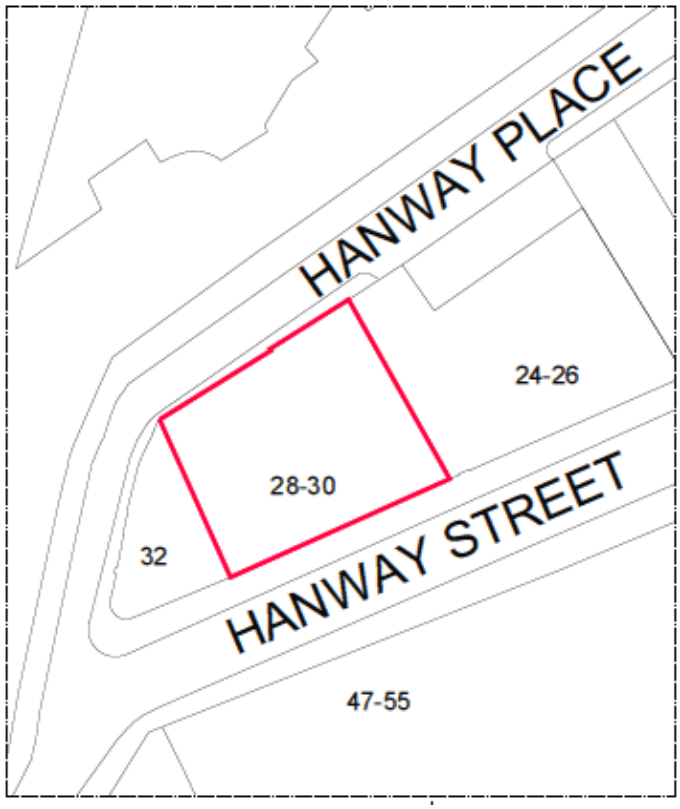
CONSTRUCTION MANAGEMENT PLAN

FOR

28-30 HANWAY STREET, LONDON



CorraMore Construction Ltd

June 2015

1.0 Introduction

This is a proposal for a site known as 28-30 Hanway Street in London. The proposed works include for demolishing the existing 3 storey building, and constructing a new 4 storey building plus a basement to provide a mixture of office and residential accommodation.

This CMP describes the anticipated demolition and construction programme for the proposed development, and describes the nature of the activities to be undertaken. It identifies the environmental considerations associated with these activities and outlines appropriate measures that might be implemented for their mitigation.

Planning for the demolition and construction works is necessarily broad at this stage and will be subject to modification during the pre-construction design phase, hence this CMP is indicative as part of the planning application.

This assessment has been made using the experience of the Applicant and their professional advisors based on the typical construction methods and contracting strategies that can be reasonably anticipated for this type of development.

Construction management and planning, and adoption of environmental best practices, good neighbourhood policies and regular meetings with stakeholders and community engagement will contribute to mitigating adverse environmental effects and ensuring good construction, environmental and health and safety practices.

This CMP sets out a number of of strategies, standards and procedures in order to mitigate anticipated environmental impacts and ensure good site health and safety practices.

The issues that have been considered within this document are as follows:

- Nature of the project and the scope of works
- Methodology for demolition, new construction and the projected programme
- Site logistics
- Traffic management
- Site waste management
- Noise and vibration
- Air quality
- Managing the environmental impact of construction
- Authorities and public liaison

2.0 Nature of the Project and the Scope of Works

The site is located on Hanway Street, a small side road which branches off Oxford Street in CentralLondon. The property at 28-30 Hanway Street is located towards the western end of the road andis bounded by No 32 to the West and No 26 to the East. The existing building fronts onto Hanway Street and the rear of the property is bounded by Hanway Place, a single track side road runningparallel with Hanway Street.

The current 3 storey building accommodates office space at the1st and 2nd floors with the existing lower ground floor providing storage space due to restricted head room. It is proposed to demolish the existing building and construct a new 4 storey building with office space at lower ground, ground and first and residential accommodation above. It is required to deepen the existing lowerground floor by approximately 1.0m in order to achieve adequate head height for useable officespace.

3.0 Methodology for demolition, new construction and the projected programme

3.01 Demolition Methodology

Prior to commencing demolition works the following intrusive survey will be undertaken:

- The building will be surveyed following vacant possession;
- Demolition survey to establish, if present, the location and quantity of asbestos containing material within the buildings and associated structures to be demolished.
- The survey will be undertaken strictly in accordance with the Control of Asbestos regulations (HSG 248) and the appropriate HSE guidance in HSG 264;
- The surveying organisation and individual surveyors will be accredited to an appropriate body as competent to perform such work in compliance with ISO 17020 and ISO 17025;
- Intrusive building survey will involve destructive inspection, as necessary, to gain access to all areas and this typically involves breaking open ceilings, floors, partitions and internal boxing;
- A Demolition Environmental Management Plan (DEMP) will be prepared.

The Demolition Contractor will record, control, remove and dispose of all asbestos containing materials in accordance with current legislation and best practice and this will include the following:

- Preparation and approval of specific detailed asbestos removal method statements;
- A mandatory 14 day approval period will be required by the Health and Safety Executive (HSE) for each of these method statements (ASB5 Approval);
- No works can commence without the ASB5 notice being approved by the HSE;
- Additional asbestos finds will result in re-notification of ASB5 approval to the HSE;
- Asbestos removal will be carried out under licence with registered firms being members of Asbestos Removal Contractors Association (ARCA);
- Removal of asbestos will be under controlled conditions. Air monitoring for asbestos fibres will be undertaken to ensure the health and safety measures are in accordance with statutory regulations;
- Safe transit routes will be established;
- Air testing of enclosures will be carried out during the course of the removal works to confirm that the area is clear from asbestos contamination;
- Asbestos containing material will be double bagged and transferred into asbestos waste skips
- The asbestos waste will be removed from site by registered carriers for disposal at a registered disposal site.

Demolition methodology will be finalised following tender and appointment of a Demolition Contractor who will undertake both the asbestos removal and demolition. An indicative and preliminary demolition method statement is outlined below. It must be stressed that the methodology outlined below may alter once full access is available and an intrusive structural investigation has been carried out.

- Soft strip will commence in areas directly after any asbestos removal has been completed and following certification from the asbestos monitoring consultant, this will include removal of all non structural elements by operatives
- The building itself will be demolished mainly by hand using small mechanical tools and munchers
- The building will then be demolished on a floor by floor basis with a central chute leading down to the ground floor. Small bins will be filled from the chute and a small tipper lorry with a hi-ab crane will visit site on a daily basis and remove the demolition spoil.
- The party walls to both adjacent properties will require propping during the demolition of the existing building and until permanent restraint is provided by the new structure. Propping during the demolitions will be flying shores from gable to gable on a floor by floor basis.
- When the facades are being demolished, the road will be temporarily closed as a precautionary measure.
- Road closure permits will be organised as required with the relevant authorities.

3.02 New Construction Methodology

Upon completion of the demolition, the lower ground floor will require underpinning. The underpinning to the lower ground floor will need to follow an underpinning sequence and be back filled adequately until the next pin is constructed.

It is proposed todeepen the existing lower ground floor by approximately 1.0m. The existing basement slab will beremoved and mass concrete underpins will be constructed to the perimeter walls. A 200 thick RCliner wall will be cast in front of the underpinning. An RC raft slab will form the foundation to thenew building

The new building will be of reinforced concrete construction comprising of cast in-situ flat slabs and columns. The walls to the lift shaft will provide lateral stability to the structure with the floorslabs acting as diaphragms in transferring lateral forces to the core walls. Typical floor slabs will be 250 thick with a thicker slab proposed at 3rd floor due to a slight transfer in vertical load. A gap of 100mm is proposed between the existing party walls and new RC columns. The floor slabs are to extend through this gap to maintain restraint to the party walls.

The external envelope of the new building will be London stock brickwork with reconstituted stone cills and window surrounds, with bronze anodised aluminium framed windows. The top floor will be constructed in a patinated zinc standing seam mansard roof structure.

3.03 Projected Programme

It is envisaged that works will commence on site during quarter 3 or 4 of 2015. The demolition of the building will be a 4 week operation, and new construction works will require a further 12 months. Hence, the overall programme will be 13 months.

4.0 Site Logistics

Set out below are the general principles of the site logistics

4.1 Site Establishment and Security

- The first stage of the demolition and construction programme will be to establish the area as a demolition/construction site. The working areas will be secure and the general public will be separated from the works by the use of solid, well maintained fencing;
- Temporary hoardings will be provided on short term boundaries and for highway works;
- All site facilities will be contained within the site area;
- All gates will be maintained by security officers during working hours;
- Flood-lighting in areas adjacent to sensitive receptors (i.e nearby residential properties) will generally be limited to the working hours identified

4.2 Consents and Licenses

All statutory consents & licences required to commence an onsite activity will be obtained ahead of works commencing and giving the appropriate notice period. These will include:

- Hoarding and scaffold licences for works on the perimeter boundary;
- Construction Notices;
- Section 61 of the Control of Pollution Act: 1974;
- Connections to existing utilities and main sewers;
- Licence to discharge water from the Site into the public sewer;
- Approval of the Construction Environmental Management Plan (CEMP) including Site Waste Management Plan (SWMP);
- Where required, consents will be obtained from existing and new adjoining owners for tower crane oversail;

4.3 Access and Egress

The proposed new development will encompass the entire site boundaries, and as such there will be a necessity to provide access to the site on both main elevations on Hanway Street and Hanway Place.

4.4 Material Storage and Handling

- Contractors and their subcontractors will be expected to maintain a tidy site and to operate a " just in time " policy for the delivery and supply of materials for the works as on site storage will be at a minimum;
- Tanks and drums of liquid chemicals and fuels would be stored in bunded areas. Packaging would be returned, where possible;
- A luffing jib crane would be used for general unloading and hoisting during the structural and envelope works.

4.5 Site Accommodation

- It is the intention to provide a main site welfare on the Site. The location of these facilities is yet to be determined, however they will be as part of the detailed demolition and construction logistics programme;
- The Principal Contractor will be responsible for providing canteen and welfare facilities for the site operatives;
- In line with the requirements of the Considerate Constructors Scheme a high level of site welfare facilities will be maintained and the Site will be cleaned on a regular basis, especially around canteens and toilets; and
- All site facilities will be contained within the Site.

4.6 Visitor Management

- Visitors will only be allowed to enter the Site via designated pedestrian access gates and a dedicated route to the main site office for registration and obtaining PPE prior to entering the Site;
- Visitors will be expected to attend a specific site induction unless being accompanied by a member of the site team

5.0 Traffic Management

The construction site will be accessible from both Hanway Place and Hanway Street, however as Hanway Street is the wider route of the two, it is proposed that this will be the main point of access to the site for construction vehicles.

All construction and contractor vehicles will follow a 'one-way' system, approaching along the southbound Rathbone Place, turning left onto the eastbound Oxford Street carriageway before turning left Hanway Street. Loading/unloading will take place immediately adjacent the site entrance before vehicles exit onto Hanway Street and finally Tottenham Court Road. The proposed ingress and egress routes are shown on diagram 1 below

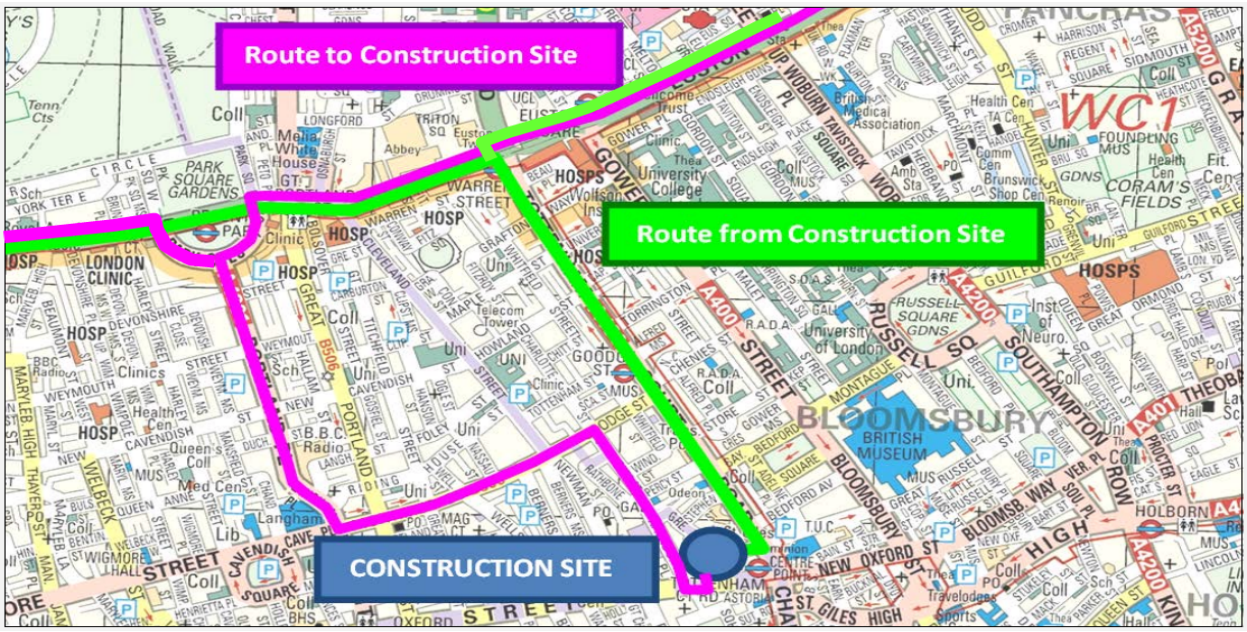


Diagram 1

In order to minimise disturbance to any users, businesses and residents on Oxford Street, Hanway Street and Hanway Place, a number of mitigating measures will be implemented and enforced. These measures will seek to eliminate all adverse effects on the local public realm, whilst maximising the efficiency of the construction process:

- Construction and contractor vehicle access to the site will be restricted to the following hours unless otherwise agreed with the relevant authorities:
    - 0700 -1800 hours Monday to Friday;
    - 0700 – 1300 hours on Saturday;
    - Not at all on Sundays and bank holidays

- In order to determine the impact on pedestrians and restrict construction vehicle movements accordingly, pedestrian impact surveys will be carried out prior to the commencement of works on site and during the construction process

- A pedestrian crossover / temporary construction vehicle access will be formed fronting the facade of Nos. 28-30 Hanway Street. Further details of the access design can be found on diagram 2 below.

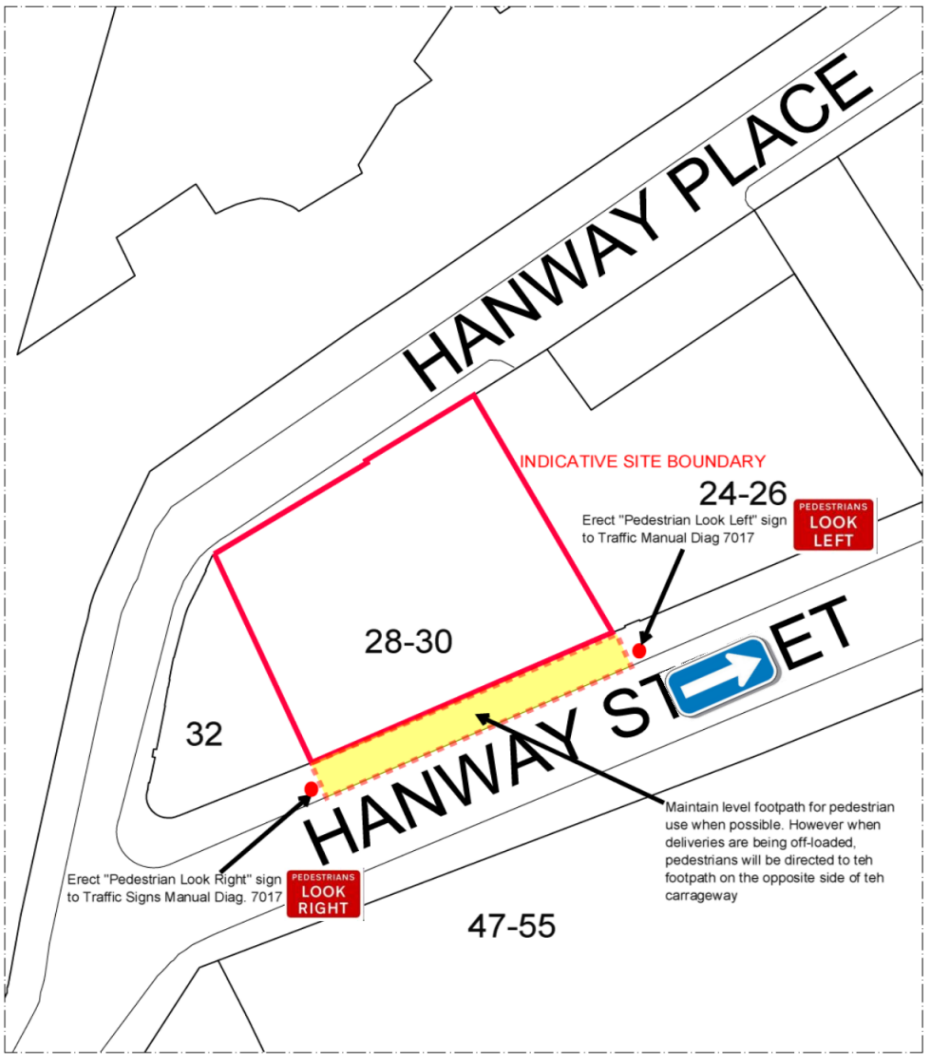


Diagram 2

- Appropriate barriers and signage will be erected on the Hanway Street footway and either side of the proposed site access ramp. The barriers will act as a warning to approaching vehicles of the access/loading in the Hanway Street carriageway and act as a guidance measure for incoming construction vehicles. The barriers and 'Pedestrians Look Left/Right' signage will warn pedestrians of the potential for entering construction vehicles.

- In order to oversee movements associated with eastbound and westbound approaches on Oxford Street onto Hanway Street, banksmen will be employed to ensure the efficient flow of construction vehicles and deliveries to the site, while minimising the impact to the general public. These banksmen will also ensure that vehicles are diverted correctly along Hanway Place when the offloading of deliveries to the site results in the temporary closure of Hanway Street.

- When deliveries are being offloaded at Hanway Street, then vehicular traffic will be diverted along Hanway Place. At the end of Hanway Place, vehicles will turn right, and then left back onto Hanway Street. This is demonstrated on diagram 3 below

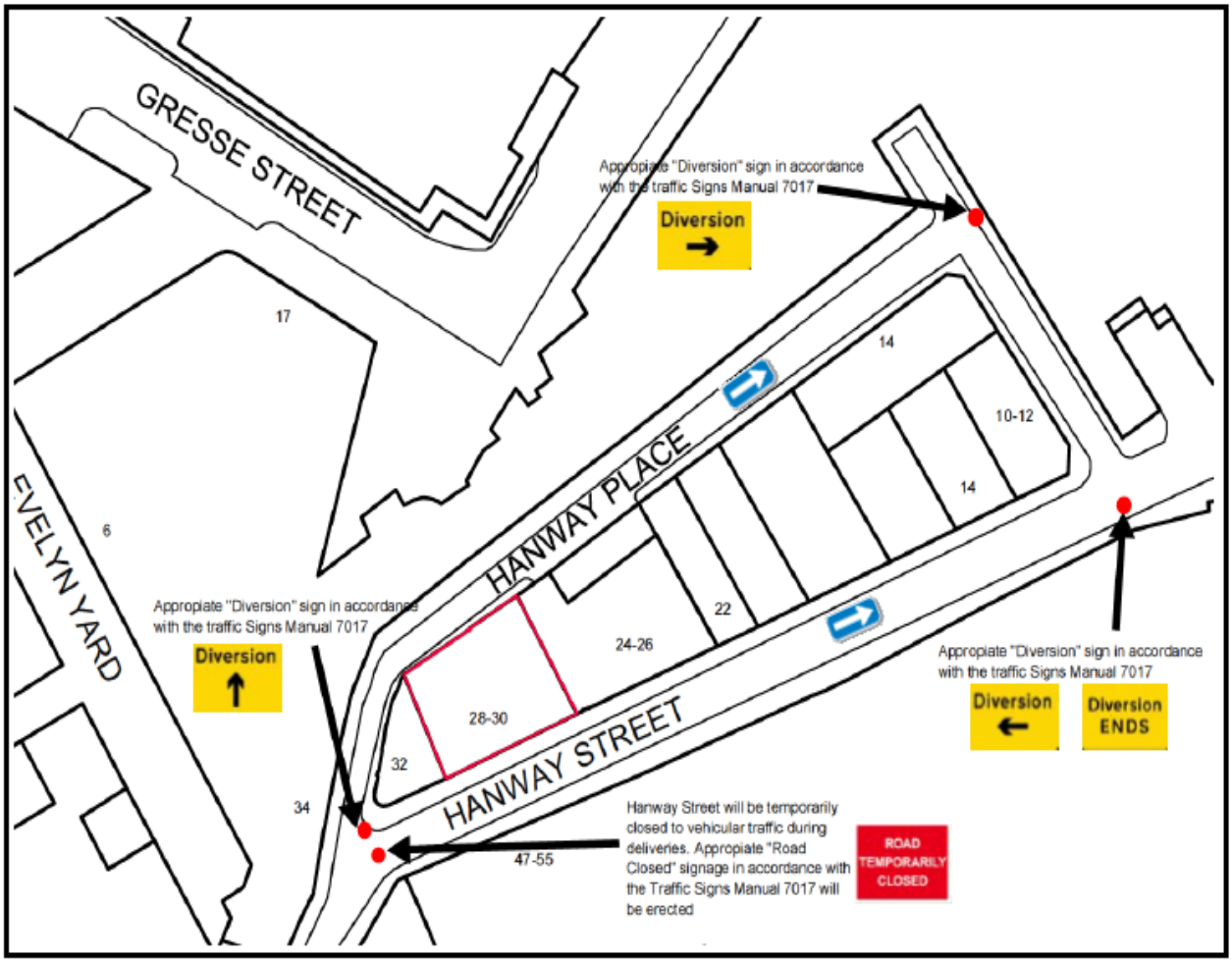


Diagram 3

6.0 Site Waste Management

The disposal of waste generated during construction, including any surplus spoil, will be managed to maximise the environmental and development benefits from the use of surplus material and to reduce any adverse effects of disposal. In general, the principles of the waste management hierarchy, which favours waste minimisation, re-use and materials and recycling over disposals to landfill will be favoured.

Methods for waste reduction will form a basic strategy for construction waste management from the start. These materials will generally be inert or environmentally benign and may have alternative uses elsewhere on the Site. Opportunities will be investigated to maximise the recycling potential of demolition and construction materials.

Buildings and materials containing asbestos will be assessed in advance of demolition works commencing, and all asbestos identified removed.

Care will be taken by contractors to identify all asbestos related materials and to record, control, remove and dispose of all such materials in accordance with current legislation.

Some contaminated materials may be found during the Development. Any contaminated materials that may be generated shall be stored and disposed of in accordance with relevant best practise guidance and legislation.

Licensed carriers will remove other residual waste, i.e. general office waste, etc from site to suitable licensed disposal sites. Where possible, segregation and recycling of materials, such as office paper, food waste will be undertaken

7.0 Noise and Vibration

Noise and vibration levels will be controlled as set out below to ensure that the Development is operated in a way that minimises detrimental impact to the amenities of local public.

Excavations, piling works and foundation construction will be among the most significant activities. The noisiest activities are likely to be demolition and piling works. Although concreting operations will also give rise to noise, the levels generated would not be considered to be significant.

As the building rises above the ground, there will be some noise from scaffolding and formwork erection but the majority of activities and plant (e.g. concrete pumping) are considered to generate low noise levels.

On occasions it may prove necessary to carry out noisy activities outside of normal working hours. In such instances prior consultation will be carried out with the local authority

Details of construction activities, prediction levels/assessments will be discussed with the relevant authority, both prior to construction and during construction. Detailed construction programmes will be available in advance of work starting on site. Prediction, evaluation and assessment of noise and vibration as well as discussions between the construction team and local authority will be an ongoing activity throughout the construction period.

Where work outside of agreed hours or likely to exceed specified noise limits is necessary then this shall only proceed subject to notification to the Environmental Health Officer and approval given. Except for emergency situations, notification will be in advance of any requirement for out of hours/noisy working.

Where the potential for noise exists, e.g. during demolition, ‘Best Practicable Means’ will be used to reduce noise to achieve compliance consistent with the recommendations of BS 5228.

8.0 Air Quality

Construction and demolition works will be carried out in such a way as to limit the emissions to air of pollutants, particularly dust and fine particles, employing Best Practicable Means. The site will be managed in accordance with the CMP to minimise the potential effects on air quality from construction.

Monitoring will be undertaken throughout the construction period to enable proactive management of dust levels. Wind speed and direction will be included in the monitoring. There will also be on-going liaison with Environmental Officer regarding the construction control measures set in place.

Construction plant can be a significant source of emissions although control measures can be implemented to minimise any adverse impacts. The following measures will be employed:

- Site plant and equipment will be kept in good repair and maintained in accordance with the manufacturers specifications. Allowing for economic constraints, the plant will be selected on the basis of which has the least potential for dust and other emissions;
- Plant will not be left running when not in use;
- Plant with dust arrestment equipment will be used where practical;
- Where practical, cleaner fuels will be employed for construction plant

Vehicle movements may result in dust emissions (by re-suspending dust from the road or from spilling dusty loads) and exhaust emissions. However, a number of control measures can be adopted to eliminate or minimise such emissions:

- Wheel washing facilities on site to prevent mud from construction operations being transported on to adjacent public roads;
- Regular cleaning of hard-surfaced site entrance roads;
- Ensuring that dusty materials are transported appropriately (e.g. sheeting of vehicles carrying spoil and other dusty materials);
- Hoarding and gates to prevent dust breakout; and
- Appropriate dust site monitoring will be included within the site management practices

Dust emissions from construction will be controlled through careful pre-project planning and effective site management. The following control measures and good management practices, will be employed:

- Site operations will be planned to take into account local topography, prevailing wind patterns and local sensitive
- Burning of materials on site will be prohibited;
- Loading and unloading will only be permitted in designated areas;
- Provision of water sprays and wind/dust fences where possible, particularly in dust sensitive locations, for example, during demolition works. Water spraying and/or screening will be undertaken prior to and during demolition;

9.0 Managing the Environmental Impact of Construction

A Principal Contractor will be appointed to develop and implement a site specific Construction Environmental Management Plan (CEMP) covering the demolition and new construction for the Development.

This plan will deal with the potential impacts arising from these activities and identify implementation of effective management controls, for example the employment of dust suppression methods and use of properly maintained plant. This plan would set out the management, monitoring, auditing and training procedures in place to ensure compliance with the relevant legislation and ensure significant impacts on the surrounding environment are mitigated.

9.1 General Safety, Health and Environmental Consideration

9.1.1 Construction and demolition works will be carried out in such a way as to limit, as far as is practicable, adverse environmental impact.

9.1.2 Works will be carried out in accordance with the following general provisions:

- Planning approvals;
- Considerate Constructors Scheme; and
- Requirements of highways and utility authorities.

9.1.3 As part of the Construction Method Statement and Review process will ensure that construction techniques and materials used are a fundamental consideration of the design and intended long-term use, the aim being to achieve:

- Design for durability and low maintenance;
- Design for flexibility and adaptability;
- Use of materials from sustainable sources; and
- Use of local materials where possible.

9.1.4 Safety, health and environmental issues on the Development are a primary factor in influencing the construction methods adopted. The construction team will develop detailed health and safety plans, specific environmental, fire and accident procedures to suit the construction sequences of the Development. It is intended to agree a protocol process with SC Environmental Services Division under Section 61 of the Control of Pollution Act: 1974 in relation to controlling hours of operation, noise, vibration and pollution impacts of equipment used on the Site.

9.1.5 Contractors involved in the Development will ensure:

- That all non-English speaking employees are provided with relevant health and safety information in their national language;
- That adequate multi-lingual supervision is provided so as to ensure that employees continue to be adequately and effectively informed and supervised on all matters affecting their health and safety; and
- That suitable bi-lingual arrangements are in place to ensure that statutory related matters are complied with.

9.1.6 All contractors will be required to adopt the Construction Skills Certification Scheme (CSCS) or equivalent skills certification, combined with health and safety training for 100% of their workforce. General operatives will be required to complete the health and safety training element of the CSCS scheme and may be given the opportunity to pursue a relevant NVQ qualification. Supervisor training shall also be provided by the contractor/subcontractors.

9.1.7 A formal Health & Safety Policy Statement will be adopted, in accordance with the requirements of the Health & Safety Executive and other statutory and local authority guidelines.

9.1.8 Compliance with the following mandatory provisions shall be enforced:

- COSHH, 1999;
- Provision and Use of Work Equipment Regulations, 1998;
- Highly flammable Liquids & Petroleum Gases Regulations, 1972; and
- Health & Safety at Work Act, 1974.

9.2 Control Substances Hazardous to Health

The strategy for controlling all substances coming onto site and all work activities and progress which may generate hazardous substances will be managed and controlled in accordance with the 'Control of Substances Hazardous to Health' regulations (COSHH), 1999 and best practise guidance, such as that published by the Environment Agency.

Some control measures to be employed are as follows:

- All fuels and chemicals will be stored in designated areas, with deliveries of all hazardous materials supervised;
- Storage tank or container facilities will be appropriately bunded with designated areas as far as possible from any watercourses or surface drains;
- In case of spills or discharges, remedial action will be taken as soon as possible, and set procedures will be compiled with;
- A logistics plan will be developed to take into account the management and control of hazardous substances on site; and
- Personal protective equipment (PPE) suitable to prevailing conditions will be used by all construction workers.

9.3 Outline Environmental, Emergency Fire and Accident Procedures

Measures will be carried out to avoid environmental incidents, however if these occur then it must be reported to the responsible person within the Construction Team.

The overall strategy in the event of a spillage will be to "Stop-Contain-Notify"

Emergency routes and procedures will be continuously adapted to suit the construction sequence and stage of the Development. An Emergency Fire and Accident plan will be prepared, generally following the guidelines for plan contents below and updated on a regular basis to take account of construction progress:

- Definition of the management organisation and responsibility for safety;
- Definition of appropriate fire prevention measures, including good housekeeping of site, welfare facilities and offices;
- Use of non flammable/fire retardant materials for protection of finished works;
- Safe use and safe storage of flammable materials of all categories, whether solid, liquid or gas;

- Appropriate waste management procedures;
- Monitoring the type and frequency of fire inspection/audits;
- Suitable site accommodation location, construction and detection/fire fighting systems;
- During construction, the installation of temporary detection and alarm systems, together with appropriate use of existing systems and early use of final as installed systems when possible;
- Development of evacuation plans, to include escape routes, muster stations, means of sounding alarms and the setting of systems in place to ensure that emergency vehicles have been called and all personnel have safely left the area;
- Training and fire drills;
- The application of permit systems for Hot Works, Confined Space Entry and Electrical Access Control;
- The provision of Fire Watchers and First Aiders;
- Checking that emergency routes/exits are available and unobstructed at all times;
- Dissemination of the plan; and
- Continuous liaison with fire brigade/police/ambulance services and other emergency services, plus clients/occupants of adjacent buildings.

The Emergency Fire and Accident Plan as outlined above will be developed in consultation with the local Fire Brigade and emergency services. As sites are dynamic environments, emergency planning will be under constant and critical review to ensure the continued relevance of the plan and procedures. This will be the responsibility of the Site Manager.

First aid facilities will be established in multiple locations as appropriate around the site

10.0 Authorities and Public Liaison

10.1 Considerate Constructors Scheme

10.1.1 The Principal Contractor will be required to register the Site with the 'Considerate Constructors Scheme' which is administered by the Construction Industry Board. This is a voluntary code of practice that seeks to:

- Minimise any disturbance or negative impact (in terms of noise, dirt and inconvenience) sometimes caused by construction sites to the immediate neighbourhood;
- Eradicate offensive behaviour and language from construction sites; and
- Recognise and reward the constructor's commitment to raise standards of site management, safety and environmental awareness beyond statutory duties.

10.1.2 The scheme requires constructors to adhere to a Code of Practice that includes the following principles:

- Be environmentally aware in the selection of resources. Pay particular attention to pollution avoidance and waste management. Use local resources wherever possible and keep to a minimum at all times noise from construction site activity;
- Be considerate to the needs of all those affected by the construction process and of its impact on the environment. Special attention to be given to the needs of those with sight, hearing or mobility difficulties;

- Keep the Site clean and in good order and ensure that the surrounding area is kept free from mud, spillage and any unnecessary construction debris;
- Be a good neighbour by undertaking full and regular consultation with neighbours regarding site activity from pre- start to final handover. Provide site information and viewing facilities where practical;
- Promote respectable and safe standards of behaviours and dress. Derogatory behaviours shall not be tolerated under threat of the strongest possible disciplinary action;
- Be safe. All construction operations and vehicle movements to be carried out with care of the safety of passers-by, neighbours and site personnel;
- Be accountable to the public by providing site contact details and be available to deal with their concerns and develop good local relations;
- All contractors will be required to adhere to the requirements of the code of practice. Information about the scheme will be provided to all personnel at induction and through ongoing awareness raising such as posters and tool box talks as appropriate; and
- The scheme will also be publicised to local residents by the use of appropriate banners and posters with contact details posted at the boundary of the Site.

Public Relations

10.1.3 During the works, there will be regular communication with neighbouring residents. Any special or unusual activities to take place (such as road closures or deliveries of large plant) will be notified to the relevant neighbours.

10.1.4 The Developer will provide a point of contact to the neighbouring residents and relevant statutory and non statutory bodies and a contact telephone number will be provided.

10.1.5 A complaints register will be established to provide a permanent record of the performance of the project. Any complaint from residents or other parties will be treated seriously, and the complaint logged and cause investigated. Analysis of any complaints made will allow procedures to be implemented with the aim of avoiding any re-occurrence.

10.1.6 A proposal to use the Site fencing to display information regarding the Development, status etc will be made in order that the local community and passersby can be informed of progress of the Development.