

Method Statement

for the

Construction of The Wheelhouse Apartments,

10 Elmsley Road, Liverpool. L18 8AZ

Client	Elmsley Homes Ltd
Architect/Principal Designer	Mersey Design Group Ltd
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1.0 INTRODUCTION

The Wheel House is situated in the leafy suburb of Mossley Hill and the site contains two existing buildings, the Wheel House itself and its associated Pool House. Both buildings are to be removed to allow comprehensive residential redevelopment of the site. This takes the form of 3 detached three storey apartment dwellings positioned on large individual plots which are located in a manner which will ensure they have little or no impact on the amenities of any occupiers of adjoining dwellings on Drewell Road, Elmsley Road and Lyndhurst Road.

The new Residential development is due to commence on site in July 2016 with an anticipated completion in July 2017.

Utmost care will be given with regard to the welfare of workers and without putting at risk their health and safety. The same goes for others who may be affected by the project, particularly the general public, visitors and surrounding buildings and residences.

It is also recognised that activities should be carried out with an understanding and awareness of environmental matters. The Contractor will therefore actively seek to reduce any adverse impact on the environment, by implementing high standards of pollution control and care for the local environment to levels that are reasonably practicable to attain.

To this end the Contractor will carry out our works in accordance with the proposed programme of work unless unexpected complications arise. If any alterations or adjustments are required, any changes will be fully documented and the client advised accordingly.

An Asbestos Refurbishment and Demolition Survey has been carried out identifying locations of Asbestos containing materials (ACM). Following the removal of ACM's by a Licensed Contractor, the building will be soft stripped prior to demolition.

Prior to the start on site the Contractor will conduct a dilapidation survey on surrounding footpaths and roads with any findings being recorded and a photographic record taken.

Following all demolition activities all ground floor slabs are to be grubbed up and disposed of offsite or crushed and left on site for future use. All other waste materials will be removed from site to the appropriate Licensed Landfill facility.

2.0 PHASING

The demolition and the construction are to be carried out via a Management contract to the time scales as set out on the attached programme and to the specification set out hereafter in this document.

All three apartment blocks will be erected as one project with the programme staggered so that trades can move from their element work finish on one block to the commencement on the next.

The final handover of each block is therefore anticipated at monthly intervals working from South to North. Each block will have secure temporary 1.8m high hoardings fencing off the remaining construction site after each completion.

3.0 SCOPE OF CONTRACT WORKS

Site Set-up & Demolition Works

- 2.1 All notifications and licenses required for associated works in place.
- 2.2 Confirmation disconnection/isolation of services.
- 2.3 Site Set-Up Hoardings/Welfare facilities/Skips
- 2.4 Dilapidation surveys
- 2.5 Tree protection measures installed for course of works.
- 2.6 Tree removals to allow construction
- 2.7 Remove asbestos containing materials from building Asbestos Plan of Works (separate document).
- 2.8 Clear out and dispose of all loose items within building.
- 2.9 Soft stripping of building prior to demolition.
- 2.10 Utilising Semi High Reach, 14 & 20 tonne Excavator demolish buildings.
- 2.11 Utilising hammer/bucket attachment break out building footprint to depth tbc
- 2.12 Backfill foundations & basements with crushed material and compact
- 2.13 All dust monitoring to be carried out by the Contractor and suitable dampening down to be utilised where required.
- 2.14 Remove all waste materials from site.

Block 1 Works

- 2.15 Excavate to new levels
- 2.16 Set out Building Foundations
- 2.17 Install Gas, Electric and Water
- 2.18 Construct Footings and Ground Floor Slab incl waterproofing
- 2.19 Erect steel Frame
- 2.20 Erect Precast Concrete Upper Floors, Staircases, Lift shafts, Core & Shear Walls
- 2.21 Erect timber Roof structure, felt and Batten
- 2.22 Install Roof 2nd fix & rainwater goods
- 2.23 Construct External Walls with associated Scaffolding
- 2.24 Install Windows; louvres and external doors
- 2.25 Install Combined Mechanical & Electrical Services
- 2.26 Erect Non Structural internal Walls and Partitions,
- 2.27 Install Ceilings Dry linings and partitions; skim finish
- 2.28 Install Internal Floor and Wall finishes
- 2.29 Install Sanitary appliances, sinks etc
- 2.30 Install Cupboards, shelves, kitchen units Skirtings & second fix joinery items
- 2.31 Install Internal door sets
- 2.32 Painting and decorating
- 2.33 Install Loose fittings, furnishings & equipment

Block 2 & 3 Works

2.34 Repeat 2.14 to 2.32 for each block with staggered programme so that each trade can move from completion of one block to the next.

External & Completion Works

- 2.35 Install external drainage
- 2.36 Install roads, paths, pavings and surfacings.
- 2.37 Install Fencing, railings and walls
- 2.38 Tree removals as required under the Management plan
- 2.39 Install Soft landscaping, planting and irrigation systems
- 2.40 Remove all waste materials from site.
- 2.41 Leave site clean and tidy
- 2.42 Boundary hoardings relocated, fencings and walls made good

All work will be undertaken in a logical sequence, to be determined by the principle contractor, and will be carried out in accordance with current health and safety legislation and the conditions of our planning permission.

4.0 SITE SAFETY

4.1 General

All site visitors will report to the site office and if they are to go onto site they must have a site induction. All other persons are not permitted on site and this will be enforced through a site security system, safety barriers and warning signs.

All operatives will receive a site induction from the Contractor site manager when they arrive on site and first aid boxes and accident book will be kept inside the site office.

Fire extinguishers and a klaxon air horn will be situated within the working area; Test certificates will be provided with all mechanical machinery.

All operatives will hold a current CCDO qualification card and as a minimum each operative will have attended a Construction awareness course. There will be a minimum of one first aider on site.

4.2 Health and safety generally

All operations will be executed at all times in such a way as to ensure as far as it is reasonably practicable the health, safety and welfare of all persons likely to be affected by operations including sub-contractors, client's staff, visitors and the general public.

4.3 Company safety policy

The Demolition Contractor will operate a Company Health and Safety Policy in accordance with the current Health and Safety at Work Act 1974, and accompanying legislation.

4.4 Emergency procedures

An emergency co-ordinator will be appointed for the site and he will formulate an Emergency Procedure for the detailing of Fire Points, Emergency Exit Routes and Muster Points. He will be responsible for ensuring the relevant emergency services are called to the site when necessary and that emergency roll calls are undertaken.

Any health and safety incidents will be immediately reported to the site manager.

In potentially dangerous situations the Contractor will take necessary precautions to minimise the effect of danger but only if this can be achieved without putting any persons at risk. If the situation arises the site will be secured and a plan of action will be agreed and implemented.

4.5 Asbestos

In the event of any materials being uncovered during the works, which appear to be asbestos, works in that area will cease immediately. The area will then be fenced off to

prevent any access by site personnel and the relevant bodies will be notified immediately. A reappraisal of the works will then be implemented and documentation given and understood by all concerned.

4.6 Use of PPE by all site operatives

All site operatives will be issued and are obliged when on site to wear as standard, safety helmets in compliance with BS.EN397:1995, flame retardant overalls, high visibility waistcoat, jacket or high visibility overalls, gloves and safety boots (toe-cap, ankle support and mid-sole protection) at all times.

Safety glasses, goggles, RPE and hearing protection will be readily available as needs arise and if necessary hearing protection zones will be set up.

The issue of all PPE will be logged in a PPE register.

4.7 Face fit testing

As a part of Construction procedures it is often a requirement that operatives wear appropriate PPE/RPE in regards to masks and protecting the respiratory system of the individual. In order for the mask to be worn in the correct manner and to work effectively the user must be clean-shaven. Operatives will be made aware in advance when they are to be involved in such activities and hence ensure that they come to work clean-shaven. If an operative is not clean-shaven they will need to be allocated to an alternative task. All operatives undergo a Fit to Fit (HSE Approved) Face Fit Test at an accredited facility.

4.8 Fire prevention strategy

The key issues with any fire prevention strategy are the following points:

- Risk assessment
- Means of escape
- Means of giving warning
- Means of fighting fire

Please refer to separate risk assessment documentation. A system will be in place on site to alert personnel in the event of a fire, which will be a temporary fire alarm utilising a klaxon or air horn.

Fire extinguishers will be located at identified fire points around the site. The locations will change as Construction progresses. The extinguishers will be appropriate to the nature of the potential fire:

- wood, paper and cloth water extinguisher;
- flammable liquids dry powder or foam extinguisher;
- Electrical carbon dioxide (C02) extinguisher.

No bonfires are allowed anywhere on the site

5.0 SITE INFORMATION

5.1 Working hours

no operations which are audible at the site boundary shall be carried out:

- (i) outside the hours of 0800 to 1800 weekdays
- (ii) outside the hours of 0800 to 1300 Saturdays, and
- (iii) at any time on Sundays or Bank Holidays.

5.2 Security

The site will be enclosed during demolition with full 2.4m height timber hoarding to all boundaries with secure gated access to be confirmed. Boundary walls with railings will have timber hoardings fitted inside the railings to a similar height.

5.3 Services

All services will be disconnected/isolated and certificates issued before demolition works commence.

5.4 Welfare

Mess, office and storage cabins will be provided, situated within the confines of the site compound as indicated on the site plan.

5.5 Warning signs

The Contractor will provide suitable signage displayed to the perimeter in clearly visible positions and suitable safety barriers forming access and egress routes. Signage will also be erected displaying.

- Site safety requirements.
- Danger Demolition/Construction In Progress
- Danger keep out.
- Children must not play on this site.
- PPE Requirements

5.6 Consultations with people on site

Team talks will also be used as an opportunity for the workforce to be consulted on health and safety issues as a means of complying with the 'Health and Safety' (Consultation with Employees) Regulations 1996.

At all induction meetings and tool-box talks it will be a requirement that those present are asked to report any issues related to health and safety that may be of concern. When such information is received by the management it will then be recorded and appropriate measures will be implemented.

There will be an effective communication strategy in place on site for liaison between all parties, which is maintained through start-up meetings and daily morning briefings.

5.7 Management

The Contract manager will visit the site daily and a working supervisor will be appointed to oversee the day-to-day operation.

Daily visits will include a safety visit to inspect the work methods, housekeeping and include safety discussion with the workforce.

6.0 **SEQUENCE OF WORK**

6.1 Site Set-Up

The site is surrounded by 1.8m high sandstone walls to be retained with the exception of the entrance opening on Elmsley Road, across which security Hoarding gates have already been erected.

Warning signs clearly stating 'Danger Construction' and 'Keep Out' will be attached to the perimeter wall and gates at intervals of 15 metres.

The Contractor's compound area for the site accommodation and storage will be erected to the left of the entrance within the site as per the attached Site set-up drawing.

Welfare and canteen facilities will be situated in the areas shown and will also include the site office and first aid facilities. All relevant notification and documentation will be placed on the site notice boards within the offices/welfare facilities. All site visitors will be required to sign in and out of site and follow site rules at all times.

6.2 Services

Written confirmation must have been received and copies held on site confirming the disconnection/isolation of services have been carried out prior to works commencing.

6.3 Protection Measures

As excavation progresses sub-base will be laid to cap the exposed subsoil to form a working platform and minimise water damage to the sub-soil

The attached plans show locations of trees on the site which are to have the following protection measures in accordance with the British Standard BS 5837 Trees in relation to design, demolition and construction.

Unless otherwise agreed in writing with the Local Planning Authority (LPA), a Root Protection Area (RPA) is to be enforced with its radius calculated as

- 12 times the diameter of the trunk measured at 1.5m for single stemmed tree or
- 10 times the diameter of the tree measured immediately above the root flare for a multi-stemmed tree.

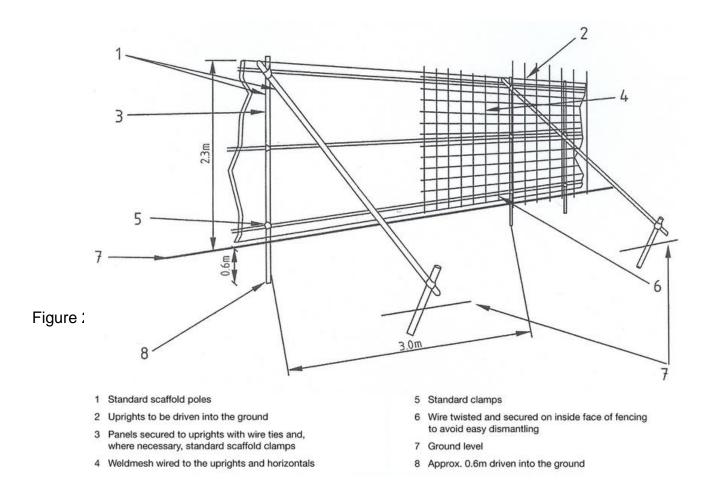
a) Fencing

Fencing is to be erected around all trees prior to the commencement of any demolition works, as per BS.5387. Figure 2 overleaf.

Fenced areas are to be inaccessible to contractors and notices should be fixed to the fencing display words such as "Contractor Exclusion Zone - Keep Out".

Within the fenced area, during the demolition period:

- No spoil, vehicles, fuel, materials, waste, temporary buildings or ancillary equipment shall be stored.
- Existing ground levels shall not be raised or lowered.
- No Services shall be laid.
- Materials likely to be injurious to trees, such as the mixing of cement or the discharge of cement, oil, bitumen or other noxious substances or the use of machinery that could lead to spillages of fuels/oils should not be permitted outside the fence where contaminated fluids could drain towards the tree.



b) Ground Protection

Any RPA which is not currently paved or tarmacked where vehicular or pedestrian access for the demolition operation may take place should be protected by a combination of barriers and ground protection. The position of the barrier may be shown within the RPA at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the RPA should be protected with Ground guards laid as per BS.5387. Figure 3 overleaf

For pedestrian movements within the RPA the installation of ground protection in the form of a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile, or supported by scaffold, may be acceptable.

For wheeled or tracked construction traffic movements within the RPA the ground protection should be designed by an engineer to accommodate the likely loading and may involve the use of proprietary systems.

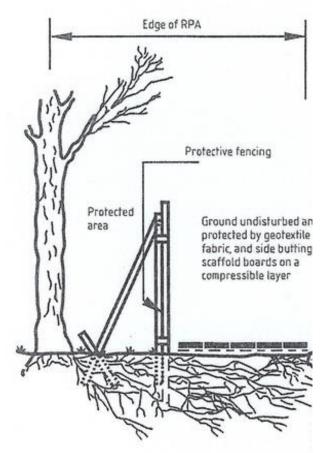


Figure 3. - Ground Guards

6.4 Asbestos Removal

A pre-demolition/refurbishment Asbestos Survey has been carried out by Asset Ltd and this confirms asbestos present in the buildings. An asbestos plan of works will be developed and approved complying with the Control of Asbestos Regulations 2012. The Asbestos is to be removed by a licensed Asbestos contractor and demolition activities will only commence once a clearance certificate has been issued.

6.5 Soft Strip

Once the asbestos has been confirmed as removed a gang will begin the soft strip. Rollon roll-off skips will be placed around the buildings to receive waste. A designated drop zone (barriered off and banksman in attendance at all times) will be established for the removal of debris from each of the floors. The gang will begin on the ground floor and strip the building moving all loose material to the side for accessing the skips. Hand tools will be used to remove all skirting, doors, doorframes, flooring and all other fixtures and fittings. These will be separated and streamed to relevant waste skips for either recycling or disposal to landfill.

(Scrap metal, general waste, wood). Once the ground floor has been completed the gang will move onto the first & second floors in sequence and repeat the process. There is

access from the ground floor to the location of the skips so this loose material will be walked to the appropriate skips.

When stripping out items that will create dust (i.e. insulation/ plasterboard/ ceilings/ flooring) in the process operatives are required as mandatory to wear disposable paper overalls over their normal boiler-suits and adequate RPE (Sundström SR100 Half Mask fitted with P3 filter and pre-filter). Dusty environments will require the pre-filters to be changed on a daily basis and the filter checked daily and changed weekly (alternatively changed more frequently if the check deemed otherwise). The masks will be cleaned (warm water and hygiene wipes) at the end of each shift and checked for cleanliness by a competent person before used the next day. Redundant filters will be discarded into the appropriate waste receptacle in readiness for removal off-site.

6.6 Demolition

Prior to any heavy machinery being brought to site existing underground retained drainage and Mechanical and Electrical services as indicated upon Engineers plans will be protected by using plating and/or road mats.

Using 360° Semi-High reach excavator Contractors will methodically dismantle the building. Further excavators will also be utilised (20 tonne and 14 tonne) to work in tandem to dismantle the building and segregate/load the waste materials.

Excavators will commence with the roof structure followed by the side walls and internal support structures section by section. Any steel structural beams will be cut with Hydraulic shears.

The steel will be placed in 40-yard scrap metal skips and other waste materials placed in the appropriate waste skips. The demolition will be performed in a systematic procedure with banks-men in attendance at all times.

6.7 Crushing

Once the buildings have been demolished the resulting hard-core will be crushed on site. Mobile crushers will be brought to site and in a designated area will be begin to crush the materials produced from the demolition processes. 360° Excavator with bucket attachment will load the hard-core materials (concrete and brick) into the crusher resulting in crushed material (6F2). During the operations banks-men will be attendance and dust suppression measures in place as detailed in items 7.1 and 7.4 below.

6.8 Site Clearance

On completion of building demolition, the concrete slabs will be grubbed up using the hammer and bucket excavator attachments and the resulting crushed. The foundations will be removed to a depth of 1.5m (tbc) to the building footprint and the area then backfilled with compacted 6F2.

All plant, equipment and waste materials generated will then be removed from site. The waste materials (apart from crush to be re-used) will have been taken off-site to the appropriate licensed landfill facility and all waste transfer notes kept in readiness for inclusion in the Health & Safety file.

7.0 TRAFFIC SYSTEMS AND RESTRICTIONS

7.1 Vehicle Routing & Deliveries

All site traffic will be directed via Queens Drive to North Mossley Hill Road and then to Elmsley Road. Delivery drivers will be notified in advance of these restrictions.

No deliveries will take place between the hours of 08:00 to 09:30 and 15:00 to 16:00 due to the nature of pedestrian access and the heavy build-up of traffic surrounding the site and these delivery times must be strictly adhered to.

Site traffic entry and exit points will be clearly marked and signage erected highlighting the crossing points to the general public. Drivers of vehicles wishing to enter site must stop at the site office to sign in and receive instructions.

All Skips, wagons and plant will all arrive and leave site via the existing Elmsley Road access point only indicated on the Traffic Management Plan. Lyndhurst and Drewell Road are un-adopted, particularly narrow and therefore unsuitable for large vehicles and will not be used.

All vehicles arriving at or departing site will at all times ensure loads are secure and where possible curtain sided vehicles will be used.

Drivers on site will undertake an induction, which includes highlighting any possible risks, as well as fully understanding the Traffic Control System.

A banks man must be used at all times for both on site vehicle movements and for vehicle access and egress, which must be from Elmsley Road only.

Routes suitable for emergency traffic shall be provided and maintained at all times. Particular care will be carried out to ensure that access for emergency services will not be impaired during delivery or collection of plant and materials.

In order to maintain traffic/pedestrian safety drivers will be instructed to observe normal Highway Code requirements, adhere to the mandatory speed limit and take additional precautions in the vicinity of co-workers.

These measures will be securely maintained in accordance with the general programme and sequence of works.

7.2 Parking

The existing entrance and hard-standings within the site will be utilised for vehicular parking for the duration of the works.

No vehicles are to park or wait on Elmsley Road and deliveries will be unloaded within the site boundary. No vehicles are to park on the surrounding roads or use Drewell or Lyndhurst Roads as a cut through to Elmsley Road.

7.3 Noise

It is accepted that noise can be very disturbing to neighbours, and our clients/contractors are committed to being good neighbours throughout the development as they were for the adjacent Carlton House development. Therefore, the following steps will be taken to ensure that noise issues are managed effectively during the necessary construction works.

- Strict adherence to working hours as item 4.1 above
- Where such options exist, and are practical to implement, we will endeavour to use less noisy construction techniques.
- Particularly noisy operations will be scheduled to be undertaken at the times of day least likely to disturb our neighbours.

We believe these measures, combined with the natural attenuation of noise provided by the distances, boundary walls and foliage, will ensure that we will not significantly increase the background noise levels around the site.

In the unlikely event that these measures are not effective, we are committed to working closely with our neighbours, and with the local authority, to amicably resolve any disputes.

7.4 Dust

The type of work being undertaken for this development is not anticipated to create significant quantities of dust. However, levels of dust generated will be monitored in conjunction with the principle contractor, and During the site works the contractor shall pay full regard to the best practicable means available in respect of the control of dust from the site.

For the demolition and crushing activities water suppression will be provided using an atomising steam dust suppression machine.

7.5 Wheel Wash

Throughout the construction phase, traffic management will separate "dirty" and "clean" areas of the site as much as possible. Existing hard standings and stoned areas on the site are designated for parking and deliveries, which means that the majority of traffic on the site will not become muddied.

A wheel wash station will be set up adjacent to the gate, as indicated on the attached plan to deal with any vehicles where wheels are muddied, comprising a pressure washer and brushes.

In addition, the condition of Elmsley Road will be monitored and emergency road cleaning undertaken if required.

8.0 PLANT AND EQUIPMENT

8.1 Storage of Plant and Materials

On-site storage of plant and materials will be provided in the area designated on the attached plan, and all deliveries will be made to this area.

This area already has a tarmac base which provides a suitable parking surface, and which will not cause plant to become muddied or stuck.

The area is substantial, and will provide ample storage space for the quantity of plant and material likely to be on site during construction. It is a close to the entrance and gives ample turning space for large vehicles.

As this area is distant from Blocks 1 and 2 smaller storage areas are identified adjacent to these blocks for ease of access.

8.2 Large plant requirements

- Semi High Reach Tonne 360° excavators with attachments
- 14 Tonne & 20 Tonne 360° excavators with rotating selector grab and bucket attachments.
- · Concrete pulveriser attachment.
- Mobile Crushers

8.3 Haulage requirements

Roll on/ Roll off skip lorries.

The haulage company will 'sheet in' the waste materials prior to leaving site.

8.4 Small plant requirements

- Various hand tools.
- Dust suppression and water equipment (meters/check valves)

8.5 General Requirements

All plant and equipment to be used will be available for inspection immediately prior to commencing work and will be in a safe condition.

All plant and equipment and labour requirements will satisfy the following:-

- The Health & Safety at Work Act 1974
- The Management of Health & Safety at Work Regulations 1999
- Provision and Use of Work Equipment Regulations 1998
- Work at Heights Regulations 2005
- Manual Handling Regulations 2005
- Electricity at Work Regulations 1989
- Noise at Work Regulations 2005
- COSHH Regulations 2005
- Personnel Protective Equipment at Work Regulations 2002
- The Control of Asbestos Regulations 2012

- High Flammable Liquids and Liquefied Petroleum Gases Regulations 1972
- DSEAR (Dangerous Substances & Explosive Atmospheres Regulations) 2002
- Control of Lead at Work Regulations 2002
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
- The Construction Head Protection Regulations 2007

Guidance Note EH44 Dust: General Principal of Protection

And wherever practicable conform to the following British Standards and Guidance notes:-

The British Standard Codes of Practice BS: 6187-2011 CITB GE 700 April 2013 edition.

LICENSED RECYCLING CENTRES – Examples only TBC
J. Davidson Scrap Metal Recycling & S. Norton & Company Ltd
CCC Waste Recycling
Boden's Waste Wood Recycling
Whitemoss Landfill

8.6 Review

Regular project review meetings will be held to review all aspects of the project, and to ensure that work is progressing in accordance with this Construction Method Statement.

9.0 APPENDICES

9.1 Stakeholders

CLIENT Elmsley Homes Ltd

ARCHITECTS:
Mersey Design Group Ltd

QUANTITY SURVEYORS: Mersey Design Group Ltd

PRINCIPAL DESIGNERS: Mersey Design Group Ltd

MECHANICAL & ELECTRICAL CONSULTING ENGINEERS Rodney Environmental Consultants

STRUCTURAL & CIVIL CONSULTING ENGINEERS Interim Consultancy Solutions

ASBESTOS SURVEYING SERVICES Asset Ltd

LANDSCAPE ARCHITECTS BCA Landscape

GROUND INVESTIGATION SURVEYORS: To be Confirmed

9.2 Traffic Access Plan

9.3 Site Access/ Block Phasing Plan