

Store Street, Manchester

Construction Environmental Management Plan



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Introduction

This Plan has been produced to support the approved application submitted to Manchester City Council (MCC) for the residential development at Store Street, Manchester.

At the time of writing, a contractor has not been appointed for the construction of the development. Therefore, this document provides the framework for the Construction Environmental Management Plan (CEMP) and indicates the anticipated delivery of the scheme.

It is understood that a more detailed CEMP will be submitted to MCC for further approval, prior to appointment of a suitable contractor, and the commencement of the main development works.

As it has not been possible to consult with the future contractor, the details of the CEMP may vary from what is defined within this Plan. However, full consultation will be undertaken with MCC in respect of the detailed CEMP to ensure that all development specific and local adjacencies have been considered and addressed.

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1.0 Site Establishment & Logistics

1.1 Site Operating Hours

The works will be programmed based on a Monday to Friday and a Saturday morning working week.

Official site working hours would be:

Mon – Fri: 7:30am – 6:00 pm, Sat: 8:30am – 2:00pm

Sunday/Bank Holidays: No Work

If required to work outside the above hours, local authority and local residents will be informed where necessary prior to any works commencing.

1.2 Site Establishment Plan

Due to the location of the site and the proposed footprint of the building the site build process and logistics of the site are very challenging. A high level of consideration will be given to the site logistics, deliveries, protecting the public, materials distribution and the affect that the construction work will have on the local community.

The building occupies the whole footprint of the site, so capacity to house the full site welfare and office accommodation set-up isn't possible. Consequently, the basement level will be utilized for initial set up and subsequent material storage. A local facility will be secured which will act as contractor parking / welfare / office facilities for the duration of the build.

The project office will comprise of facilities for the contractor's staff, as well as key subcontractors and the Client. There will be meeting room facilities, welfare (inclusive of a canteen), drying rooms and WCs - all in accordance with CDM Regulations.

Traffic Management will be implemented, as necessary, to demark road and pavement closures, works access and egress, footpath alterations and pedestrian segregation.

Where possible and required, the site will be protected by a solid construction perimeter hoarding and will be monitored by CCTV.

1.3 Site Parking Arrangements

There is no provision for parking on site. However, a local site will be secured which will permit safe and controlled contractor parking. The secure site will house all staff / contractor parking, ensuring no requirement for off-site public parking by associated personnel. Before any construction works begin, liaison relating to parking arrangements for the duration of the project, will be undertaken with the relevant personnel.

1.4 Materials & Plant Deliveries

The site is located on Store Street, Manchester.

Deliveries will access the site via a drive in-drive out proposal. In recognition of the residential nature of the area, management controls will be implemented to ensure the safe movement of vehicles.

Vehicular access to the site will be along Store Street and through access gates located within the area of the partial road closure. Once loading / off-loading works are complete, all vehicles will egress through an additional vehicle gate in a forward gear. Vehicles will be able to continue onto Store Street in a forward gear to turn around and exit the local area.

Vehicle deliveries will be scheduled to avoid stacking on the public highways.

1.5 Storage of Materials & Plant

All materials deliveries will be made on a 'just in time' basis to minimise the amount of material stored on site, as space will be at a premium. No plant movements will be allowed outside of the site boundary unless prior arranged with the Local Authority. Plant expected on site includes Tower Crane, excavators, dumpers, rollers, piling rig, forklift and concrete pump. All plant will be secured overnight to prevent unauthorised use.

1.6 Construction Methods

Before any construction works begin site boundaries will be established by means of solid hoardings to secure the site. Pedestrian & Vehicle access and egress gates will be installed at agreed locations.

The General construction sequence and construction methods are as follows; the building may be founded on piles and caps dependant on the level of the bedrock. On completion of the foundations, the lift pit and under slab drainage will be installed and the concrete ground floor slab cast. The frame of the building is constructed next followed by the roof covering system.

The site will be serviced by means of a tower crane with goods and passenger hoists positioned around the building, to suit the height of the structure. Once the main structure reaches the fourth floor, then the construction of the façade commences. This consists of a wall make up of SFS steel framing off the frame, with moisture board and insulation. This is then wrapped in facing brick slip envelope with aluminum windows and curtain walling. Once the building is watertight at the lower levels, then the internal fit-out works will commence.

All materials will be off loaded in a designated area and distributed vertically by the crane / hoist with horizontal loading by pallet truck.

A full size sample panel will be erected for inspection and approval by MCC, prior to progression of the façade.

1.7 The Erection & Maintenance of Security Hoarding

The site will be secured by means of a solid hoarding incorporating the necessary pedestrian and vehicle access gates to meet the sites needs and will comply with current health & safety legislation. The delivery access gates will be controlled by a gateman who will coordinate all deliveries to site. Pedestrians in and out of the main site works will be controlled allowing detailed monitoring of all site personnel. The site will also be covered by 24 hour CCTV and a static guard, if required. The hoarding will be maintained to a high standard and will be checked for stability and appearance as part of the daily Health & Safety routine and temporary works procedures. As part of the ongoing co-ordination with the local highways department, a hoarding license will be applied for.

1.8 Crane & Hoist Position

It has been considered that a tower crane will be located in the middle of the footprint of the building. The crane will service the construction of the frame and facades before being dismantled. The building will also be serviced by a goods and a passenger hoist.

Once the tower crane is erected a rescue procedure will be developed.

1.9 Traffic Management & Road Closures

There may be a temporary part road closure required for the duration of the project on Store Street. Temporary footpath closures will also be required to a portion of the pavement on Store Street. All road and footpath closures will be via direct liaison with the Local Highways Authority.

1.10 Faced Access

There will be a requirement to access the whole of the external elevations to complete the façade works. Perimeter scaffold will be erected inclusive of a protective fanlight (on the Store Street elevation) at ground floor level to protect the public and building operatives.

All façade access will be fully designed by a qualified engineer and checked by a temporary works engineer. This will be installed, maintained and dismantled by competent persons only. All works will be undertaken within the confines of the site boundary

All permits from the local authority will be in place before any work commences.

1.11 Temporary Lighting

Low level bulkhead type lighting will be provide to the perimeter of the hoarding line to reduce the effects of any dark spots caused by the erection of the hoarding. All walkways staircases and access routes will also be lit by means of temporary lighting which will be of a minimal output to minimise the effect on local residents and businesses. Task lighting will be on a need by need basis by means of fluorescent strip lights on tripods, this will be switched off during none working hours.

1.12 Access to Existing Properties & Businesses

Our current proposal for the site set up takes into account the impact on local residents and businesses. There will be minimal / no impact on the surrounding buildings.

Local Residents and businesses will always be given priority, this will be communicated to the workforce and deliveries through the induction process and toolbox talks and will be rigorously enforced. It is also our intention to communicate to local stakeholders through letter drops and communication boards with contact details of the senior staff on the perimeter of the site.

2.0 Environmental

2.1 Site Waste Management Plan

A Site Waste Management Plan will be operated to allow the recording and monitoring of all waste streams, energy consumption and FSC timber usage, against set targets, which are obtained from Industry Benchmarks. It also records waste minimisation actions; forecasts waste amounts; actual waste produced and Duty of Care notices.

All waste streams will be segregated where possible before being removed from site by a licensed carrier. All mixed waste is transported to a licensed transfer station where the waste is segregated to assist with recycling / re-use and avoidance of sending to landfill.

2.2 Materials Management

This section contains details of expectations the sustainable management of materials. This section has been developed to specifically discharge Condition 3 (b) of the planning conditions. This section will be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by MCC.

Sustainable Materials

The contractor will minimise the use of non-sustainable resources. This may include, but not be limited to;

- Minimising the use of primary materials such as aggregates.
- Reducing resource use and waste during construction, for example through appropriate prefabrication methods.
- Identifying potential for reuse of products or materials within the project.
- Identifying energy reduction and sustainability measures to be incorporated into the design of the development.
- The project will adopt an energy efficiency strategy which minimizes carbon dioxide (CO2) production and will meet the sustainability standards set by MCC.

The contractor will minimise the use of materials that:

- Contain substances known to contribute to stratospheric ozone depletion or with the potential to contribute to global warming.
- Have a hazardous nature, using less hazardous materials where viable alternatives exist.

Energy & Sustainability Strategy

The UK energy sector is currently going through significant changes. The effect of changing economic, environmental, social and public health concerns in parallel with burgeoning national and international climate change policy, has drastically shifted how electricity and heat are generated, and the way in which supply and demand are processed across the energy grid.

Decarbonising of the UK Energy Sector

The UK electricity generation sector is also undergoing a 'greening' or de-carbonisation. The past ten years has seen the amount of electricity produced in the UK from carbon-intensive energy sources (primarily coal and oil) declined sharply, while the output from renewable sources has increased more than four-fold over the same period.

This move towards a higher renewables ratio within the UK, has taken place due to governmental and local planning policies aimed at encouraging the development and construction of new renewable generation capacity and an increase in costs faced by carbon intensive energy generation.

Strategy for Reduction of CO2 Emissions

The Low Carbon Design Hierarchy - The strategy for reducing carbon dioxide (CO2) emissions and energy consumption within both the apartments and town houses will be to embrace a lean, mean and green approach as defined below:

Lean – The use of advanced building modelling software and passive construction techniques including improved insulation & air permeability.

Mean – Incorporation of high-efficiency systems and effective controls throughout the design.

Green – Incorporation of renewable energy sources where necessary to achieve CO2 targets or provide desirable benefits.

Lean – Passive Building Measures

Passive measures are to be included within the design of the dwellings to reduce energy use and the associated CO2 emissions as follows;

- Enhanced insulation to the building envelope
- Windows with high thermal insulation
- Reduced air permeability
- Maximisation of daylight

- Optimise glazing solar energy transmittance

Mean – High Efficiency Systems, Plant and Controls

High efficiency systems, plant, controls and equipment will be incorporated as follows;

- Energy Efficient LED Lighting
- Lighting Controls to Limit Energy Use
- Electric Panel Heaters
- Ventilation Systems Utilising Heat recovery
- Water management – low water capacity WC's and flushing units, low flow taps/ showers, Dual flush

Green – High Efficiency Systems, Plant and Controls

The design will place particular emphasis on passive energy saving through careful design of the building and building services. To complement the energy saving the following renewable, low carbon and sustainable measures will be included within the scheme design.

- Electric Vehicle Charging - provision located at ground floor within the development. Current provision has been made for 50% of the car parking spaces to be supplied by electric vehicle charge points at the date of first occupancy.
- Cycle Storage - incorporated into the scheme to encourage usage by prospective residents. Cycling is considered the low-carbon transport of the future and will be a major component of Greater Manchester's move to become a zero-carbon city.
- Photovoltaics (PV) - Electricity generated by the PV array will be utilised in the apartment block to reduce consumption of grid electricity. It is anticipated there will be sufficient space to support a PV array at roof level on the apartment development.

2.3 Environmental Impacts

Environmental Impact Assessments are carried out on projects to identify any likely aspects and impacts on the environment the project may have. This assessment will include for necessary control measures for implementation to eliminate / reduce such impacts.

2.3.1 Air Quality Plan

The most significant risk to air quality from the construction works is during the ground works period of the development from the process and the equipment used to carry out the works. Dust generated through all work activities will be controlled at source, so far as is reasonably practicable, by a recognised method and in line with legislative duties.

2.3.2 Control of Dust & Dirt

To control excessive mud being transferred from the site to local roads, it is proposed to use a wheel wash during the construction of the structural frame. In addition to the above, a road sweeper will also be utilized during the remaining period of the works.

Dust generated through all work activities will be controlled at source, so far as is reasonably practicable, by a recognised method and in line with legislative duties.

2.4 Recycling of Waste & Demolition Materials

All waste streams will be segregated, where possible, prior to being removed from site by a licensed carrier. All mixed waste is transported to a licensed transfer station where the waste is segregated.

2.5 Human Impact

Construction works can have an impact upon the local environment and the residents of local communities. As such, the following processes and procedures would be implemented; in addition to the above controls to minimise the effect the development has on the local community.

The site will be registered with the Considerate Constructors Scheme. The intention is to communicate to local stakeholders through letter drops and communication boards with the primary personnel contact details on the perimeter of the site and details of how to raise any concerns the local community may have during construction. All site staff and contractors will receive a site induction which will include a section on reducing the impact on the local community.

Local residents will be invited to advise of any concerns they may have and an open-door policy will be endorsed. A Community Engagement Plan will be developed at pre-construction stage and will be fully implemented through the construction phase and beyond, with a strong proactive attitude being encouraged.

3.0 Programme

3.1 Construction Programme

The proposed draft outline construction programme for the development runs for 70 calendar weeks with a proposed start date in Q1 2024.

In advance of commencing any of the façade works, it's proposed that suitable time will be provided for MCC to approve the proposed extent of the required materials sample panel, with subsequent time to inspect/ comment and approve the materiality and quality of the panel, in advance of commencing the façade.