DRAFT CONSTRUCTION MANAGEMENT PLAN

28 CHARLOTTE STREET

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GENERAL NOTES

Only construction status documentation is to be constructed from. If you do not have a construction issue document and you are about to build something, please contact Hammond and Hammond . Ensure that you have the latest revision prior to construction. This document is strictly confidential to our client, or their other professional advisors to the specific purpose to which it refers. No responsibility whatsoever is accepted to any third parties for the whole or part of its contents. This document has been prepared for our client and does not entitle any third party to the benefit of the contents herein.

1. INTRODUCTION

28 Charlotte Street is a mixed use Georgian Terrace located to the South of Goodge Street in Fitzrovia, London.
The proposals seek permission to subdivide an existing single-family dwelling into 4 apartments with alterations to the existing rear extension, part excavation of a basement, erection of a 2nd floor extension, and alterations to the fenestration on the existing mansard extension.

As requested by the planning authority, this Draft Construction Management Plan (CMP) sets out a construction management approach to realising the design, which will ensure that the impact of construction works on the local residents and the immediate highway network is kept to an absolute minimum. It is understood that the construction management is to be agreed as part of a Section 106 planning process.

2. THE SITE

2.1 GENERAL SITE DESCRIPTION

The site is located to the South of Goodge Street in Central London, on Charlotte Street and within the Charlotte Street Conservation Area. The property is accessed from Charlotte Street and is bound to the north and the south by two other Georgian terraces. To the east, at the rear of the site, it borders with both Crabtree Fields Park and a recent 20th century residential development at 7-15 Whitfield Street. To the west separated by the road Charlotte Street the property is faced by commercial developments hosting a bank, restaurant and offices.
The site location is shown by the red outline in Figure 1

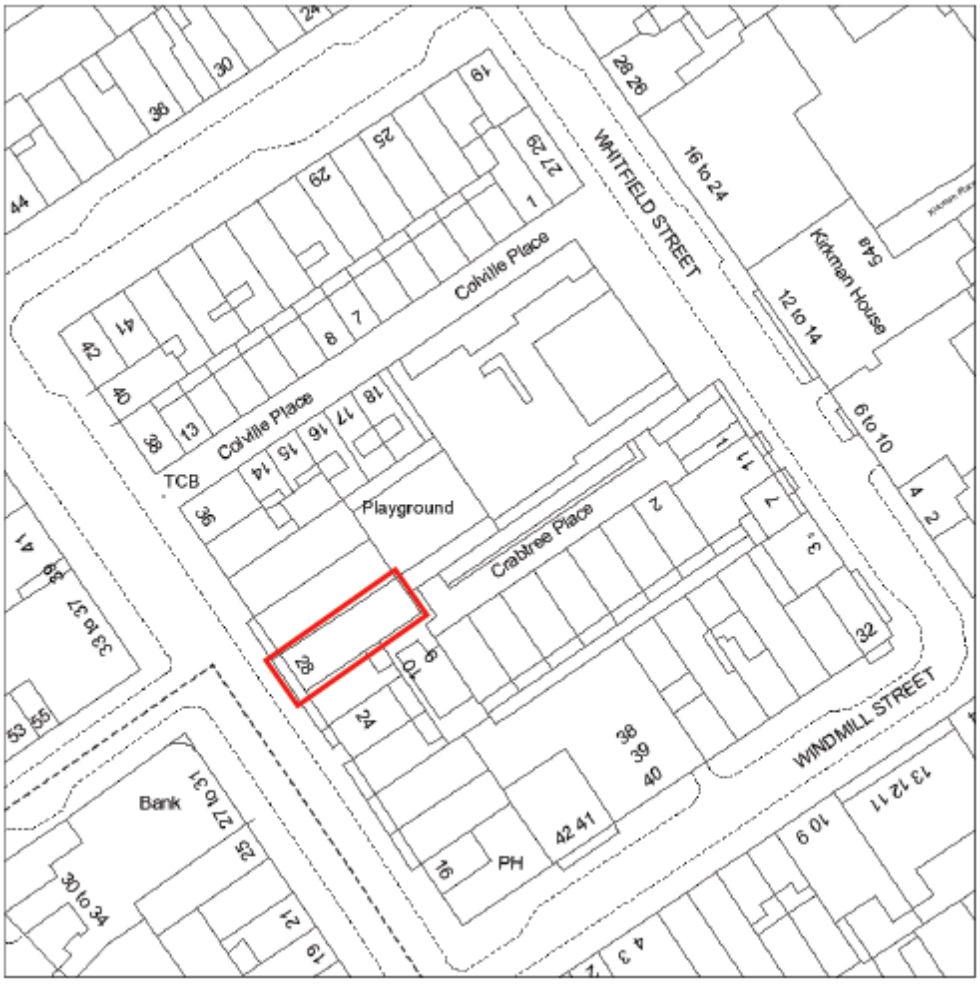


Figure 1 – Site location

Existing ground level to the front of the property on Charlotte Street is 35.091m AOD and at the rear is 35.113m AOD. The current building occupies a footprint of approximately 144.23sqm It is proposed to build a new building within the existing site boundary in approximately the same position as the existing building with a single storey basement beneath with similar dimensions to the building above also extending to up to add a third floor

The existing site geology from British Geological Survey information is of Lynch Hill gravel formation, which has been confirmed by local boreholes which show sand and gravel to between 7.0m and 8.5m below ground level underlain by London clay formation.
The new basement will be designed to limit ground bearing pressure to 150kN/m^2 in order to limit settlement. The building's design shall also resist floatation with a safety factor of not less than 1.1 as specified in BS8007:1987 cl. 2.2.3.2.
Thus the existing geology at the depth of the proposed basement will be capable of supporting the new imposed loads.

2.2 EXISTING BUILDING

It is anticipated that the existing 5 story building is formed of traditional load bearing masonry walls, with timber flooring and rafters. There is a single depth basement beneath part of the building with light wells to the rear.

2.3 PROPOSED SCHEME

The proposed scheme is as follows:

Basement

The proposed basement is single depth and extends the existing basement to the east boundry wall. The basement box will form the foundation for the building.The retaining walls to the basement will be formed of reinforced concrete embedded wall cast in sections. Temporary propping will be required to the top of the wall until the basement slab is cast. This method of construction allows the basement walls to be built tight against the site boundary. The reinforced concrete basement slab and retaining wall base will be ground bearing and act to transfer the superstructure loads into the ground.

Water-proofing

Waterproofing shall be provided to give a Grade 4 basement condition, suitable for a high specification residential space. This will be done using a structurally integral

system, which uses a 200mm thick reinforced concrete liner wall, in addition to a drained cavity wall.

Ground floor slab
The ground floor is to be formed using timber floors. The retaining walls will be design as cantilevered so as not to rely on the floor for restraint.

Super structure
The superstructure will be formed of traditional masonry and timber floor construction with buttressing walls to provide lateral stability. Steel columns will be placed locally to stiffen any walls where sufficient masonry buttressing cannot be achieved.

Land drainage.
The primary ground water level encountered during the initial site investigation is at around 11m below ground level. It is therefore expected that the ground water will not be affected by construction and there will be small risk of water ingress into the excavation. The water levels around the site will be monitored throughout construction.

3. CONSTRUCTION PROCESS

3.1 METHODOLOGY

The basement is to be built bottom up in the following main phases:

1. Excavation will commence from above the front of the proposed basement through the existing basement progressing towards the rear.
2. The existing ground bearing concrete floor to the rear of the property, above the proposed basement, will be broken out and removed from site.
3. A conveyor belt will be set up through the existing basement to convey the spoil from the excavation to a skip placed on the road for disposal
4. The existing property will be underpinned in a 'hit and miss' underpinning sequence. See drawing MS/01 & MS/02 for the construction sequence of a typical underpin, and Underpinning Specification in the Appendices.
5. The underpins to form the new basement will require horizontal propping until completion of the basement slab.
6. As excavation progresses, any existing foundations discovered will be broken out and removed from site to make way for the new basement construction.
7. The existing walls of the building over will be temporarily propped using steel beam needles at regular centres, as necessary. Temporary concrete pad foundations may be required beneath the props, or the props may be supported on the concrete bases of underpins already constructed, whenever the location allows.
8. New concrete pad foundations and strip foundations will be constructed, where specified on the structural drawings.
9. New steel beams and columns will be installed, as specified on the structural drawings. These will be supported on the underpins or on the new concrete foundations. Steel beams supported by existing masonry walls will bear on concrete padstones, as specified on the structural drawings. The padstones will spread the load on the existing masonry with stresses kept to acceptable levels.
10. The top of the new steel beams will be dry – packed to the underside of the existing walls above, and the existing walls will be repaired and made good, as required.
11. When all the underpins to the existing property have been completed, bulk excavation to the whole site will be carried out.
12. Horizontal propping across the site, if required by design, will be installed at high level. This will be via a proprietary propping system such as Mabey props or similar.
13. Once the bulk excavation is down to approximately 500mm above the proposed basement level, a second level of horizontal props will be installed, if required by the design.

14. Excavation will then be carried out down to formation level.
15. The below – slab drainage for foul & ground water, sumps and pumps will then be installed. The pumps will discharge the foul / ground water into the existing sewer system to the front of the property.
16. The new basement RC slab (ground – bearing slab) will then be constructed.
17. Once the new basement slab has gained sufficient strength, the horizontal propping across the site will be removed.
18. After the new basement slab has cured, a drained – cavity layer will be laid to the slab and walls.
19. A layer of insulation will be placed on top of the drained – cavity layer on the slab, and in front of the drained – cavity layer on the walls.
20. Finally a layer of screed will be laid to form the finished basement floor.

The construction programme will be approximately 14 months and a specific programme will be developed by the Contractor.

4. HEALTH AND SAFETY

It is a priority of the Contractor to ensure the Health and Safety of the General Public and its Workforce. The Contactor will implement a Safety Management Scheme to ensure effective safety procedures at all times.

4.1 ENVIRONMENT, HEALTH AND SAFETY MANAGEMENT

The Contactors management system will be accredited by ISO14001. The Contractor will *require all operatives to be CSCS/CPCS trained. All operatives will undergo a safety* induction and understand the method statements before starting work on the site.

4.2 CONSIDERATE CONSTRUCTOR SCHEME

It is proposed the Contractor should join the Considerate Constructor Scheme and is encouraged to gain a high score.

4.3 GOOD NEIGHBOURING POLICY AND COMMUNICATION

The Contractor will implement a good neighbour policy to minimise any impact of works that might have on local residents and business. The policy will maintain a continuous dialogue with the local neighbours, the following is proposed:

- There will be a solid hoarding around the site and the contractor will ensure that it is kept tidy and free of graffiti, with the entrance painted in a sympathetic colour.
- A meeting has been held with the Charlotte Street Association and the Bloomsbury Conservation Area Advisory Committee. This provided an opportunity to meet the key contacts and for them to ask questions and raise concerns. During this meeting the proposed program of works were introduced, any key concerns raised are now being reviewed.
- Regular newsletters to neighboring residents, local businesses and other interested parties. Letters once a quarter will ensure that the neighbours are aware of the current operations. Contact details will be provided on these newsletters to allow for comments and complaints.
- Newsletters to advise of any one-off or out-of hours operations which have the potential to cause disruption.

- There will be a complaints book on site including the name of complainant and date, time, nature of complaint and action necessary to resolve with daily review.
- A contact board will be placed outside of the site with the name of the site manager and contact details.
- The Contractor must ensure there is a specific & known contact for client liaison, in particular with adjacent neighbors.
- Typically the Contractor's senior construction manager will be responsible for the neighbor liaison to ensure the above procedures are followed.

4.4 PROJECT STAKEHOLDERS

The Contractor will consider the concerns of the various stakeholders throughout the project:

- Owners and residents of neighbouring properties
- Local road users
- Local businesses
- Camden Council
- The project workforce
- The client The Contractor will manage the key issues to ensure a successful project for all the stakeholders.

4.5 EMERGENCY ACCESS General emergency services routes to be maintained accessible at all times.

The redevelopment of 28 Charlotte Street will not prevent access to Charlotte Street in normal circumstances. In the event that a construction vehicle breaks down, blocking access, the Construction Project Manager will arrange for the broken down vehicle to be repaired/recovered at the earliest opportunity and liaise with the emergency services to ensure that they are aware of the obstruction.

5. ENVIRONMENT, HEALTH AMENITY AND DISTURBANCE

5.1 CONSTRUCTION PROCESS

The bulk of heavy engineering work is the creation of the basement level, demolition and removal of the existing superstructure and basement slab and walls. The basement box will be constructed bottom up in a retained excavation and temporary propping. This will minimise noise to the immediate vicinity of the works.

5.2 SUSTAINABILITY TARGET

The following sustainability targets will be adopted by the Contactor:-

- The environmental impacts of the construction works are to be minimised as much as possible.
- Achieve FSC Project Certification, thus procuring 100 % of temporary and permanent timber as FSC or Recycled
- Assist the design team in the specification of concrete, reinforced steel and brick to the Framework Standard for Responsible Sourcing of Construction Products (BES 6001)
- Work with the design team to facilitate the specification of a low embodied concrete mix using cement replacements.
- Develop a site specific Site Waste Management Plan and aim to achieve a diversion of construction waste to landfill maximising opportunities for recycling.
- Develop a site specific Carbon Management Plan to take practical measure to reduce the carbon intensity of the project.
- To constantly assess the design and take, together with the design team, all opportunities that arise to minimise the environmental impact of the project.

5.3 WORKING HOURS

To minimise the noise and disturbance to the neighbouring residents, the Contractors site working will be as follows:

- Monday to Friday – 8am-6pm
- Saturday – 8am-1pm (there will be no noisy work, but internal work such as electrical work or decoration will be carried out).
- Sundays and Bank Holidays- No work

5.4 WORK OUTSIDE OF NORMAL HOURS

There will be no work outside the proposed hours. On Saturdays there will be no noisy work, but internal work such as electrical work or decoration will be carried out.

If specific operations are required outside the normal working hours these will be planned very carefully to ensure noise pollution is kept to a minimum where possible. This is not envisaged during the ordinary course of the project.

The Contractor will inform the Environmental Health Department in writing at least two weeks in advance and in addition the local residents will be notified in writing and given necessary contact details if they have further concerns. If it is necessary to undertake specific operations or emergency work outside the normal working hours, the council will be notified of expected duration of the works and contact details of the person in charge.

5.5 NOISE AND VIBRATION

The existing walls of 28 Charlotte Street and trees in Crabtree Fields that face the rear of the property will assist in acting as a noise barrier. Deliveries to the site and skip movements will take place between the hours of 10:00 and 16:00 and scheduled to distribute vehicle movements throughout these hours so as to avoid periods of intensive activity therefore limiting noise and vehicle emissions.

The Contractor will use ‘best practice means’ to control noise and vibration pollution at all times.

This includes:

- Noise will be kept to a minimum on site.
- Acoustic hoardings will be used to minimise noise leaving the site.
- Machinery and vehicles will be switched off when not in use
- Use a three phase electricity supply as soon as it is available to avoid using generators, diesel and petrol.
- Keep all machinery and vehicles in good working order to reduce noise as far as possible.
- Arrange deliveries and collections during normal working hours.
- Maintain a delivery schedule and manage traffic along Admiral Walk to prevent queuing and waiting of vehicles.
- Enforce site rules to operatives and delivery drivers, and generally manage the site to avoid unnecessary noise.
- Minimise the number of deliveries to and from site, to avoid excess traffic noise

pollution.
- Prohibit the use of radios outside.

5.6 DUST AND AIR POLLUTION

The Contractor will employ good environmental practise to minimise dust and air pollution at all times especially during the demolition works. Contractor to ensure that dust and air pollution is closely controlled & monitored using control measures which will include:-

- Operations that produce dust at source will be damped down (during demolition, cutting etc.).
- Damping down dusty areas of ground during piling and excavation stages
- Regular road sweep along Charlotte Street to minimise debris in the roadway.
- Grab and skip lorries will be fully sheeted when departing from site
- Covers skips that contain dusty materials
- No fires
- Maintain suitable machinery and vehicles in good working order at all times
- Switch off machinery when not in use
- Avoid the use of generators wherever possible
- All erected scaffold will have Monarflex sheeting or debris netting to retain dust in isolated area.

5.7 CLEANLINESS AND POLLUTION AVOIDANCE

The Contractor will manage all works to ensure the local area is kept clean and free of any pollution from the site, including:

- Keeping the roads and footpaths affected by the site work clean.
- Dispose of any contaminated water in line with good practice and legislation.
- Control the use and storage of any dangerous substances on site.
- Protect the passing public and adjacent buildings from damage.

5.8 PEDESTRIAN ACCESS

Charlotte Street mainly consists of commercial property and a few residential apartments above commercial space with the exception of 26 Charlotte Sreet which is a full residential house.

A number of options to ensure public safety have been considered in order to maintain

pedestrian access. The use of a covered walkway over the existing footpath using a scaffolding frame and integrated with the site hoarding is considered the most appropriate. Suitable lighting should be included within the covered walkway.

The first priority for the Contractor is the safety of pedestrians and passing vehicles when undertaking any vehicle or goods movement operations. Therefore, during any vehicle movements materials entering or exiting the site, the footpath will need to be briefly closed to maintain public safety. This would be controlled by traffic marshals/site operatives or vehicle banksmen.

5.9 EXCAVATIONS AND CONTAMINATED SOIL

The stratum encountered during the ground investigation is classified as non-hazardous. If any hazardous material is encountered during the excavation all operations will stop until a method statement is produced for removal and disposal of the hazardous spoil and submitted to the Environmental Health Team, who will be notified before works start.

5.10 HOARDINGS

The site will be enclosed by secure hoardings, where the site shares a boundary with Crabtree Fields. If during the construction stages the hoarding boundary needs to be moved slightly into the neighbouring property, an agreement will be reached with the affected neighbours. The height of the hoarding will be of a suitable height to minimise the impact on the adjoining property.

Operations will be kept to a minimum where possible and moved back to the original hoarding boundary as soon as work is complete in this area.

5.11 LIGHTING

The site will be well-lit for the safety of the operatives. In the event that floodlights are installed at high level the Contractor will consider the possibility of light pollution for neighbouring properties and minimise any potential issues. In particular the use of cowls to the lights will be required to prevent overspill into adjoining land area.

5.12 SITE ACCOMMODATION AND STORAGE

The site office will be located on the first floor during basement construction, on the

ground floor during the renovation of the first floor and for the duration of the build. .

Storage will be limited where possible on site and a 'just in time' delivery approach will be maintained. Some storage will be available in the property.

5.13 SCAFFOLDING

The scaffold contactor will submit drawings and design calculations to the Engineer for temporary works checks. The Contactor will ensure the scaffold is checked regularly by a competent person and not adapted by unauthorised personnel.

5.14 CRANEAGE, EQUIPMENT AND MACHINERY

During the early stages of the project the Contractor will use a concrete pump during concreting operations. Excavators and conveyors will be used for lifting spoil from the basement excavation.

During the construction of reinforced concrete superstructure, it is envisaged the Contractor will use hoisting facilities and a telehandler or mobile crane. Small wagons and vans will be offloaded by hand on site and materials carried or loaded by hand into a nearby hoist. The Contactor will undertake any mechanical offloading of larger deliveries, such as bundle of reinforcement and timber formwork, including the use of the telehandler or mobile crane in an exclusion zone.

5.15 GULLIES AND SEWERS

It is not envisaged there will be a requirement to pump ground water. If required, the Contactor will obtain a Permit to Discharge from Thames Water before discharging any waste water. Appropriate measures will be taken by the Contractor such as three-stage settlement tanks.

All existing gullies will be protected on Charlotte Street by inserting silt traps and emptying on a regularly basis.

5.16 LICENCES

The Contractor will apply for the highway licences, permits and consents required to work on a residential property. Generally licences will be obtained by the Contractor

where the works interface with Charlotte Street.

5.17 CONCRETE PRODUCTION

Consideration has been given to the production of concrete on-site in order to minimise the quantity of concrete to be transported. However, the compact nature of the makes the installation of a production plant impractical and a major safety hazard.

6. CONSTRUCTION TRAFFIC

6.1 COMMUNICATION WITH NEIGHBOURS

As discussed in 4.3, the Contractor will distribute newsletters to residents and local businesses and other interested parties. These newsletters will advise of traffic arrangements relative to the operations, such as delivery times etc.

Newsletters will also be used to advise of one-off and out-of-hours operations which may require amendments to normal traffic arrangements.

Contact details including emergency details will be provided on the newsletters to allow neighbours to contact the Contractor with any questions or concerns.

6.2 ROAD CLOSURES AND TRAFFIC MANAGEMENT

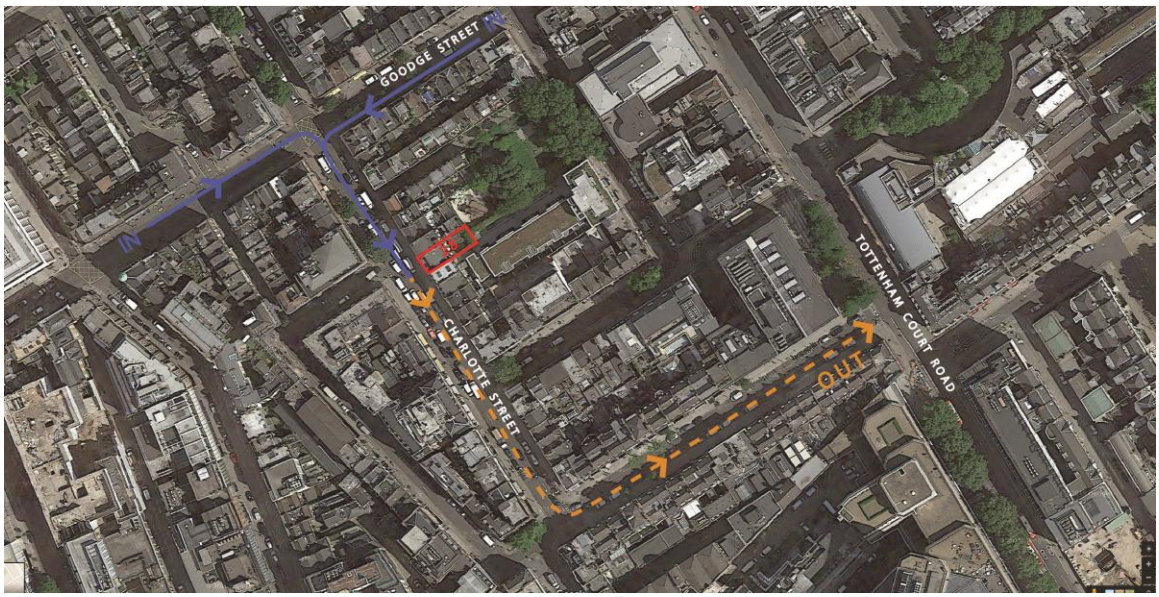
It is possible that a short section of Charlotte Street will need to be controlled by temporary traffic control / lights during construction. If this is necessary then the Contactor will obtain agreement from the Council to manage vehicle movements along Charlotte Street when necessary.

To minimise the potential impact of construction workers travelling to the area, construction workers will be asked not to park any vehicles within a mile of the site. The Contractor will operate a policy to promote and encourage the use of sustainable modes of travel to and from the site and minimise the use private cars. Hampstead Underground Station is only a few minutes walk from the site and so travel by tube will be encouraged.

6.3 VEHICLE ROUTES AND ACCESS

Construction vehicle movements will not be permitted at weekends or during public holidays and will be scheduled to take place between the hours of 10:00 and 16:00. Heavy goods vehicle movements will be scheduled so as to avoid more than one movement to and from the site every 30 minutes.

All Contractor and delivery vehicles will likely have to approach Charlotte Street from Goodge Street.



6.4 VEHICLE SIZE AND SCHEDULES

During the construction works (approx. 12 months duration) there will be frequent visits by delivery lorries ,grab and skip lorries during demolition and excavation and concrete lorries during the concrete works. The Contractor will need controlled delivery times by operating a booking-in system and deliveries outside of planned schedule should be turned away.

The size and frequency of vehicles movements is specific to each element of the construction works. It should be expected that large HGVs will be required for regular delivery and removal of materials. However, the Contractor will be responsible for ensuring only adequately sized vehicles are used, specifically taking into account the nature of the surrounding roads.

6.5 PARKING AND LOADING

Minimal parking facilities will be provided the Contractor's construction team will be encouraged to use public transport whenever possible to do so, see section 6.2.

A license from the council will be sought to suspend the single residents parking bay opposite to the site, this is to be agreed with the Council in due course.

Figure 5 – Map view showing parking bay to suspend.

7. WASTE MANAGEMENT STRATEGY

7.1 SITE WASTE MANAGEMENT PLAN

The Contractor will develop and implement a site waste management plan. This plan will ensure that the Contractor will meet the obligations under the Site Waste Management Plan Regulations. The Contractor should forecast waste materials, set specific targets and monitor and record the actual waste generated on site. A set procedure and commitments for reducing waste at 28 Charlotte Street will be implemented in accordance with current best practise. Due to space limitations, it will be difficult to sort out waste on site apart from the spoil from demolition and the basement excavation. It is proposed that the Contractor employs a licences Contractor to sort waste off-site to ensure waste is diverted away from landfill.

7.2 SKIPS

It is proposed the Contractor uses a general building skip to remove materials from site. This would be located on the external hard surfacing to the front of the existing house. This may require collections up to three times a day.

8. COMMUNICATION WITH THE COUNCIL

The Contractor should propose an initial meeting between council personnel and key staff to introduce them to the project and to explain the outline construction methodology and programme. Lines of communication, contact and emergency contact details should be established. It is also proposed that the Contractor includes a key council personnel on the neighbourhood newsletter mailing list to provide up-to date progress reports and advise of any special arrangements potentially affecting the neighbours which are due to be implemented. The Contractor should liaise with the Council in advance regarding any proposed out-of-hours works, traffic management arrangements or other special activities, particularly those which require any permissions or approvals.

9. SUMMARY

This Draft Construction Management Plan (CMP) relates to the proposed redevelopment of 28 Charlotte Street, Fitzrovia, London. The purpose of the CMP is to ensure that the impact of construction works on the local residents and the immediate highway network is kept to an absolute minimum.

The agreed contents of the Draft Construction Management Plan must be complied with unless otherwise agreed with Camden Council.

If problems arise in relation to the construction of the development and complaints from local residents, the person responsible for implementing the Construction Management Plan shall work with the Council to review and amend the document as necessary.

Any future revised plan must be approved by the Council and complied with thereafter.