with some minor landscaping to the front, side, and rear of the property.

The impact of these works on adjoining properties must be deeply considered. The following items have been recognised as important to neighbours and must be adhered to at all times during construction:

- Access and egress routes to properties must be maintained at all times.
- Environmental conditions must be kept to an acceptable standard.
- Statutory services must be kept live at all times.
- Existing fire zones must be maintained.

3.0 Site Works

3.1 Preliminary Programme & Site Layout Plan

The overall project duration is expected to be in the region of 64 weeks.

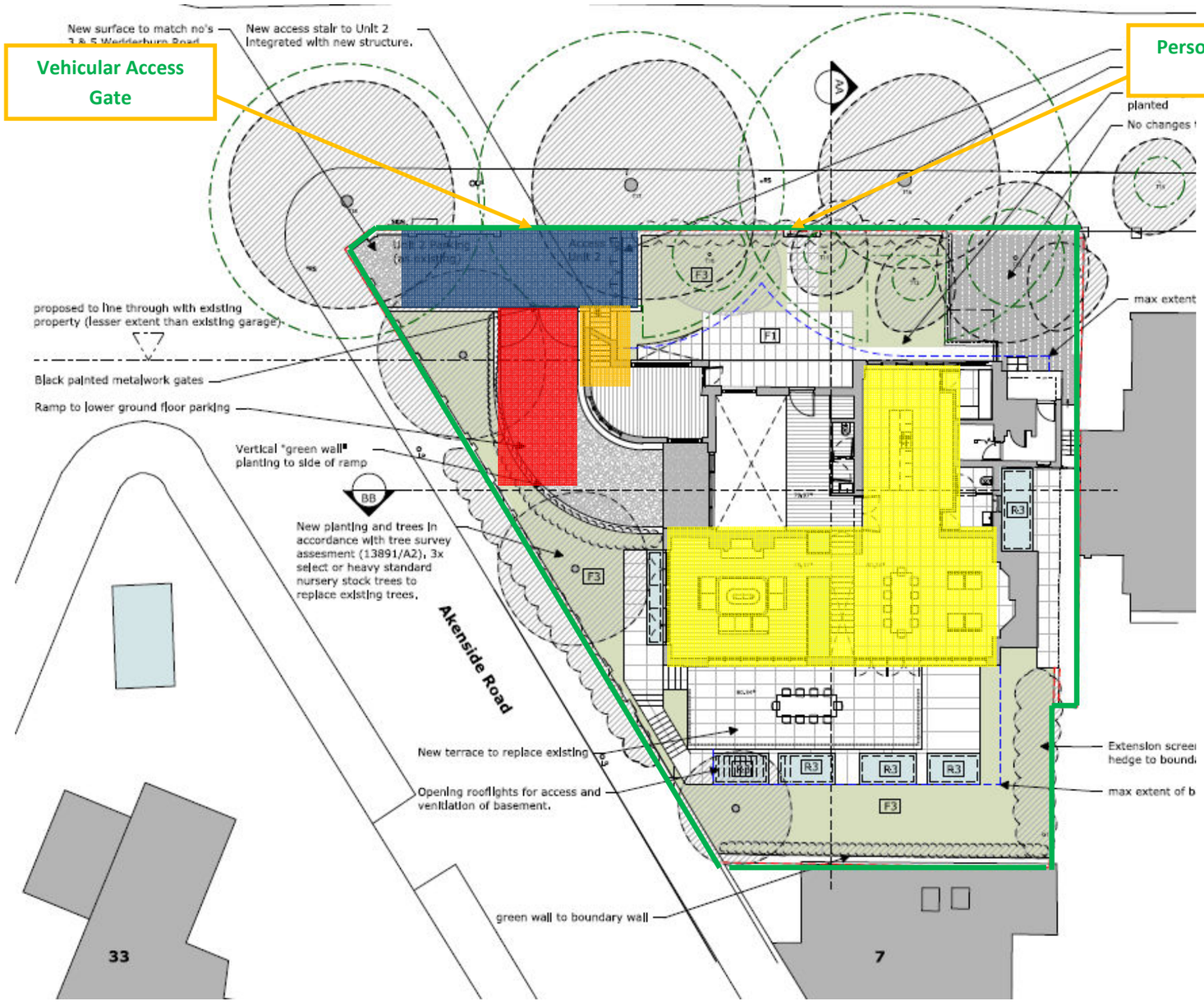
The key elements of the development with regards to the potential impact on surrounding area are:

- Site Establishment
- Piling
- Substructure: Basement Excavation & Removal Of Excavated Material
- Concrete Works
- Internal Fitout
- External works.
- Clear Site

From the current design information, Walter Lilly have developed our preliminary construction programme, inserted within this document indicating the scope and sequence of the works for this project.

WEDDERBURN ROAD

INITIAL STAGE SITE ESTABLISHMENT PLAN SLP 1



INITIAL STAGE SITE ESTABLISHMENT PLAN – SLP1

Access for muck away lorries
During excavation stages

Parking bay for
Delivery access

Secure site hoarding

Site accommodation prior
To car park completion

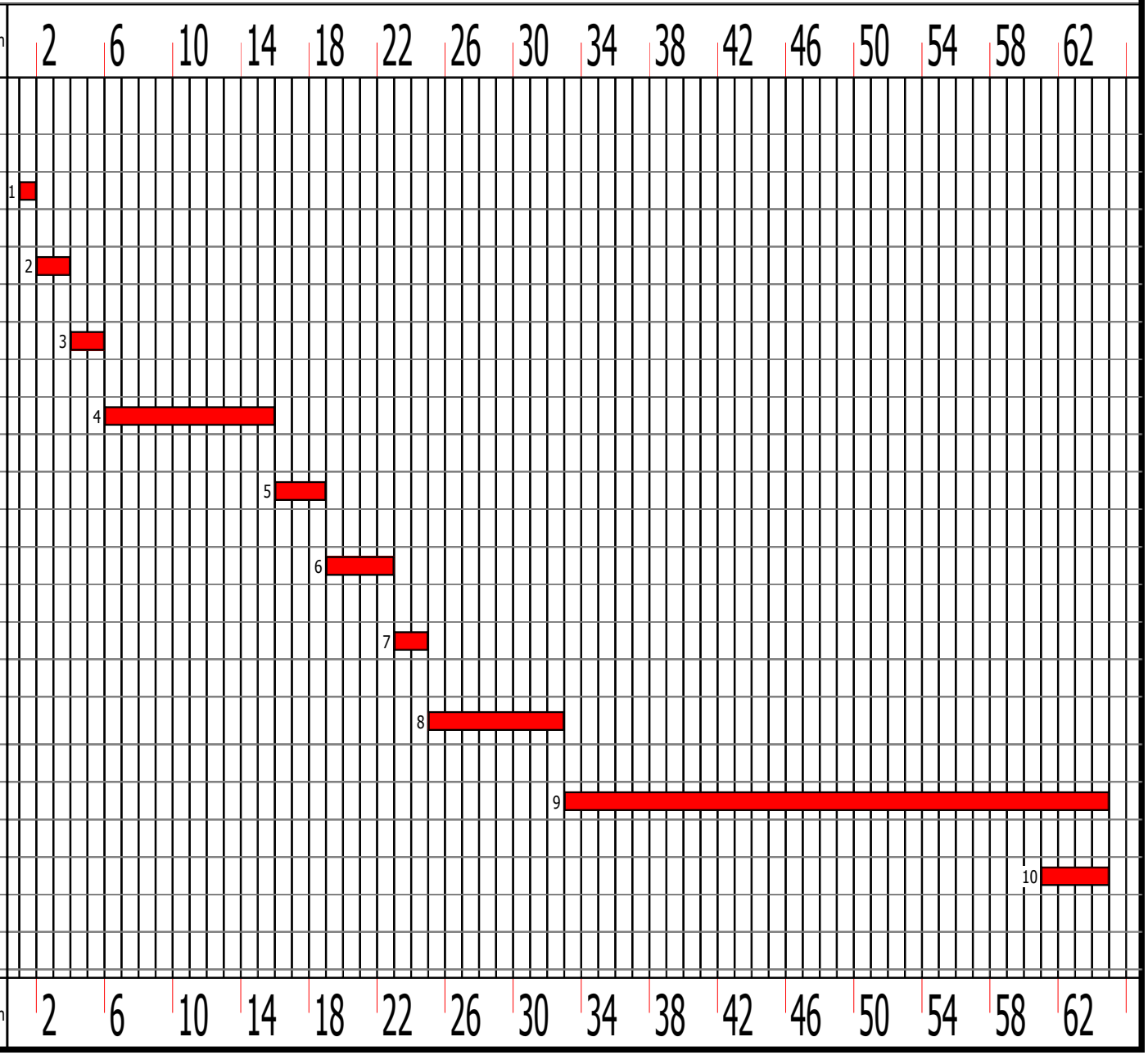
Approximate location of
Temporary stair for access to
Unit 2

WalterLilly

Contract Title : 15 WEDDERBURN ROAD
Programme Title : PRELIMINARY PROGRAMME
Programme No. : 15WR
Drawn by : JMH **Date : 18/10/2013**

WalterLilly

Line	Name	Duration
	15 WEDDERBURN ROAD - OUTLINE PRELIMINARY PROGRAMME	
1	SITE SET UP	1w
2	PROPPING & DEMOLITION	2w
3	INTERNAL ALTERATIONS TO FACILITATE PILING RIG	2w
4	PILING OPERATIONS	10w
5	NEW GROUND FLOOR BEAMS AND GROUND FLOOR SLAB	3w
6	EXCAVATION OF LOWER GROUND	4w
7	NEW LOWER GROUND LEVEL SLAB	2w
8	EXCAVATION OF BASEMENT VOID AND CONSTRUCTION OF BASEMENT LEVEL	8w
9	INTERNAL FIT OUT	32w
10	EXTERNAL LANDSCAPING	4w



3.2 Outline Method of Works

The key elements of the development with regard to the potential impact on the surrounding area are:

- **Site Establishment, Propping & Demolition**

  The site office and welfare accommodation will be established within the ground floor of Flat 1, no. 15 Wedderburn Road. These will then be relocated to the car park area once it has been constructed. Due to the scale of the plot, it will not be necessary to position portable cabins over the public footpath. Temporary props will be installed from the underside of the first floor, down to the existing lower ground level. This will increase the stability of the house whilst the construction works take place.

  Demolition of the garage will then provide access to site for muck away vehicles during the excavation process. Internal demolitions will then take place to create an access route and working area for the piling rig.

- **Piling Operations**

  Piling will then be carried out in some areas within the existing house to form the external perimeter of the new basement level swimming pool. The piling will be secant type 450mm diameter carried out by a low head room rig with a mast height not exceeding 3.5 metres. In the existing swimming pool area of the house at lower ground level this will be fine as the headroom is in excess of 3.5 metres. In other areas, parts of the ground floor may need to be locally removed to accommodate the rig. It should be noted that the special access rig will be taken apart and lowered by crane into position and then reassembled. A mobile crane positioned on Wedderburn road will be required for this action.

  Once all the internal piling has been completed the external piling will commence. This piling is generally at the rear of the property and at the front, plus around the new access ramp to the car parking. When the piling is complete, it will be necessary to tie the pile together at head level with a capping beam to provide a full continuous permanent tie.

- **Insertion of New Ground Floor Beams and Ground Floor Slab**

  On completion of piling and casting of the capping beam, work can commence to insert beams to the underside of the ground floor and support the load bearing masonry. These new beams will be supported by spanning them between the newly inserted piles. The beams are likely to be steel sections which will need to be spliced together to facilitate access and their insertion. In addition it may be necessary to preload the beams by the use of harjaks or similar to ensure the beams have picked up the load, thus minimising the likelihood of any settlement cracking above.

  After the beams have been installed to support the load bearing elements, then the new sections of the ground floor can be cast which are suspended and suit the new architectural arrangement.

- **Substructure: Excavation of Lower Ground**

  Once the ground floor has been completed, excavation can commence beneath the floor to remove material and open up the new space for car parking. The excavated material will be removed from site using a conveyor belt system set up to feed directly into awaiting muck away lorries.

- **New Lower Ground Level Slab**

  On completion of the excavation for the lower ground level, it will be necessary to cast the new lower ground floor slab. This slab will be in reinforced concrete spanning between primary reinforced concrete beams which are in turn supported on the new piled perimeter walls or internal piled walls. The central staircase void will be maintained as this will provide access for the latter removal of materials from the basement space beneath. The new lower ground floor slab will be tied to the piles by use of resin anchors and it will provide suitable propping to the piles by means of its diaphragm action.

- **Excavation of Basement Void and Construction of Basement Level Slab**

  Work commences on the removal of material beneath the new lower ground slab to form the new swimming pool basement space. The material is excavated to the new formation and a new basement slab is cast on compressible material such as Cellcore to take account of likely heave. The slab is anchored around the perimeter and also internally to piles to provide restraint against the buoyancy force associated with ground water.

  As part of this work the new swimming pool is also constructed most likely from reinforced concrete with hydrophobic additives.

- **Internal Services and Finishes**

  A full services installation will commence once the structural works to the building have been completed. Finishes trades will run concurrently. A nominal period has been allowed on the programme for these works. Once the structural works are completed, the site accommodation will be relocated from the first floor into the new car park area.

- **External Works**

  Once the main envelope works have been completed and scaffolds removed there will be an element of external services to complete. This will include drainage connections, power and gas utilities, and the construction of the car turntable. Once completed, the hard and soft landscaping will be progressed with the site accommodation being removed towards the end of the programme, allowing the remaining works to complete accordingly.

4.0 Construction Management Action Plan

The following sections outline the key elements for consideration. This document demonstrates our commitment to manage, control, and where possible mitigate our impact on the local community and infrastructure.

Many of the issues identified will be further developed and dealt with in our more detailed site based method statements. Method statements will be prepared and agreed for all major site operations in advance of the relevant works commencing. This will be particularly important for piling, excavation and structural works.

4.1 Communication

4.1.1 Neighbourly Relations

The site is within a residential area. Maintaining good neighbourly relations is assisted greatly by good communication and by keeping third parties regularly informed of site activities likely to impact on adjacent residents. Walter Lilly have found that listening to reasonable concerns and demonstrating a considerate and professional approach, will maintain a well-balanced relationship.

Regular newsletters will be produced to keep neighbours advised of future events, general progress of the works, and the requirements for any abnormal works.

Appropriate signage and information boards will be displayed on site hoardings.

We would plan our works to accommodate special arrangements to minimise disruption to adjacent residents during any special events such as funerals, weddings, birthday parties, and examination periods etc.

4.1.2 Considerate Constructors Scheme

Walter Lilly will register and comply with the requirements of the Considerate Constructors Scheme for the duration of the project.

The works will be carried out in accordance with the Considerate Constructors Scheme and in such a way as to minimise the impact on the local environment and amenities. Materials will be re-cycled wherever possible.

A contact board will be displayed outside the site providing contact details. This will include names and telephone numbers of key construction staff so that neighbours and the general public can contact should they have cause to do so.

A complaints/contact book will be kept on site which will be used to record details of any complaints. This will include the name of the person making the complaint, the date, time and nature of the complaint, and the action necessary to resolve the complaint. The complaints book will be regularly reviewed to ensure that any complaints are dealt with and resolved promptly *(sample below).*

http://wilintranet/users/ccdbms.nsf/a10d9c1ca2c97bee802572b200398167/cc7214737745cba4802571ab002d59c5/$FILE/Project Complaints Register.doc

Walter Lilly	PROJECT COMPLAINTS REGISTER					
Contract No & Project						
Date Received	***Name & Details of Caller***	***Complaint / Comment / Compliment***	***Walter Lilly Signature***	***Action Taken***	***Date Actioned***	***Status Open / Closed***

13 January 2009 RJB HAS

4.1.3 Complaints Register:

Walter Lilly will provide and maintain a complaints register for this project.

The register will be kept in the site office.

The register will be maintained by the site manager.

The register will be available for inspection on request within the site office.

Details recorded in the register shall include:

- Complainant name.
- Complainants contact details.
- Date and time of complaint.
- Details of complaint made.

- Actions taken to resolve complaint including date and time.
- Reasons for unresolved complaint. Completed within 48 hours of complaint.

4.1.4 Incident Logbook:

Walter Lilly will provide and maintain an incident logbook for this project.

The incident logbook will be kept in the site office.

The incident logbook will be maintained by the site manager.

The incident logbook will be available for inspection upon request within the site office.

Details recorded in the incident logbook shall include:

- Incident details.
- Date and time of incident.
- Actions taken to resolve incident including date and time.
- Planned actions implemented to prevent recurrence of incident.

4.1.5 Main Contractor Contact Details:

Name & address of the main contractor:

Walter Lilly & Company Limited
Waddon House
283 Stafford Road
Croydon CR0 4NN

Company address for receipt of legal documents:

Walter Lilly & Company Limited
Waddon House
283 Stafford Road
Croydon CR0 4NN

Main contractor contact details:

Walter Lilly & Company Limited
Waddon House
283 Stafford Road
Croydon CR0 4NN
Telephone number 0208 730 6200

E.mail contact@walter-lilly.co.uk
Web www.walterlilly.co.uk

Name, address & contact details of the site:

Walter Lilly Site
15 Wedderburn Road
London NW3 5QS

4.2 Site Establishment

A solid hoarding will be erected to the frontage of the site and along the boundary to all sides. The hoarding will contain the site entrance gates, both personnel and vehicular which will be kept closed as much as possible. It will be painted in the Walter Lilly colours or an agreed colour and kept in a clean and tidy condition throughout the works. Signage will be kept to a minimum.

All hoardings/fencing will be regularly checked and maintained in a clean and tidy condition and signage will be kept to the minimum.

Temporary power, water and drainage, will be established to serve the site.

The site will be maintained in a safe and tidy manner with the implementation of good housekeeping procedures.

4.2.1 Access

Pedestrian and vehicular access to the site will be from Wedderburn Road via the access gates into the existing car park. The pedestrian access route will be altered to run through the new main entrance once this is formed.

As shown on the attached site plan SLP 1, muck away vehicles can be positioned within the site constraints after the demolition of the existing garage. This will still allow access into the site for delivery vehicles as they can park in the existing car parking area. This will mean there is no requirement to suspend any of the residents parking bays in the local area.

All site staff and operatives will be encouraged to travel to work by public transport as there will be strictly no parking outside or anywhere near to the property. Any staff or operatives that must drive to work will be told to park in local pay and display parking spaces.

4.2.2 Traffic Management: *(Please see separate detailed Traffic Management plan)*

Deliveries will be managed on a 'just-in-time' basis. Deliveries will be carefully planned, pre-booked, and managed on site to ensure no back up of vehicles outside of the property, and will be timed to cause minimal disruption to the neighbours. All deliveries and collections will be made between the hours of 09:30am and 16:30pm to avoid periods when the roads are at their busiest.

All deliveries to site will be undertaken with full regard paid to:

- Reversing vehicles directed by a competent person.

- Pedestrian and vehicle directional signage – suitable barriers will be erected when deliveries arrive to prevent pedestrians accessing the unloading area.
- Mobile plant will only be operated by a competent person with a banks person in attendance to direct movements.
- Consultation with the Borough of Camden will continue throughout the project to ensure:

    - Construction methods minimise the potential impact on nearby residents
    - Maintenance of the existing public highway
    - Reduction and control of plant movements
    - Segregation of all pedestrians, public or employees, on or in the vicinity of the site

All deliveries to site will be scheduled, to avoid vehicles having to queue to offload at the site. Deliveries and unloading will be supervised to ensure that vehicles are dealt with quickly to minimise the period that they are adjacent to the site. All traffic movements adjacent to the site will be monitored and carried out in a cautious and responsible manner. Deliveries will not conflict with refuse collection.

All subcontractors and suppliers will be made aware of the plan and its requirements, all movements will be booked and controlled by Walter-Lilly management to ensure overbooking and congestion does not occur. Contractors will be expected to provide details of how they will manage their deliveries in accordance with the Plan.

The parking up of deliveries in the immediate area will be prohibited and any unbooked deliveries that arrive on site will be sent away. We do not anticipate any requirement for holding areas off site, however where concreting and other timed return movements are required, specific arrangement will be made with the relevant contractors.

This system will allocate a sufficient time period in the loading area depending on the nature of the delivery/action. In conjunction with this, delivery drivers will call the site management team 30 minutes before arrival to ensure the loading area will be ready. If for some unforeseen reason the area is not clear, the vehicles will wait in a suitable location outside of the borough.

4.2.3 Working Hours

Working hours will be 08.00 – 18.00 Monday to Friday. If Saturday working is required, the hours will be 08.00 – 13.00 only. No works will be carried out on Sundays or Bank Holidays.

Noisy works will be carefully planned and controlled so as to cause minimal disturbance to the neighbours. This may mean altering working hours for some noisy works.

4.2.4 Fire and Emergency Procedures

Contact names and telephone numbers will be made available in case of out of hours emergencies relating to the site. This information will be displayed on the main entrance gate.

Walter Lilly shall implement procedures to protect the site from fire, which will include the following:

A Site Fire Safety Co-ordinator will be appointed to assess the degree of fire risk and formulate a Site Fire Safety Plan, which will be updated as necessary as the works progress and will also include the following:

- Hot Work Permit regime.
- Installation of the site fire fighting equipment e.g. establishing fire points and installing and maintaining fire extinguishers etc.
- Evacuation alarm.
- Material storage and waste control.
- Fire Brigade access.

4.2.5 Security

All site personnel will have to sign in on arrival and sign out as they leave the site. This will be incorporated into the site rules and included as part of the site induction process.

The front entrance gate and apron will be regularly inspected to ensure that it remains secure and clear of materials and rubbish. The access gate to the site will be fitted with a combination security lock to allow access for authorised personnel only.

The names of two appropriate members of staff will be displayed on the gate in case of emergencies.

The police will be notified that a construction site is to start so that occasional patrols may happen and reduce the risk of crime.

4.2.6 Health and Safety

A Construction Health and Safety Plan will be prepared for the works in accordance with the CDM Regulations. Risk Assessments will be developed and agreed. Sub-contractors detailed method statements will also be produced and safe methods of work established for each element of the works.

Site inductions will be held for all new site personnel to establish the site rules and to enforce safety procedures. All site personnel will be required to read the emergency

procedures when signing in for the first time, and sign to the effect that they have read the procedures. These will include any relevant neighbourly issues.
A risk chart at the entry to the site will show current risks for each day and will be updated on a daily basis.

4.2.7 Scaffolding

There will be scaffolds erected as work proceeds to the superstructure elements of the buildings. All scaffolding will be fully monoflex sheeted. This will assist in controlling dust, noise and privacy to neighbouring properties. There may be certain instances where it will be necessary to oversail or found scaffolding on neighbouring land, with these agreements encapsulated within the individual party wall award agreements. This work will be carefully and thoughtfully planned and executed to ensure the safety of neighbours and compliance to the party wall agreements is adhered to at all times.

Scaffold towers and podiums will be used within the building and basement areas and scaffolding will be used for access and edge protection where required.

4.2.8 Main Plant:

Small 360° excavators will be used to excavate the new basement and car park and load excavated material into lorries, possibly by conveyor for removal from site. The excavators will only operate from within the confines of the site.

A small piling rig will be used to pile the perimeter of the basement footprint, this rig will be specified when the design drawings are done.

Concrete lorries will deliver premixed concrete to site and off load it at the exact position required to alleviate the requirement of pumping equipment.

All deliveries will be by van or small lorries. No articulated lorries will be allowed to deliver to this site.

4.2.9 Good Housekeeping

The site will be kept in a clean and safe condition. The areas adjacent to the site will be regularly inspected and any rubbish or litter removed.

Pavements will be kept clean.

Perimeter hoardings will be repainted from time to time and will be kept in a neat and tidy condition. Any graffiti will be quickly removed from the hoardings.

Offloading will generally be direct from vehicles onto the site. Materials will not be stored on the public footpaths.

Waste and rubbish will be regularly removed from site and not allowed to accumulate so as to cause a safety or fire hazard

Activities that have the potential to cause dust will be carefully monitored and dust reduction methods employed. This will include water spray, dust extraction and localised screening where appropriate.

Welfare facilities will be provided on site to discourage operatives from frequenting the interface between the site and public areas. Site operatives will not be allowed to congregate or loiter on the footpath adjacent to the site.

4.2.10 Utility Services

As far as we can detect at this time, existing drainage and utility services supply the site from Wedderburn Road. Detection and plotting the routes of these services will be carried out before any work can start on site. There is no need to install new or modify the existing utility services to the site that involve work the public highway.

4.2.11 Staff Training

As part of Walter Lilly's approach to training and development, staff will be encouraged and supported in reaching appropriate levels of development not only through training provided by the Company but also through their own initiatives such as Continuing Professional Development.

The Directors actively encourage all staff to take advantage of the facilities and opportunities which are available for their training and development.

It is recognised that people are the company's most important resource and we pride ourselves on the dedication and commitment of our trained and motivated staff to the successful outcome of your project.

Our Training Procedure outlines the responsibilities of relevant staff and the procedures for New Starters, Training Matrix, Performance Reviews and Training Records.

In the field of management development training, we provide a broad range of courses in the following areas;

- IT training (word, excel, power point and project commander)
- Management training (team building and leadership, time management, people focus project management, action centered leadership etc.)
- Contractual training (JCT, NEC, GC Works and insurances)
- Technical training (temporary works, commissioning, insight into specialist joinery, fibrous plaster workshop, joinery workshop and stonework workshop)
- Professional training

Training is an essential part of the Group's safety policy and an extensive range of in house health and safety training courses are utilised, supplemented by CITB courses to provide externally assessed certification. All production staff are required to undertake the CITB 5 day Site Management Safety Training Scheme (SMSTS), which is renewable every five years. This training incorporates the requirements to comply with BS 5228:2009

Our surveying staff and those that visit site regularly take part in a two day course, based on the SMSTS curriculum and facilitated by our external trainers.

All site and project managers, site agents and foremen are required to undertake first aid training, either through the Red Cross or St John Ambulance. Certificates are renewed three yearly and we currently have 65 members of staff who are qualified first aiders.

Recruitment and training procedures ensure that employees are not placed in jobs beyond their abilities. Procedures are in place for selecting competent contractors ensuring that provision has been made for information and effective communication.

The safety committee determines policy in all SHE matters, meeting quarterly and chaired by the construction director which identifies the company's statement of intent to ensure that the direction of the organisation and training is set, and that safety health and environmental issues are integrated with other business objectives and supports quality initiatives aimed at continuous improvements.

Walter Lilly are accredited to ISO 14001 – Environmental Management System.

All staff receive a copy of the regular quarterly Safety Committee Minutes, which are also posted on the Intranet, along with copies of any Safety Alerts.

An Annual Safety Report is issued to employees relating to Group safety performance.

All staff and subcontractors are inducted when visiting sites for the first time and if necessary training is carried out. New office staff also receive an induction and arrangements are made for training and coaching. These are reviewed at appraisal. In-house technical sessions are used to keep staff up to date and a video library is maintained and is available to staff for loan.

Walter Lilly trained matrix 2013 is issued in conjunction with this document.

4.2.12 Tree Protection

In accordance with the Tree Survey Assessment document produced by Indigo Surveys Ltd, a number of tree protection procedures will be adopted.

There are four trees located out of the site boundary along Wedderburn Road, there are labelled T15-18 in the Indigo report. These trees will be retained and must be protected throughout the construction process. A 2.4m full boarded enclosure will be erected around each tree stem to ensure it is not damaged by construction related activities.

The site layout has been designed so that suitable crown clearance and a root protection area are maintained at all times.

The following points will be continuously considered and adhered to regarding the protection of trees:

- Removal of all agreed trees and any agreed pruning works prior to works commencing by a suitably qualified arboricultural contractor.
- Induction of construction personnel regarding the exclusion of works (including access and storage) from the retained trees root protection area.
- Secure temporary PBF within the front garden section to exclude the highway trees RPAs from the working site.
- The retention of hard surfaces for the protection of the highway trees RPAs for the duration of the construction (to include a temporarily installed impermeable surface cover for material storage).
- The storage of materials clear of all retained trees RPAs and/or to ensure no contamination/run off into soils in proximity to trees or on higher ground.
- The sensitive removal of structures and/or hard surfaces from retained trees RPAs undertaken manually with special provision for tree protection.

4.3 Environmental Issues

Walter Lilly operate an environmental policy in which we pursue the following objectives. To:

- Conduct our activities with proper regard to the protection of the environment.
- Comply with all relevant regulatory and legislative requirements and codes of practice.
- Communicate with local communities to ensure the work causes the minimum disturbance and disruption.
- Ensure that our staff have a good understanding of the environmental impacts of our business and what is expected of them to minimise these impacts.
- Ensure that our suppliers and sub-contractors are aware of this policy and ensure they apply similar standards to their own work.

During the early stages of the project the following activities will be carried out to deal with environmental management:

1. Preparation of the Project Environmental Plan in line with our ISO 14001 Environmental Management System.
2. Preparation and consultation with client and statutory authorities to obtain approved licences and consents for discharge, and putting the stated consent conditions and controls in place through the Project Environmental Plan.
3. Preparation of the Site Waste Management Plan and consultation with supply chain partners and design team to design out or minimise waste.

4.3.1 Waste and Material Management

A site waste management plan will be prepared prior to the works commencing.

All waste materials will be removed from site by a licensed waste contractor discharged using skips or lorries.

All waste from this site will be dealt with in accordance with the waste duty of care in section 34 of the Environmental Protection (Duty of Care) Regulations 1991 (b): and materials will be handled efficiently and waste managed appropriately.

We aim to minimise waste and to recycle as much material as possible. Due to the limited space on site waste will generally be sorted for recycling at the waste transfer station. This element of the works will be carried out by one of our licensed sub-contractors specialising in waste management.

4.3.2 Noise and Vibration:

BS 5228 refers to the need for the protection against noise and vibration for anyone living near or working on a building site.

Noise and vibration can cause disturbance to processes and activities in neighbouring buildings. In extreme circumstances, vibration can cause or contribute to building damage.

BS 5228-2 gives recommendations for basic methods of vibration control relating to construction sites where work activities/operations generate significant vibration levels. We will implement all appropriate measures to comply with this legislation.

A method statement will be developed as part of this Construction Management Plan prior to the works commencing to specify measures for monitoring noise and vibration and specify specific maximum agreed levels to be achieved by minimising generation and emission of noise and vibration during construction process.

We are fully aware of the sensitivities of those occupying the adjacent properties to noise.

All reasonable steps will be taken to minimise any disruption to adjacent occupiers by noisy activities.

Where it is necessary to carry out noisy activities, these will be identified well in advance and the timing agreed prior to commencement.

Noisy works will be restricted will to between 09.30 - 16.30 Monday to Friday only.

Operatives working in noisy areas will be monitored to ensure they are wearing the necessary protective equipment and that they are not exceeding their permitted exposure periods.

We shall carry out prediction survey of noise and vibration levels before any works are carried out on site. The predicted noise and vibration levels shall be registered in our Construction Management Plan.

A method statement will be developed as part of this Construction Management Plan prior to the works commencing to specify measures for monitoring noise and vibration levels and agreed monitoring locations maximum permissible levels.

Noise & Vibration Control: The following measures will be considered as appropriate to mitigate the impact of noise and vibration due to the construction activities on this project:

- Personal protective equipment shall be provided and used by all site personnel in locations identified as noise sensitive areas.

- Acoustic barriers where appropriate will be erected adjacent to any specific noise generating equipment and at particular locations to protect neighbouring buildings.
- Selection of construction plant to minimise noise generation. Use of modern plant with damping materials, mufflers and full maintenance/service record.
- Electrically operated plant will be used where practical. We will ensure all plant used on the site will be effectively silenced.
- No radios or other audio equipment will be allowed on site.

Where it is necessary to carry out noisy activities these will be carried out in accordance with Local Authority requirements and in consultation with any affected residents.

4.3.3 Dust & Air Emissions:

We will comply with the requirements of the Institute of Air Quality Management, Dust and Air Emissions Mitigation Measures.

The control of dust and emissions from construction and demolitions will adopt the best practice guidance procedures as defined in the "Best Practice Guidance" document produced by London Councils and the Greater London Authority.

This project is less than 1000 square metres and is a single property development. Under the best practice guidance criteria (page 11) this site would be classed as low risk. We will implement mitigation measures for a low risk site on this project.

Dust: The following measures will be considered as appropriate to mitigate the impact of dust due to the construction activities on this project:

- Solid barriers where appropriate will be erected around the site particularly to the neighbouring buildings and boundaries.
- There will no on-site bonfires.
- Site set-up to be planned to ensure where possible dust creating activities are located away from the sensitive areas.
- Demolition activities will use water as a dust suppressant.
- Adjacent road surfaces will be frequently swept to keep in clean.
- All loads entering and leaving the site will be covered where appropriate.

- All non-road mobile machinery will utilise ultra-low sulphur tax exempt diesel, where available.

- All road vehicles will be requested to comply with set emission standards.

- Cutting equipment will use water as suppressant or have a local exhaust ventilation system.

- Skips will be securely covered.

A method statement will be developed as part of this Construction Management Plan prior to the works commencing to specify measures for monitoring air and dust emissions and specify specific maximum agreed levels to be achieved by minimising gaseous and particulate emissions generated during construction.

4.3.4 Rodent Control:

There is no history of rodent problems in relation to this site.

The proposed works involve the removal of hard paving and excavation of previously virgin ground. We would not envisage a rodent issue in relation to this basement structure construction.

The following measures will be implemented to minimise the risk of rodent infestation during the construction activities on this project:

- Maintain good housekeeping practises on site, ensuring all rubbish is cleared and any food/materials are secured in a locked and sealed container.
- All food waste to be cleared from site on a daily basis and secured in sealed bins.
- Drainage installations. Connections to existing foul or surface drainage. All exposed drain connections shall be temporarily sealed when not being worked on.
- Redundant drainage. Permanently seal redundant drain runs.

If a rodent issue should be identified, we will immediately arrange pest control specialists to visit the site and instigate suitable measures to eradicate this problem.