

Construction management plan

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Introduction

This Construction and Environmental Management Plan (CEMP) has been prepared on behalf of Waterfall Planning Ltd (the 'Applicant'), and describes how the construction of the proposed development at Hampton Waterworks will be managed in order to eliminate, mitigate or minimize the impact of demolition and construction activities on the environment and the local community.

The CEMP is a live document and will be updated with greater detail through the duration of the project with method statements, logistics plans and site notices/administrative documentation etc. all of which will be available for inspection on site.

Location

Upper Sunbury Road, Hampton TW12 2DS

The development site is located within the authority boundary of the London Borough of Richmond Upon Thames and is bounded by Upper and Lower Sunbury Roads to the north and east. To the West lies existing residential development as well as the Water Treatment works reservoirs and buildings which are also found to the South of the site. The site currently houses Grade II Listed former waterworks buildings – Karslake and Ruston & Ward - comprising former engine houses with a single storey blocks.



Project description

The development proposes to refurbish four existing buildings into a mixed-use development consisting of 36 residential units along with office spaces. The key elements of the scheme are as follow:

- 16 no. of 1-bedroom apartments;
- 11 no. of 2-bedroom apartments;
- 7 no. of 3-bedroom apartments;
- 2 no. of 4-bedroom apartments;

- 306 m2 commercial area; and
- 39 no. car parking spaces.

Site management

A contractor has not yet been appointed for the project.

Prior to the commencement of works on site a Project Manager will be appointed.

The Project Manager will assume the duties of a Construction Liaison Officer to ensure that the day to day contact for environmental related matters with adjacent stakeholders are addressed.

Prior to the commencement of works a Principal Designer will be appointed.

It will be a requirement that this site is registered with the Considerate Constructors Scheme (CCS) and, in accordance with their requirements, site contact details will be posted at all site entrances.

Working Hours

Normal working hours will apply to all demolition and construction activities including the use of plant and machinery necessary for implementation the Project. These will be:

- 08.00 – 18.00 Monday to Friday; and
- 08.00 – 13.00 Saturdays

No demolition or construction activities will take place on Sundays or Bank Holidays without prior permission of the local authority.

Parking

The use of public transportation will be encouraged for all operatives and this policy will be communicated to all involved members of the project. The use of public transport will also be reinforced as part of the site induction process.

It is acknowledged that parking in the streets surrounding the site will be a major concern for local stakeholders, in order to mitigate the impact to the local area, the following parking policies will be considered:

1. On Site parking

Some parking on-site will be available during construction.

2. Off-Site Parking

Parking off-site during both demolition and construction phases will not be allowed in any circumstances. This will be communicated to everyone involved during the procurement and the production stage of the project.

In the event that any complaints are received these are to be immediately notified to site management, who will take the appropriate action and ask for offending vehicles to be moved.

Vehicles, Plant and Equipment

All works will be carried out in accordance with the 'Best Practice' requirements noted in BS 5228-Part 1:2009 "Code of Practice for Noise and Vibration Control on Construction and Open Sites". Noisy operations shall be kept to a minimum in frequency and duration.

An inventory of all NRMM will be required to be kept on-site stating the emission limits for all equipment – Refer to <http://nrmm.london/nrmm> for more details.

All machinery will be regularly serviced, and service logs kept on-site for inspection. This documentation will be made available to local authority officers as required.

Vehicles shall be managed to allow safe movement on site. Vehicle movements shall be minimised as much as possible.

All plant and vehicles will be regularly checked to ensure they are in good working order/well maintained. Plant and vehicles will be switched off and engines will not be left running when not in immediate use.

Static plant and machinery, such as pumps, compressors, generators etc. will be positioned on impermeable drip trays at all times while on site.

The refuelling area will be bunded to prevent drainage of any spillage into a watercourse, and the ground surface must be covered with an absorbent material such as sand or woodchips. The requirements of the Pollution Prevention Guidelines PPG2: Above Ground Oil Storage Tanks must be complied with. All plant and equipment will use biodegradable hydraulic oil.

Communication Strategy and Good Neighbour Policy

A notice board will be posted on site, adjacent to site access points, giving details of site contacts in the case of emergencies and to allow local residents to contact the site manager where there are any concerns regarding the development construction works.

The details will also be given to the local authorities and will be available online. These communication facilities will be available at all times i.e. '24/7'.

In the case of emergencies, the response by the site manager to the emergency situation will be immediate. In other cases, the response will be as soon as reasonably practical but normally not longer than 24 hours during weekdays.

Prior to the commencement of any works a Newsletter will be issued to all local residents.

Subsequent newsletters will be issued on a monthly basis and at times when specific operations or vehicle movements are anticipated.

The site will be registered with the Considerate Constructors Scheme.

If necessary neighbourly meetings will be arranged to further inform the local neighbourhood of project developments and progress.

A Project Office will be established at the site.

Construction Works and Programme

The construction programme will be developed in greater detail post-planning approval, once a contractor has been involved.

Although the project will be completed in one Phase there is two distinct Stages for the works:

- Stage I Enabling, Demolition & Restoration Works
- Stage II Construction Works delivered in four phases
 - Phase I Groundworks / Substructure,
 - Phase II Construction of Structural Frame,
 - Phase III Internal Fit-Out and commissioning,
 - Phase IV External Landscaping.

Enabling Works and Hoarding

The first activity on site is the erection of Hoarding. The height of the hoarding will be approx. 2.4m and will secure the site along Upper Sunbury and Lower Sunbury Roads from unauthorised access.

Applications will be made to the relevant department of Richmond Council.

Prior to the submission of a licence application arrangements will be made to meet with a representative from Richmond Council to discuss and agree hoarding locations.

24 Hours security will be present on site.

Temporary services connections will commence at the same time as existing services are to be isolated and disconnected. Temporary welfare facilities will be placed on site to provide accommodation and welfare to project's team.

Stage I – Enabling, demolition & restoration

The existing buildings are currently vacant and require a full strip out internally back to the original heritage façade and restoration of that heritage stone and brickwork.

Stage 1 work on the existing buildings will commence in four phases:

1. Soft strip
2. Asbestos removal
3. Demolition
4. Restoration

Stage II – Construction

The Construction works of the development will delivered in four phases as follows:

- Phase I Groundworks
- Phase II construction of Structural Frame and External Envelope
- Phase III Internal Fit-Out and commissioning
- Phase IV External Landscaping

Logistic and Traffic Management Plan

The site consists of two large Listed Waterworks buildings, with two semi-detached cottages and the storehouse in between. Site access is provided off of Upper Sunbury Rd through existing, but disused, vehicle routes – as shown on the proposed site plan.

Highways

The site is encircled by:

- Upper Sunbury Road to the North. Upper Sunbury Road is a two way road
- Lower Sunbury Road to the East. Lower Sunbury Road road is a two way road
- Thames Water access road is part of the south side of the site, with reservoirs to the south of the site
- Residential cottages to the west

Site Accommodation

Site accommodation will be inside the project's boundaries. Site accommodation will utilise prefabricated cabins to provide accommodation and welfare facilities.

Traffic Safety

The safety of pedestrians, cyclists and other road users is of paramount importance. As such all hauliers within the project supply chain will be required to demonstrate compliance with best practice for road safety within London and particular be registered with FORS. Traffic management will be planned in accordance with the principals of CLOCS.

Delivery drivers will also be expected to have completed the Safer Urban Driving Course.

The safety of pedestrian and maintaining efficient traffic flows will be achieved through the following:

- Clear signage
- Traffic management systems
- Traffic marshals positioned outside the site at all times during vehicle movements to ensure that the TMP is fully implemented and adhered to
- Control of vehicle movements to and from site through logistical management procedures
- Close liaison at all times with the Richmond Council Highways Department
- Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the Local Authority, where applicable).
- Produce a construction logistics plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking and car-sharing).

Traffic Management

Anticipated Vehicle Movements

Key to the success of any traffic management plan is knowing the size of delivery vehicles and the frequency of deliveries and collections.

Numerous types of delivery vehicles will be used to bring materials to and from the site of which listed below are anticipated approximate details:

- Roll on Roll off skips 7.50m long – 2.4m wide
- 8 yard skips 7.00m long – 2.4m wide
- 8 wheel tipper lorry 9.80m long – 2.45m wide (Demolition and muck away)
- Ready Mix Concrete Lorries 8.25m long – 2.45m wide
- Flatbed rigid Lorries 8.50m long – 2.45m wide (General Materials)
- Articulated Lorries Varies depending on load (Plant and larger materials)

The frequency of vehicle movements will be dependent upon the stage of the works.

Deliveries

Deliveries will commence outside of the morning and afternoon school run peak periods.

Consultation with local schools will determine the exact peak periods, in general no deliveries will commence between 8.00 to 9.00 AM and 3.00 to 4.30 PM.

Noise, Dust and Vibration

All works will be carried out with reference to the following documents:

- BS 5228 – 1:2009

- The Control of dust and emissions from during construction and demolition – Best Practice Guidance – (Mayor of London – July 2014)
- Guidance on Air Quality monitoring in the vicinity of demolition and construction sites – (Current Edition from IAQM)
- Guidance on the Assessment of dust from demolition and construction sites – (Current edition from IAQM)
- BRE Pollution Control Guides Parts 1 – 5
- PPG2 – Above Ground Oil Storage Tanks
- PPG 6 – Working at Construction and demolition sites – (withdrawn but still referred to)
- PPG 21 – Incident Response Planning

Noise, dust and vibration will be controlled and limited, so far as reasonably practicable and in accordance with Best Practice procedures as detailed within attached documents, so those sensitive receptors are protected from excessive noise and vibration arising from construction activities.

The following measures will be used, where appropriate:

- Hydraulic plant will be used in preference to pneumatic plant where possible
- Use of hydraulic grabber / jaw equipment as an alternative to percussive breakers where feasible;
- Working duration during the day to be limited to reduce the noise level potential when working at the nearest distances to the site boundary or at other times when activity is required to be intense;
- Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.
- Plant and equipment will be maintained in good working order and fitted with silencers and acoustic panels where appropriate
- All NRMM plant will be recorded on the NRMM Register
- All plant will be shut down or throttled back between periods of use
- Methods used for concrete breaking and demolition should be carefully considered, non-percussive means should be used where possible
- In sensitive locations, acoustic enclosures may be required for fixed plant such as generators
- Establish noise and vibration limits to facilitate an impact assessment outcome of Minor adverse effect (not significant);
- Potential trial works prior to implementing proposed working methods which are monitored for noise and vibration as necessary, to confirm whether the method is appropriate;
- Continuous noise and vibration monitoring as appropriate of nearest working activity to sensitive receptors or for potential intense working periods;
- Crushing concrete, grading and screening of materials to be located as far as practically possible from noise sensitive receptors; and
- Use of local spoil piles to provide temporary noise screening of crushing concrete, grading and screening of materials working area. Establish noise and vibration limits to facilitate an impact assessment outcome of Minor adverse.
- Use of quietest available plant and minimise working duration of the plant;
- Regular communication between the contractor and affected neighbours so as to clearly understand the anticipated level and duration of noise and vibration throughout the construction period. Where excessive noise or vibration cannot be avoided, adjacent neighbours should be notified as to when such works will be undertaken and the times adhered to. Temporary re-housing could be considered if noise or vibration will be unavoidably significant;
- Reduce the potential for double handling of materials and overlapping of activities;
- Loading and unloading of vehicles, dismantling of site equipment such as scaffolding or moving equipment or materials around the site are to be conducted in a manner as to minimise noise generation;
- Vehicle engines and any other compressor etc. should be switched off when not in use;

- The use of reversing beacons shall be avoided as far as is practicable with safe operating practices;
- Compressors and generators should be 'sound reduced' models, fitted with properly lined and sealed acoustic covers, to be kept closed when the machines are in use;
- All percussive tools shall be fitted with mufflers or silencers of the type recommended by the manufacturer;
- All machines in intermittent use shall be shut down in the intervening periods between works if possible, or throttled down to a minimum;
- Where possible, equipment should ideally be powered by mains electricity in preference to locally powered sources such as diesel generators. Hand tools to be electrically powered;
- To minimise breakout from fit-out activities as far as is practically possible, ensure that all external windows and doors to the existing building are kept closed;
- No radios or similar noise-producing entertainment devices; and
- Contractors should belong to the Considerate Contractors Scheme.

Site management will carry out regular noise, dust and vibration monitoring, at the site boundary during the works, and will maintain all necessary records.

These measures are not required during the fit out stage of the project.

All records will be available for inspection at all times.

Noise levels will be monitored during the permitted

Subject to any agreed Section 61 Notice, any excessively noisy works will be carried out on a 2 hours on/off basis for example 08:00 or 10:00, 12:00 to 14:00 and 16:00 to 18:00.

During activities that are likely to create dust a number of measures will be used to control the escape of dust. These will include but not be limited to:

- Develop and implement a Dust Management Plan (DMP), which may include measures to control emissions, approved by the Local Authority. The DMP may include monitoring of dust deposition, dust flux, real-time PM continuous monitoring and/or visual inspections.
- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked. This should include regular dust soiling check of surfaces such as street furniture, cars, window sills within 100m of the site boundary, with cleaning to be provided if necessary.
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Local Authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real time PM10 continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Local Authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real time PM10 continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.
- Review of working methods to ensure that appropriate plant and methodology is being used to minimize the creation of dust.
- Damping down

In planning work operations the following will be considered to mitigate the effect of vibration:

- Review of working methods to ensure that appropriate plant and methodology is being used to minimize vibration.
- Plan works so that sufficient breaks are allowed for, i.e. two hours on and two hours off.
- Ensure all plant and equipment is well maintained and located, as far as reasonably possible, away for sensitive receptors.

Waste Management

Demolition Waste

Following the controlled removal of hazardous materials (e.g. asbestos), the current building and structures on the site will be demolished.

Demolition materials will be segregated for recycling. A target of 95% of demolition waste is expected to be recycled.

Construction Waste

Construction waste will be required to be managed in such a way as to minimise the waste being produced in the first place, recycling or reusing as much construction waste as possible, and ensure that as much construction waste as possible is diverted from disposal to landfill and to ensure that more sustainable waste management options are considered first, i.e.: avoidance / reduction / reuse / recovery, before final disposal is decided.

Waste streams will be segregated on site, where possible, and if not will be sent to a registered waste transfer station where segregation will take place.

A target of 95% of construction waste is expected to be recycled.

Contractors will be expected to comply with waste all current legislation and best practice guidance with regard to waste management.