Construction Environmental Management Plan for works at:

Former Adur Civic Centre.

Ham Rd. Shoreham-by-Sea.





Introduction:

The Construction Environmental Management Plan (CEMP) sets out the responsibilities with regard to compliance and legislation and to implement any mitigation measures.

This CEMP details management measures to minimise environmental impact from the construction phase of the development.

Furthermore, it provides a framework within which the measures will be implemented throughout the project.

The CEMP provides project-specific management measures and is a dynamic document which should be reviewed if activities or conditions onsite change that may influence management measures. This document has been developed to avoid, minimise and mitigate against any construction effects on the environment and surrounding community. It should be considered a living document with reviews being undertaken at set intervals and new information added as appropriate.

For the purposes of this document, the working area is defined as any area where there will be a requirement for temporary or permanent works to facilitate the construction of the development. This includes areas required for access, temporary construction and temporary storage areas.

This CEMP examines the following aspects with relation to the project execution:

• Vehicular Congestion

• Community

• Noise

• Dust & Air Quality

• Light pollution

• Water Consumption, Drainage & Environment

• Waste

• Sustainability

Project Overview:

The site is located between Brighton Road and Ham Road in Shoreham-by-Sea, with the Site Entrance situated off Ham Rd. Once developed this site will provide 2 new Blocks with 159 Residential Units, comprising a minimum of 30% Affordable Housing, Class E Commercial Floorspace and associated Parking and Landscaping.

The existing site is the location of the former Adur Civic Centre and will be redeveloped into a new mixed-use scheme, providing both Residential Apartments on the upper floors and Commercial Units on the ground floors of each Block. It is located on the busy A259 coast road, Brighton Road which leads east towards Albion Street and Kingsway towards Brighton city centre and west into Shoreham High Street. The north of the site is bounded by Ham Road, which leads into Brunswick Road and to the East side of the site is Eastern Avenue and adjacent to Eastern Avenue is Shoreham Skatepark. On the west boundary is the Duke of Wellington Public House.

The site is well connected, with bus stops immediately adjacent to the northern and southern boundaries. To the northwest is Shoreham railway station, less than 10 minutes' walk away.

The site will be fully enclosed by 2.4m height temporary hoarding panels to prevent unauthorised entry.

Site security will be covered by a CCTV system that will be externally monitored. Exact timing of the implementation of this system will be at the discretion of PMC.

The scheme will be registered under the considerate constructors' scheme with site contact details clearly displayed on the site boundary. In addition, the site manager will operate an open-door policy to all neighbouring residents.

An Introductory letter will be sent out to neighbouring properties informing them of our proposed start on site approximately 2-weeks prior to any works commencing.

It is the main contractors' intention to build relationships with the neighbouring residents as to ensure that the minimum amount of disruption is caused to them during the construction programme.

All drivers and qualified banksmen will be made aware of the risks of pedestrians, emerging and walking in the close proximity of the site entrance.

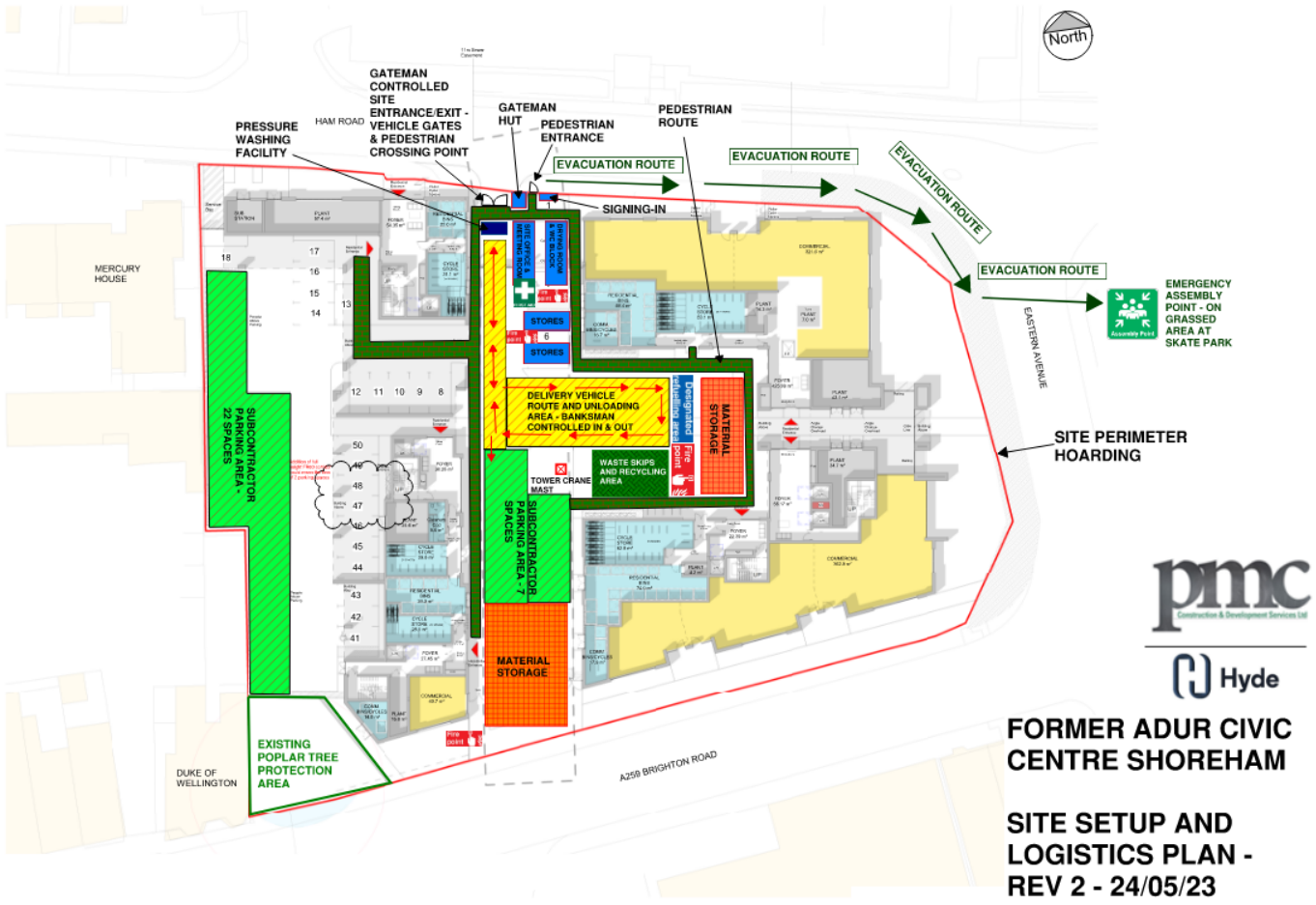
Key Site Personnel

Director	Steve Cripps
Construction Manager	Lee Howard
Project Manager	Mick Hopper
Technical Consultant	Andrew Bell
Site Manager	Steve Zaffaresse

Banksman (Orange Tabard) to be confirmed by the Site Manager on day of induction

The site management reserve the right to stop work where it is deemed unsafe work practices are taking place.

Site Logistics / Construction Management & Phase Plan:



Note: During the construction process, parts or aspects of the plan may need to be altered as required.

Construction Strategy, Phasing and Environmental Impacts:

Strategy:

The strategy is to build out of the site, with both Block A and Block B concurrently in one phase.

The services will be accommodated within service ducts constructed along with drainage into each block as part of the construction setup period with the build proceeding with Block A then Block B and the external landscape areas will follow-on, along with the approved hard landscaping and planting scheme etc.

Construction work within each Block will proceed as follows:

- Reinforced Concrete Frame
    - Environmental Impact Considerations include
        - Dust
        - Noise / Emissions from possible onsite machinery
        - CO2 and Carbonates from curing concrete
        - Waste

- Metsec Inner Skin (MMC)
    - Environmental Impacts Considerations include
        - Noise / Emissions from possible onsite machinery
        - Waste
        - Dust

- Windows / Door installation
    - Environmental Impacts Considerations include
        - Noise / Emissions from possible onsite machinery
        - Waste

- External Brickwork
    - Environmental Impacts Considerations include
        - Dust
        - Noise / Emissions from onsite machinery
        - Co2 and Carbonates from cement
        - Waste

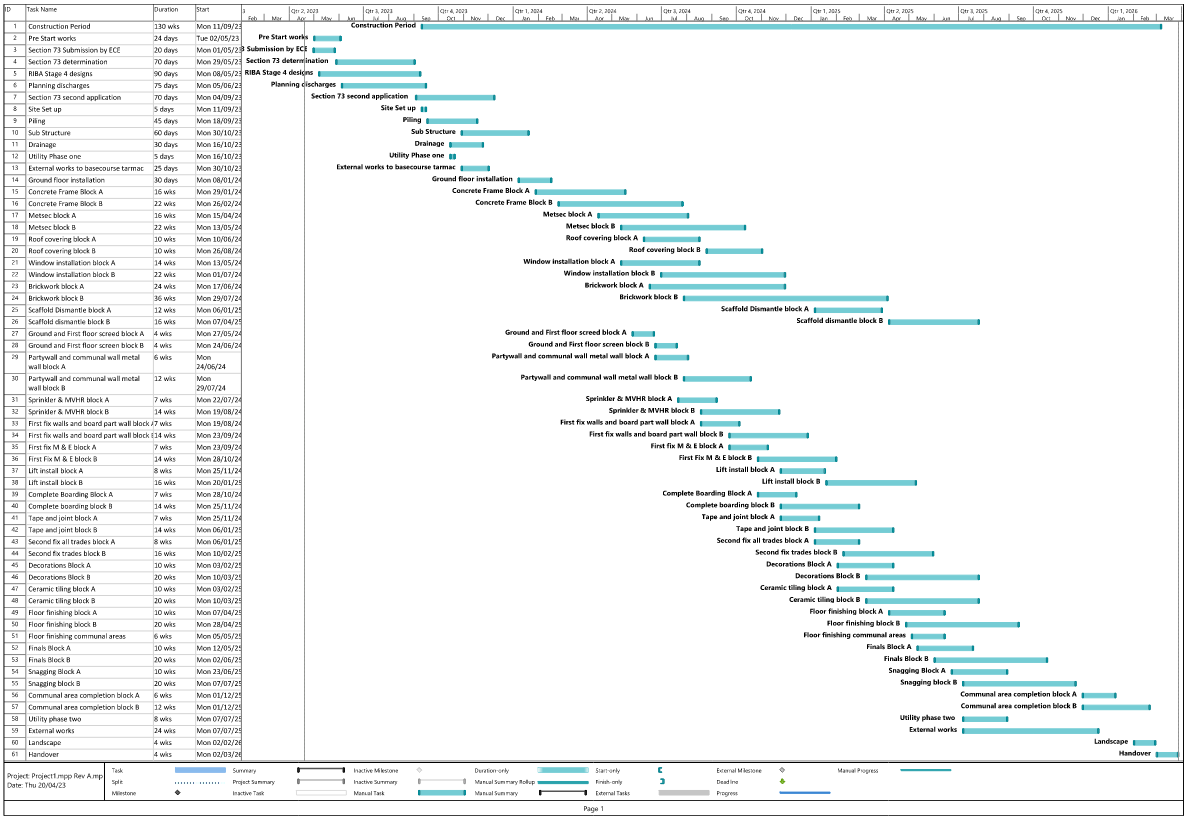
- Secondary Steelwork / Balconies
    - Environmental Impacts Considerations include
        - Noise / Emissions from possible onsite machinery
        - Waste

- First Fix Electrical and Mechanical
    - Environmental Impacts Considerations include
        - Noise / Emissions from possible onsite machinery
        - Waste



- Roof Covering
    - Environmental Impacts Considerations include
        - Chemical
        - Noise
        - Waste
- Drylining / Plasterboarding
    - Environmental Impacts Considerations include
        - Dust
        - Noise / Emissions from onsite machinery
        - Waste
- Second Fix Electrical and Mechanical
    - Environmental Impacts Considerations include
        - Noise / Emissions from possible onsite machinery
        - Waste
- Finals / Finishes
    - Environmental Impacts Considerations include
        - Noise / Emissions from possible onsite machinery
        - Waste
        - Dust
        - Chemical

The courtyard, parking and external landscaping, will be completed following the completion of Blocks A and B.



Mitigation measure for environmental impacts

<u>Vehicular Congestion (Community Consideration):</u>

Planning Permitted working hours are from 08.00 - 18.00 Monday to Friday; and 08:00 – 13:00 on Saturday. There shall be no working on Sundays or public holidays.

All delivery vehicles will be required to follow the agreed delivery route as part of the contract to supply materials. Major roads where ever possible are to be used and minimise use of quiet / narrow residential roads surrounding the site. All deliveries will be made by Rigid Vehicles or smaller delivery vans, to facilitate ease of access onto Site with minimal or no disruption to local traffic flows. No deliveries will be planned with Articulated Vehicles.

Materials are to be scheduled for delivery on a just in time basis. The estimated number of Delivery Vehicles expected throughout the duration of the Project is approximately 1965no.

All delivery vehicles will make contact with Site Management before arrival. Rigid vehicles are to find a safe parking area on approach when approximately 10 minutes away from the site. The Site Manager will then arrange for a banksman to be available to coordinate vehicle movements into the site. Delivery vehicles must not enter the site until a banksman is present.

All drivers making deliveries to the site must be in compliance with current road regulations and hold the appropriate licences for the vehicles they are driving.





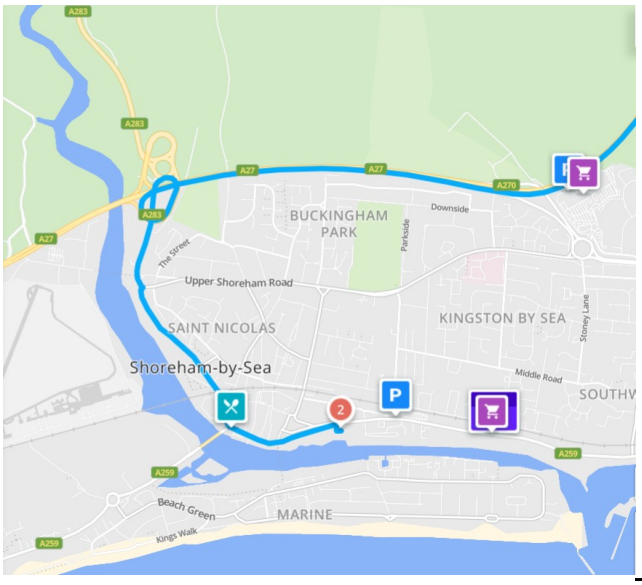


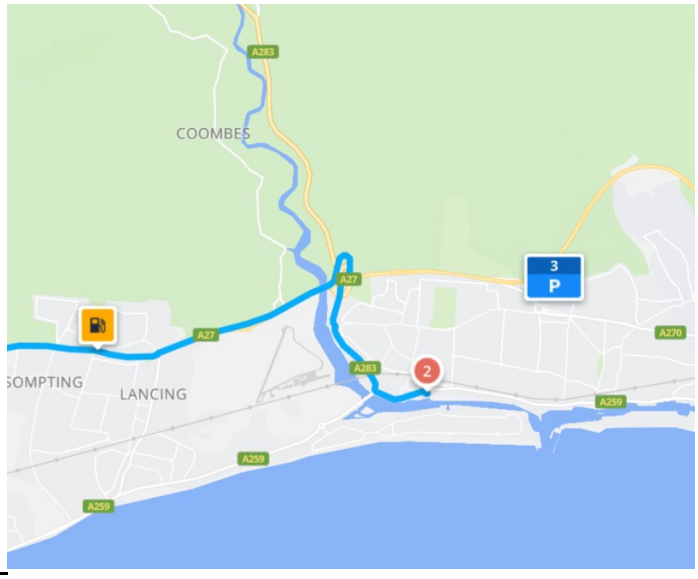

All loading and unloading will be within the confines of the site and within the hoarding line. No materials will be unloaded direct off the highway except with prior arrangement and within the confines of a pre-approved road closure area in Ham Road. If required this will be shown on a revised construction management plan, in accordance with WSCC Highways approved traffic management.

Site Management and Subcontractors/Trades, will have allocated parking on site for 29no. vehicles for as long as the Construction Programme and works sequence allows. Sub-contractor / trades will be requested not to park vehicles in the surrounding roads near the site, where this is likely to cause a nuisance to local residents.

On Approach to the Site

Delivery approaches are to avoid Residential Streets and Shopping Areas where possible, thereby reducing the potential impact on local Residents and Businesses and adding to further congestion and increased pollution in the local area. Vehicles approaching from the East and West, will use the A27 then A283 and A259. Vehicles approaching from the North, will use the M23/A23 then A27/A283 and A259. These routes will be communicated to all of our Supply Chain, to ensure we keep any disruption to a minimum.





Community Consideration - Communication:

PMC will operate a pro-active approach and contact local community representatives, either in writing or a personal visit, if noisy, vibrating or dusty works are to be conducted.

Quarterly Resident Liaison Meetings will be held in the Duke of Wellington Public House.

Dates of visits and communication will be documented in the site diary.

A Community Notice Board will be installed on the Site Boundary Fence.

Regular Letter drops throughout the lifetime of the Project, notifying of upcoming works.

Phone number/s to report complaints

Noise, Dust & Air Quality:

Generic control measures operated by PMC:

PMC Construction & Development Services Ltd will adopt best practice policies in relation to air (dust) pollution.

Best practice is defined in section 72 of the control of pollution act 1974 and section 79 of the Environmental Protection Act 1990 to reduce noise and vibration to a minimum.

All vehicles and mechanical plant shall be fitted with effective exhaust silencers and shall not use red diesel with high Sulphur content.

All compressors shall be 'sound reduced' models any pneumatic percussion tools shall be fitted with mufflers or silencers of a type recommended by the manufacturer.

Machines in intermittent use shall be shut down when not in use.

All plant shall be regularly maintained and documented weekly plant inspection sheets kept by the site manager.

Stationary plant is to be sited away from noise sensitive areas where practicable. Plant which emits noise predominantly in one direction shall be orientated so that this noise is directed away from such sensitive areas.

No plant will be left working outside normal working hours.

Tower Cranes used on the site will be all electric.

All site accommodation and welfare will use mains electric and will not require generators

Specific site processes and mitigation measures:

- Exposed site boundaries to the site will be fully hoarded
- Pressure washing of delivery vehicle wheels will be undertaken as necessary, to ensure that they do not deposit mud and/or debris from the Site onto the local roads
- The Site will install a temporary Haul Road as soon as possible, to provide a clean running surface for Delivery Vehicles and Plant
- The perimeter fence on the West at the Duke of Wellington and Mercury House boundary, will be fitted with Debris Netting to provide additional screening
- Construction delivery traffic will be routed to avoid Residential and Shopping Areas where possible
- Methods of construction are traditional, reinforced concrete frame with metsec inner skin therefore minimising on site processes time on site and improved productivity, which translates to a reduction in noise and dust pollution from not having to mix mortar on site etc.
- Materials are scheduled for delivery just in time and distributed using on site electric tower cranes or on limited occasions when required via mobile crane site haulage routes and placed onto staged landing boards specific to the floor level to reduce material cross handling
- There will be a hazard information board listing the permitted plant activities of the day and a cross check at induction to ensure the plant being used is as that identified on the RAMS
- Use of ready-mix concrete to reduce dust and CO2 / Carbonates. Small quantities of concrete site mixed in enclosed areas to avoid generating dust and reduce traffic environmental impacts by use of part loads
- Minimise cutting and grinding on site by good design and material procurement



- Cutting Areas for Bricks/Blocks/Paving etc. will be setup on the Eastern side of the Site, away from noise sensitive properties
- Where cutting on site is required the use of equipment with dust extraction and wet cut will be used where reasonably practicable
- Spray water during cutting of paving slabs
- Damping-down earthworks during dry weather
- Store dusty materials away from site boundaries, main site access roads and downwind of sensitive receptors
- Locate stockpiles out of the wind (or provide wind breaks) to minimise dust generation

Preventing Emissions and Odours:

Plant & Vehicles

- Plant and vehicles should be maintained in good working order
- Dedicated Subcontractor/Trades parking will be setup on site
- Control deliveries to minimise queuing
- Ensure engines are switched off when not in use
- Keep refueling areas away from the public
- Construction vehicles to use low Sulphur fuels and use silencers

No Fires on Site

- There are no exceptions

Waste Storage

- Use of covered containers for waste wood, inert materials, light mixed packaging, Gypsum skips
  Hazardous waste separated using specialist washout systems
  Organic waste (e.g., weeds & vegetation) to be cleared at site setup and remove frequently as required

Chemicals on Site

- COSH / Construction policies should remove the likely hood of corrosive chemicals on site, however where required policies to take account of wind conditions when planning activities likely to emit aerosols, fumes, odours or smoke
- Position site toilets to enable mains drain connection with limited use of effluent tanks.

Noise Monitoring and Sampling:

The site will monitor the noise sensitive Residential west boundary and record sound levels between hours of 08.00hrs and 18.00hrs Mon-Fri and between 08.00hrs and 13.00hrs on Saturdays during noisy works.

Sampling will record a daily LAeq level, which will determine the noise level produced from Site activities. This will be compared against the confirmed baseline ambient noise data, to ensure that the construction site noise levels do not exceed the target LAeq of 75dB.

If these noise level exceed levels noted above on two consecutive days, PMC will review works procedures and employ additional mitigation measures to reduce the noise.

Machines and work equipment will be regularly inspected and suitably maintained to ensure they are not excessively noisy. Any defective equipment will be removed from site.

Regulation 6 of the Control of Noise Regulations 2005 general provisions of prevention, as expressed in ACOP 108, will be adhered to during the construction period.

Instrumentation:

The instrumentation system will be designed to determine equivalent continuous A-weighted sound pressure level. The instrumentation will conform to the requirements for integrating averaging sound level meters - Type 1 as specified in BS 7580-1:1997, or Type 2 as specified in BS 7580-2:1997, with verification of conformity being undertaken by periodic testing in accordance with these standards. Alternatively, instrumentation conforming to BS EN 61672-1:2013, Class 1 or Class 2, will be used and be periodically tested in accordance with BS EN 61672-3:2013.

Light Pollution (Community Consideration / Environmental):

Construction Lighting

In determining the lighting arrangement on site, consideration will be given to residents and other sensitive receptors that may experience a nuisance of light.

Where appropriate, measures will be implemented to reduce obtrusive light.

Where possible a daylight only construction schedule will be adopted to minimise adverse lighting. It is unavoidable that construction work may require work during the hours of twilight or darkness in consideration of shorter daylight availability during winter months.

Where appropriate the following measures will be considered for implementation

• Dim or switch off lights where it is safe to do so • Use specifically designed equipment • Position lights sensibly.

Note: It is not anticipated that any construction works will be carried out at night

Water Consumption:

Effective construction management can deliver major savings in water use, water supply and wastewater treatment. This can be achieved without compromising the performance and user acceptability of the project.

Typically, the use of water will take place in the following areas.

Dust suppression • Vehicular dust suppression • Stockpiles of soil • Demolition operations

Cleaning • Road sweepers • Boot wash • High pressure wheel washing

Domestic and Welfare facilities • Toilets • Food preparation • Canteens • Drinking water

Construction • Mortar mixing • block work • screeding • plastering • Cleaning

The project should where appropriately utilise the following examples of best practice, or equivalent.

Enable monitoring of water use: e.g. install meters which are easy to read, or pulsed meters for connecting to a Building Management System; or sub metering (pulsed) of areas of major water consumption.

Ensure all areas of site water consumption are quantified. • Consider splitting welfare and “site-based” water consumption. • Record site water consumption on a regular basis for review at project progress meetings • Regular meter readings should be taken from all meters, submeters and metered standpipes (weekly is recommended)

Minimise the risk of leakage: leak detection equipment (including pulsed meters for regular monitoring); ensure valves and overflows are visible for early detection of water loss and easy to access for maintenance.

Influence user behaviour: Creating a culture that changes attitude and behaviour to accepting ownership of water efficiency is fundamental to improving the use of water in an efficient manner.

Good housekeeping (e.g. reporting/repairing leaks, turning off taps which are not in use, and generally using water in an efficient manner) can assist the site reduce its overall water use. The provision of information on appropriate use of fittings and appliances; awareness raising of the costs and environmental importance of water efficiency via Tool Box Talks; guidance on processes for identifying and reporting water leakage / poorly-performing fittings; method for providing feedback to building occupants on water.

Community Consideration – Construction Waste:

The Construction Site Waste Management Plan (SWMP) will be completed and maintained on site by the Project/Site Manager. It should be made available to all personnel on site as appropriate. The SWMP data sheet template to be used can be found on PMC's document storage portal.

Other industry guidance such as the CIRIA Waste Minimisation in Construction will be utilised as required. This is available online at www.ciria.org.

Site waste is also monitored and all waste generated and removed form site will be entered into the BRE Smartwaste system online.
For further information on this please visit http://www.bresitesmart.com/products/smartwaste/

Quantities of general construction and demolition wastes are made up of waste such as wood, packaging, metals, plastics, bricks, blocks, canteen waste, hazardous waste (e.g. oils, paints and adhesives), site clearance and residual waste which are generated during the construction phase.

The Waste Hierarchy which should be implemented on site is as follows:

• Prevention/Reduction: • Re-use: Products and material can sometimes be used again, for the same or a different purpose. • Recycling and composting- Resources can often be recovered from waste. • Energy recovery- Value can also be recovered by generating energy from waste. • Disposal- Only if none of the above options offer an appropriate solution should waste be disposed of.

Use toolbox talks and posters to keep waste 'on the agenda' for all.

Work with suppliers to reduce packaging as Packaging is a major contributor to waste.

Site Waste Management Plan (SWMP)

The SWMP will identify the personnel and their roles and responsibilities. This includes maintaining records of waste transfers. The appointed site manager should also ensure compliance within any permits and record keeping. PMC will ensure all controlled waste is managed in accordance with the following Duty of Care requirements: • Ensure all waste is correctly assessed and categorised; • Prevent the illegal deposit or handling of controlled waste by any other person; • Prevent waste material from escaping our control;

Only transfer controlled waste to an "authorised person" (Waste Collection Authority, the holder of an Environmental Permit, Registered Water Carrier or Waste Disposal Authority).

- Ensure that non-hazardous waste is transferred under a Waste Transfer Note which must be retained for two years.
- Hazardous waste is moved under a waste consignment note that provides a clear description of the waste material. The consignment note must be retained for three years.
- The waste is the responsibility of the company until it has been fully recovered or finally disposed of.



- All suppliers on the approved supplier list will have undergone an initial desktop duty of care audit and will be risk rated. Risk is determined based on spend with any one supplier and local knowledge or expertise.

Sustainability:

- Material Selection
  - Use sustainably source materials and supply chains
  - Prefabricating Materials in Controlled Environments
    - Constructing as much of a structure in a controlled environment as possible has improved the quality of buildings and resulted in less trash

- Reducing construction waste
  - Accurate measurement and ordering to reduce wastage
  - Championing changes in the design specification which reduce waste and materials use
  - Optimisation of the design to ensure matching building and product dimensions
  - Reducing wastage allowances in expectation of SWMP actions achieving lower wastage rates on high volume/value components
  - Selecting durable components with low waste over their life-time
    - Inherently lower energy/carbon intensity in production than their conventional equivalents (e.g., organic materials in place of highly processed materials);
    - Lower transport-related carbon emissions (shorter transport distances or more efficient delivery strategies – e.g., flat-packing);
    - Higher recycled content (or reclaimed products)
    - High levels of durability and relatively low through life maintenance

- Use of local labour.
  - Tender all works packages to local companies wherever possible
  - When tendering work packages, we have a preference weighted towards the use of local labour/suppliers.
  - Favour subcontractors who can demonstrate a commitment to training and local employment
  - Work closely with our sub contract procurement teams to identify opportunities for apprenticeship weeks during the design development and construction of the schemes
  - Work with our sub-contractors to maximise the use of local labour, provide opportunities for NEET groups (Not in Education, Employment, or Training), as well as link with local initiatives that have been established to support training and employment opportunities
  - Carry out “Meet the Buyer” events for local companies which will increase the awareness of the opportunities available throughout the contract and link ourselves with local businesses



Summary of Key Aims

Minimise Vehicular Congestion

- Minimise impact on the community and environment

A Construction Site with minimum impact on the community

- Core working hours are kept to 0800 to 1800 on weekdays and 0800 to 1300 on Saturday.
- The site is secure and prevents unauthorised access, especially by children.
- The site is set up and serviced so as to minimise impacts.
- Emergency access, procedures and fire prevention measures are in place.
- The use of energy is minimised.

Health and Safety

- Public protection around the site is ensured.
- A properly managed site with correct health and safety procedures are in place.

Traffic and Transport

- Works to roads and footpaths offer safe diversions or similar provisions.
- Access and egress routes are designated and safe pedestrian routes for access and egress.
- Deliveries restricted to Rigid Lorries or smaller delivery vehicles only
- Lorry parking within the vicinity of the construction site is controlled.

Noise and Vibration

- Noise is kept to a minimum to avoid nuisance,
- Selection and use of noise reducing equipment to be employed as best practice techniques.
- Vibrations to be closely monitored.
- No noisy works or the starting of plant before 7:30am on Mon – Friday and 8am on a Saturday, no works on Sunday.

Dust and Air Pollution

- Dust is to be minimised.
- Asbestos is disposed of as prescribed by Regulations.
- Air quality is maintained.
- No fires on site will be permitted.

Waste Disposal and Re-use

- Arrangements for storage and disposal meet all legislative requirements.
- Contaminated wastes are handled and disposed of safely.
- Construction materials are re-used / re-cycled.

Protection of Water Quality

- The disposal of seepage, wastewater and groundwater is controlled.
- Measures are in place to avoid the spillage of contaminants into waterways/water courses.

Community Communication

- Promote community awareness and participation in meeting the goals of the CEMP.

Environmental Impact

- Reduce environmental impact by meeting the goals of the CEMP.