



**20 Watford Road
Radlett
WD7 8LE
Job no: 225**

Design Stage Demolition and Construction Management Plan

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Introduction:

This design-stage document will be reviewed and expanded upon as necessary by the Principal Contractor, including site induction measures, selection of subcontractors and operatives. The proposals have been submitted to Hertsmere Borough Council. The works proposed are to be completed as directed by the proposed drawings – the construction of two dwelling houses comprised of ground floors, first and loft level.

Where indicated by the Structural Engineer's specification, temporary works will be installed as the demolition/excavation progresses to maintain the structural stability of the neighbouring structures.

The site is located on a residential street with off street parking. These factors and the likely volume of material for removal and delivery mean that a Construction Management Plan (CMP) is helpful in minimizing impact on the transport network and local amenity. This Plan addresses the following main issues:

- i) the parking of vehicles of site operatives and visitors
- ii) loading and unloading of plant and materials
- iii) storage of plant and materials used in constructing the development
- iv) hours of work
- v) wheel washing facilities
- vi) measures to control the emission of dust and dirt during construction
- vii) a scheme for recycling/disposing of waste resulting from demolition and construction works

This CMP is provided to detail how the Main Contractor will manage the delivery of the project while paying attention to the impact that the works have on adjacent properties and individuals. It will also set out the main logistics plan, risk items and specific Health and Safety issues.

The overarching aim of the CMP is the health and safety of the project workforce, the surrounding community and the general public. The contractor will be required to have Public Liability Insurance and Employers Liability Insurance before being appointed.

All works are to be implemented in accordance with the Code of Considerate Practice as follows:

- Considerate
- Environment
- Cleanliness
- Good Neighbour
- Respectful
- Safe
- Responsible
- Accountable

Site Description:

The property is sited in a residential area on Watford Road, which has two-way traffic. The road is quite clear of parked cars, as there is ample parking on the house and apartment building plots. The property has a wide frontage to the street, with a carriage driveway and large hardstanding area to the front of the existing house. The site, in common with other properties along the road is situated higher than street level.

Working Hours:

The site operating times will be in accordance with Hertsmere Borough Council restrictions:

0800 to 1800 Monday to Friday

0800 to 1300 Saturdays

There will be no working on Sundays or Bank Holidays

Contacts:

Owner contact: John McVeigh

Contractor: TBC – details will be added when appointed.

Architect: Warren Howling

DDWH Architects

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London

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Structural Engineer: TBC

The Construction Site Manager's Office facilities will be located within the site set up.

Local Authority Details:

Hertsmere Borough Council

Civic Offices

Elstree Way

Borehamwood

WD6 1WA

Other contact details:

Environment Agency: 03708 506 506

Hertfordshire Police 101

Pollution Hotline 0800 807 060

Thames Water (24 Hour) 0845 9200 800

Demolition Method Statement:

The demolition consists of taking down a detached existing house including ground floor slab, foundations and perimeter walls, as well as low retaining walls and paving in the rear terrace area.

The following measures will be undertaken in the taking down of the existing house:

- The main contractor will also be required to notify all statutory bodies before demolition works commence.
- Temporary Fencing/hoarding will be erected to secure the site perimeter, including lockable gates.
- Safety Signs will be displayed to highlight hazards such as vehicle movements, requirements for safety clothing/equipment.
- All existing services will be disconnected from the property and confirmation obtained that all services are no longer live by licenced professionals e.g. electricians and plumbers. Temporary service connections to be made within the site but away from the existing property.
- An asbestos survey will be carried out and licenced contractors will remove any asbestos containing material under controlled conditions.
- If no Asbestos is found then the works will start with a soft strip of all fixtures and fittings including windows and floors. Items will be recycled where possible.
- The mechanical excavator will then methodically and safely demolish the dwelling starting from the roof level and working down. The garage close to the site boundary will need careful taking down to ensure no debris falls over the boundary.
- A supervisor shall observe all works and be in visual contact with the excavator operator at all times.
- Dust suppression consisting of a fine mist water spray will be available on site if required.
- The demolished materials will undergo sorting and salvage once the properties have been demolished. All waste products will be disposed of by a licenced waste carrier.
- The clay tiles will be removed from the roof by hand with those in good condition set aside and sent for re-use. Those of poorer quality will be used as hardcore within the site. The brickwork will be demolished by machine and set aside for re-use as hardcore for the site and the new access road/forecourt.
- During the demolition phase the site management will ensure that no portions of the property are left in an unsafe manner overnight. The site is to be inspected each morning before work commences.
- Demolition and construction works will take place between the hours of 8am and 5pm Monday to Friday and until 1pm on Saturdays. No works will take place on Sundays or Bank Holidays.

Health and Safety for Demolition Workers:

- All persons on site must wear hi-visibility clothing, full personal protective equipment shall be issued and worn, thick gloves (e.g. rigging gloves) suitable for handling glass and other sharp materials.
- A banksman will be present during the loading of demolition materials on to vehicles and will provide traffic management if required.
- Whilst undertaking soft strip out, the structural stability is to be assessed. If any section of the building presents a risk then all persons will be evacuated and mechanical means used to remove and make safe any required areas of the building.
- The work area is to be cleared regularly and kept tidy to reduce risk of trips and falls.
- The main contractor will maintain adequate insurance and ensure that sub-contractors also have adequate insurance.

Plant and Equipment:

All plant and equipment to be used during these works shall be in good working order and fit for the purpose. All relevant inspection and testing documentation relating to the items of plant shall be copied and kept in the site file.

Plant shall have a recognizable identity number so as to enable the documentation to be matched up for the purposes of test verification.

It is anticipated that the following plant shall be utilized on site:

- 1 x 20t 360 degree Excavator with demolition grab/grapple, breaker and bucket
- Tracked mobile crusher
- 8 wheel Skip lorries and 40 yard skips
- Burning equipment c/w Oxy/Propane gases
- Fuel Bowers
- Power drills, cordless drill/drivers, nail/wrecking bars, lump hammers, utility knives, various hand power tools e.g. grinders, wheelbarrows.
- Mobile tower scaffold, podium steps, step ladders (class 1 or 2)
- Safety equipment: fire extinguisher, First Aid kit.

Logistics:

General Overview:

Factors which have been considered in planning the logistics of this project include neighboring properties and their likely sensitivity, traffic routing and frequency, vehicular and pedestrian access (including neighbours and general public) and the requirements of the construction site.

A logistics strategy to address the above has been formulated which is intended to minimize disruption during construction.

The Site Manager will be on site daily from the commencement of the works.

Other experienced operatives may be left in charge of the works from time to time with all necessary procedures relating to this Health and Safety Plan having been explained.

The site Manager or the responsible person left in charge will:

- Be available for consultation at the Local Authority or CDM Coordinator's request.
- Provide details of any activities on which the contractor are engaged as requested.
- Provide information on safety measures taken for any activity as requested.
- Record details of those on site on a daily basis.

Traffic Management and Vehicle Movements:

Vital for the efficient handling of materials, Traffic Management is also important for the relationship with passing traffic and pedestrians. The process will be controlled by a Construction Site Manager. This person will assist with the smooth movement of traffic and working within the unloading point on the road. An advance booking procedure will be in place, controlled by the Construction Site Manager. As there will be limited handling and storage facilities available on site, sizes of deliveries will be restricted, and 'just in time'. Drivers will be given clear instructions on how to get to and from the site and whom they should report to, and their allotted time slot.

Delivery vehicles will be met by a banksman at the site entrance, who will use temporary barriers to protect pedestrians, although there is not currently a footpath on this side of the road. They will then reverse into the gateway to offload within the site.

Deliveries to the frontage will be moved quickly into the site after offloading, where there is space for storage out of sight.

Delivery vehicles can then leave by driving forward back on to Watford Road. Vehicles will approach and leave the site in the following ways:

Approaching from the West, access is straightforward, the site is located between Abbey View and Gills Hill Lane.

On leaving the site, vehicles would return the same way, rather than exit east towards Park Road and on to Watling Street in the centre of Radlett.

Facilities and Office Accommodation:

All facilities for the site workforce will be located within the site boundary. A portable toilet will be provided at all times inside the site entrance gate.

The main entrance to the site will be through a security locked entrance gate at back of pavement. It is proposed to locate on-site office provision for the Construction Site Manager and subcontractors in a portakabin.

A good standard of health and welfare facility will be provided on site within the contractors office, being maintained throughout the programme and will be monitored by the Construction Site Manager.

Materials Handling:

To enable the shortest possible delivery times and to keep traffic hold up to a minimum, delivery drivers will park their vehicles outside the site to report to the Manager, prior to offloading materials into the site. All delivered materials will be moved into the compound working area immediately after delivery.

Traffic arriving at the site generally will be managed by a banksman, with priority at all times for emergency vehicles. The Construction Site Manager will be made aware of Refuse Collection times, and care will be taken to avoid congestion when arranging deliveries. Watford Road at this location is a reasonably straight road with good visibility.

All large vehicles deliveries/collections/soil removal will be restricted to between the hours of 9am and 4pm, and before 1pm on Saturdays.

For concrete deliveries, these will typically use concrete mixer lorries with built on pumps, which will pull up next to the site gate, reversing into the site, and the concrete will be pumped via tube to the working area. Concrete delivery will be organized minimum 24 hours before pouring. No late delivery of concrete will be allowed to pull up, and if late delivery does arrive then it will be sent back to the batching plant. No stacking of vehicles will be allowed at any time.

Materials will be ordered from site 48 hours prior to required delivery. The Construction Site Manager will be working on a 'just in time' basis to avoid delays in offload and double handling after being stored on site.

Licensed contractors will be used for soil removal and will be organized 24 hours prior to the lorries being filled.

It is estimated that the usual number of vehicles coming to site in any one day would be four. This would typically be two grab lorries, one concrete lorry, one staff van, and later in the project a materials delivery instead of the concrete lorry or one of the grab lorries. These numbers may vary according to the relative intensity of the work being conducted at the different stages.

These vehicles would typically be of the following dimensions:

Concrete lorry – maximum 9m x 2.5m

Grab lorry – maximum 9m x 2.5m

Staff van – maximum 5.6m x 2.1m

Material delivery vehicle – maximum 7.5m x 2.45m

Since this is a small apartment building of six units, the site traffic would be relatively low.

The estimated time on the road outside would be 10-20 minutes, during which time a banksman would be provided at all times.

Deliveries and pick-ups would be restricted to between 9am and 3pm, then before 1pm on Saturdays to avoid rush hour and local school drop-off/collection times.

Materials Storage:

The site has space for on-site storage. The main area for storage within the site is the existing hardstanding driveway to the front of the property. The protected tree at the front corner of the site will have fence protection to avoid any materials being stored within the protection area.

Wheel Washing and Road cleanliness

Given the nature of the site and proposed development, movements of vehicles on and off the site will be monitored and where required, a thorough wheel washing regime is to be implemented to ensure that all mud, stones and other materials are captured before leaving the site. The site benefits from an area of hardstanding at the front which will be used temporarily.

A wheel washing regime will consist of three simple operations carried out by a designated operative suitably dressed for the task.

- Vehicles will be parked on the hardstanding within the site with the engine off. Heavy deposits will be removed manually using scrapers and heavy brush
- Following the first step, wheels/tracks will be washed where necessary using a pressure jet wash to ensure any residual deposits are removed. The vehicle will move forward slightly to ensure the complete wheel is cleaned.

- On completion the wheels/tracks will be inspected to confirm that the vehicle is fit to leave site. Once the vehicle has left a check will be made of the road to ensure that it is clean.

Parking

As the site has an area of hardstanding at the front within the site, parking of site operatives is not ordinarily considered a major factor.

Noise Levels and Management

The site will operate only within the hours set out previously. Given the excavator is likely to be the noisiest piece of machinery it is worth noting that the strip-by-strip and open cut construction method means that the digger will only be operational for a maximum of a few hours in each day in general.

Generally the plant and machinery will operate at around 80dB. The Contractor will be required to operate up-to-date and well-maintained machinery and to implement silencing measures where possible.

Measures to minimise disturbance will include:

- Agreeing standstill periods with neighbours – for instance if they are planning on having guests or need to make an important phone call
- Regular consultation with neighbours to communicate upcoming works, understand the level of disruption and to discuss solutions
- Use of the quietest machinery suitable for the job
- All operatives will be required to use suitable noise protection equipment.

As driven piling is not indicated, (augered piling is proposed) no specific noise screening measures are proposed at this stage, although we will monitor noise and react as necessary as set out below.

- The site manager will be required to keep a written log of the hours of operation of noisy machinery and to sign off that in his or her opinion the machinery is operating within acceptable noise limits.
- The site manager will consult regularly with neighbours to understand the impact of noise, and if neighbours report noise as being a significant issue we will take steps to implement further noise screening measures required.

Hoardings and Access:

The site and working areas are partially segregated from the public realm and neighbouring properties by existing hedges and fences. A 2m high hoarding line will be established that can accommodate both the demolition/excavation and construction phases, with matching temporary vehicular entrance gates.

Dust Levels and Management:

There is the potential for dust to cause both pollution and inconvenience for neighbours. It is expected that the proposed development will strictly adhere to the relevant Code of Practice during the demolition and construction stages. On-site good practice procedures will be followed in order to mitigate air pollution (both dust and fume generation) impacts. The biggest likely contributor to dust contamination is the demolition and excavation programme. Given the prevailing soil conditions, which consist of clay deposits, and the method of excavation being stage-by-stage in small loads we are confident that dust levels can be adequately managed.

Measures currently planned to be adopted include the following:

- Use of hoarding to the front of the site to assist in the screening of noise and dust generation from low level sources.
- Rapid movement of excavated earth to skips or grab lorries for removal, and immediate covering of skips. All vehicles transporting dust generating materials to and from the site to be adequately covered on each journey.
- Strict 'engines off' policy for all plant and delivery vehicles when not in use/moving.
- Regular brushing and water spraying of areas of the site capable of collecting dust which could then become airborne.
- No burning of waste or unwanted materials will be permitted.
- All materials stored on site will be adequately covered or stored in sealed containers

Dust levels will be monitored by the Site Manager on a daily basis and a written record will be kept. Regular site inspection by the owner and consultation with neighbours will also be implemented to assess dust levels and general site cleanliness.

If the monitoring procedures above identify that the works are causing unforeseen dust issues then steps will be taken through both further hoarding and use of water suppression as necessary. Local soil conditions suggests that the majority of the excavated soil will be cohesive and therefore presents a relatively low risk of causing dust issues.

Site Security:

Security and access of the site personnel will be achieved using the single entry and exit point on to Watford Road. The entrance will always be locked and access/egress will be controlled by the Construction Site Manager at all times of the working day. Personnel access will only be permitted through this single access point for operatives, staff and professional team members, who have undergone a mandatory site induction process.

Upon arrival on site, operatives will be directed via a "safe zone" pedestrian walkway directly to the site office cabins, where operatives will sign-in to the site log in book and an induction will be completed which will clearly inform all

operatives and visitors of the site security procedures, specific works areas, access routes, welfare facilities etc with each person being shown a clearly defined site layout plan.

First Aid Provision:

Health and Safety will be the responsibility of the Construction Site Manager, and a trained first-aider will be on site during normal working hours. The first aid facility will be located in the site office area.

Fire Safety Management:

Measures will be put in place to protect those affected by the construction activities. A 'Site Fire' and 'Emergency Evacuation Plan' will be produced and displayed prominently on the site, and will form part of the site induction programme. Fire Extinguishers will be provided on site. Adequate temporary fire protection will be provided for each area of the works.

On Site Communication:

For Health and Safety reasons, mobile phones will not be permitted to be used, other than in designated areas, such as the welfare and office area.

Temporary Site Services:

The site will be surveyed for existing services which will be identified and marked. This will also apply to the immediate highway outside the site, the crossover and any other area of the public highway affected by the works. Where it is necessary to cross services that do have sufficient cover or are ducted and liable to crushing, we will place road plates over the cross over (plant/equipment cross point) to minimise risk of services damage. Any damaged to the public highway or footpath will be reinstated to the required highways specification.

A temporary building supply will be established, all temporary electrical supplies will be taken from within the site and distributed to strategically placed supplies around the site. Electrical equipment will be operated from a 110v supply. Electrical leads will be routed to avoid being a tripping hazard or being run over and damaged. Noisy and polluting diesel generators will be avoided in this way.

General Safety lighting will be provided to permit safe access and egress from the project office area, welfare facilities, and to and from the site. The lighting scheme will be reviewed to ensure that the locations, type and direction of lighting are suitable for working, but also has no adverse effect on neighbouring properties.

Provision for temporary water supplies around the site will be made similarly, from the existing supply. However, the number of water points to be located within the building footprint will be restricted.

Any existing gas supply will be capped off at the entrance to the site ready for reconnection at the appropriate point in construction of the new building.

Waste Management and Recycling:

A clean and unobstructed site is essential in setting up an environment which removes a potential for fire hazard, provides safe access, and allows good progress. No bonfires or burning of materials will be permitted on site.

The removal of waste from the work site will be undertaken on a daily basis. The success of this is dependent upon good site management – the Construction Site Manager will be responsible for this process.

Waste will be minimized by following these simple recommendations:

- Off-cuts such as insulation, plasterboard, timber, will be set aside and used first before ordering additional materials.
- Trades will be co-ordinated so that left over materials from one can be used by another.
- Unused or salvaged materials will be returned, sold or donated.
- Waste will be separated to enable timber, cardboard, plastic packaging and rubble to be sorted for recycling.

For spoil management the system of loading static containers from a conveyor system will be utilized, to reduce both the daily inconvenience to residents, and the length of time the spoil wagons are on site. The conveyor will load directly into a skip located at the front of the property. The skip will be positioned on the hardstanding within the site.

The conveyor will be adequately supported and secured using a temporary scaffold structure.

From the conveyor, once the skips are full, it is likely that the excavation will be wheeled away by a grab lorry that would attend site and load itself full from the standing skips in the site. Once full, the banksman will check that the road is completely clear of debris, that the lorry has clean wheels and if satisfied, will usher the lorry out of the street. If required, the road will be thoroughly swept and washed down, so that it is kept presentable and safe at all times.

Neighbourhood and Public Relations:

It is recognized that it is important to minimize disruption for all neighbours in the street. The neighbours will be briefed on the construction process before site works commence. The neighbours will be advised of upcoming operations and their impacts via letter drop and/or meetings with the Construction Site Manager.

Third Party Liaison with Hertsmere Borough Council:

It will be the responsibility of the Construction Site Manager to ensure that the required licences and all conditions in respect of Hertsmere BC and Building Control are met.

Environmental Management and Mitigating Measures:

The excavation and construction activities for the project will result in potential nuisance from construction generated noise and dust. In accordance with normal allowed working hours, any works which can be heard at the boundary of the site may only be undertaken within the following hours:

8:00 - 18:00 hours Monday to Friday

08:00 - 13:00 hours Saturdays

No works will be undertaken on Sundays or Bank Holidays.

At all times excavation and construction works shall be undertaken by best practicable means so as to reduce demolition and construction activity noise and dust levels impacting neighbouring properties.

All plant equipment will be silenced where appropriate, and operated to prevent excessive noise. Plant equipment will be certified to meet any relevant EC Directives and BS 5228. The site hoarding shall be erected to a height which blocks line of sight between the site activities and nearby noise sensitive properties.

Works shall be programmed so as to reduce the duration of the most intrusive operations close to neighbouring properties. Low impact demolition methods shall be used where appropriate.

Materials shall be moved carefully (both manually and by machinery) so as to avoid any dropping. Screws and drills shall be used and powered nail guns will be used for erecting hoardings/enclosures. Plant engines shall be switched off whilst not in use.

Where possible waste resulting from demolition, excavation and disposal works will be kept separate, and recycled or disposed of in an environmentally friendly manner.

Management of Liquids and Water Control:

The site is not known to have had any previous industrial use. To eliminate the risk of any potential ground, watercourse or drainage contamination from the various liquids which are used on site and from generated effluents the following control measures will be implemented on site:

All site welfare facilities effluent and sewage discharge will be via weekly pick up for the portable toilet facilities. At no time will any effluent be allowed to discharge directly on to the ground. Any specialist/hazardous waste that is produced will be disposed of in accordance with Regulations.

All spillage incidents will be recorded on a report and dependent on the type of spillage, notification will be issued to the relevant authority such as the Environment Agency and Hertsmere BC. Actions will be put in place to

immediately control the incident and limit the adverse impacts of the incident. A site investigation will then be carried out by the Construction Site Manager, and the appropriate corrective action implemented and monitored.

Management of Visual Intrusions:

The contractor will ensure that the lighting of the site is kept at the minimum luminosity necessary for adequate safety and security. In addition the lighting shall be located and directed such that it does not cause undue intrusion to adjacent properties. When the site is closed unnecessary lighting will be switched off.

The hoarding to the front boundary of the site will make the works less intrusive to neighbouring properties, and it will be finished in dark green paint. The pavement and road outside the site will be maintained and cleaned on a daily basis.

Pest Control:

All drainage systems and access points will be kept secure to prevent rodent access.

Food to only be eaten in designated areas. All generated rubbish particularly food waste will be cleared as it is generated and placed into secure containers, to be removed off site for disposal on a continuous basis.

Any food brought on site will be within storage containers.

Pre-Construction Health and Safety CDM Information:

This contract will be carried out in compliance with current Health and Safety Legislation. Contract works will be conducted in accordance with the safety policy of the chosen contractor, which will be reviewed by the contractors CDM representative and a signed copy of which will be available on site.

The Health and Safety Plan will be prepared and kept up to date, modified and altered in the light of changing circumstances and standards achieved on site and as the construction work progresses.

Reviews of parts of the Health and Safety Plan may also need to be made if there are design changes or alterations, unforeseen circumstances or variations to planned circumstances arise.

Changes will be notified to all parties including those contractors working on site who will be affected.

At site progress meetings safety shall be reviewed as an item on the agenda and recorded in the minutes.

Where appropriate, regular meetings will be held with sub-contractors to review safety matters. Comments are to be encouraged from any person on site relative to the health and safety matters.

Health and Safety File Information:

The contractor will provide any relevant information for inclusion in the project Health & Safety file.

This information will be collated throughout the project to be made available as requested.

The following hazards associated with the project have been identified by the Principal Designer:

- Unauthorized access to the site
- Work at height
- Work on/around equipment and vehicles on slope
- Work from scaffolds and roof work
- Work close to the boundaries with adjacent properties – worker protection
- Work close to adjacent residential properties – public protection
- Protection of the public from the work including construction traffic and the safe movement and unloading of materials at the site
- Narrow access roads to the site
- Deep excavations and substructure works
- Hot works and cutting within the premises under construction
- Installation of new services and testing and commissioning on completion
- Connections to foul drainage system
- Steelwork erection
- Precast concrete floors erection

Method statements will be prepared to address all high risk activities, prior to commencement of that section of work to which the method statement relates. Further method statements for specific work operations will be added to this Plan as the project proceeds.