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Proposed Residential Redevelopment
Broom Road, Teddington TW11 9BE
Teddington Riverside
Construction Management Strategy

wates construction

February 2014

Contents

1 Introduction

1.1.1

This Construction Management Plan (CMP) has been prepared and submitted to support an outline planning application for the Teddington Riverside Proposed residential development (the "Site").

The Development comprises a single outline planning application for the demolition of all structures on the Site and its redevelopment for residential use. Accordingly, planning permission is being sought for the following development:

"Demolition of all existing structures and redevelopment to provide a residential development comprising residential and energy centre , new landscaping, communal open space, and public realm, means of access and other associated works."

A full description of the application is provided separately by CgMs. This CMP describes the anticipated demolition and construction programme for the Teddington Riverside Development and describes the nature of the activities to be undertaken. It identifies the environmental considerations associated with these activities and outlines appropriate measures that might be implemented for any mitigation found necessary.

Planning for the demolition and construction works is necessarily broad at this stage and will be subject to modification during the subsequent reserved matters applications, the CMP is therefore indicative as part of the outline planning application. Being alongside the river, flood risk is a consideration at all times, including during the implementation stages and a temporary work flood protection plan will part of the delivery strategy. This will be endorsed and monitored by the flood risk consultant working closely with the EA and LPA.

This assessment has been made using the experience of the Applicant and their professional advisers based on the typical construction methods and contracting strategies that can be reasonably anticipated for a phased development of this type.

1.1.2

The demolition and construction phase of the Teddington Riverside Development are substantial and complex in nature due to the requirement to continue operation of the local infrastructure whilst construction proceeds.

The footprint of the Site is large covering approximately 1.86 hectares and construction traffic routes and construction traffic volumes will vary throughout the Development's overall programme.

The target date assumed for this CMP for commencement of the works on site is Quarter 1 2017, the first activity will be the demolition of the existing Teddington site.

Demolition and construction works for the Teddington Riverside Development will impact the local environment and have been assessed as part of the Environmental Impact Assessment. Health and safety issues need to be addressed in a proactive manner during the demolition and construction phases.

Construction management and planning, and adoption of environmental best practices, good neighbourhood policies and regular meetings with Richmond Borough Council including local stakeholders and community engagement will contribute to mitigating adverse environmental effects and ensuring good construction, environmental, health and safety practices.

These issues will be assessed in the Environmental Statement (ES) submitted in connection with the Teddington Riverside Development Outline Planning Application. This CMP is based on the base line studies and assessments carried out in preparation for the ES.

This CMP sets out a number of strategies, standards and procedures in order to mitigate anticipated environmental impacts and ensure good site health and safety practices and is taken forward alongside the project CDM co-ordinator.

The issues that have been considered within this document are as follows:

- Temporary works and flood protection
- Construction programme and phasing
- Demolition Works
- Infrastructure Works
- Description of Works
- Site Logistics
- Indicative Construction Methods
- Safety, health and environmental mitigation provisions
- Work force and
- Public relations and community liaison.

2 Construction Programme & Phasing

2.1 Assumed Construction Programme & Phasing

2.1.1

An assumed demolition and construction programme is included as Appendix 1.

2.1.2

The assumed programme presented in Appendix 1 is one view on how the stages of the work could be progressed and consequently it is indicative only. A flexible approach to planning, logistics and programming of the project will be required to incorporate both the best practise currently available and future trade contractor input.

2.1.3

For the purposes of the Planning Submission it has been assumed that the demolition works will commence early in 2017 and be complete within six months, however it should be noted that demolition commencement date is dependent upon the completion of legal, planning and leasing agreements and market conditions.

2.1.4

The construction phases are expected to be developed as follows:

- Phase 1: E7, C and essential basement, plant, flood protection
- Phase 2: B & D
- Phase 3: E1-6 inclusive and A.

2.2 Typical Configuration

2.2.1

Based on the Illustrative Masterplan construction consists of a ground floor slab ,a single taller building structure and 5 blocks low to mid rise in height above a courtyard slab and low-rise blocks on plot elevations.

2.2.2

At each phase of the Development some or all of the following activities will be required:

- Survey/recording and subsequent demolition of existing buildings;
- Archaeological watching brief (programme of monitoring and recording);
- Condition survey of perimeter roads;
- Condition survey of adjacent buildings;
- Unexploded ordnance survey;
- Geotechnical investigation (soil type, contamination and ground conditions);
- Service infrastructure works e.g. abandonment, re-routing and reinforcement of the utility networks;
- Tree protection works and ecological site surveys;
- Site clearance and enabling works, including earthworks to create a suitable development platform, and remediate
- if required;
- Sub-structure works i.e. piling and foundations;
- Construction of superstructure, envelope and building fit out; and
- External works including landscaping and public realm.

2.3 Generic Construction Programme

A generic construction programme is included as Appendix 5. The work activity durations are assumed at this stage of the outline planning application, a more detailed programme will be developed for the reserved matters application and more robust durations provided based on the detail design work for structure, envelope and internal finishes developed during this next design phase.

3 Demolition and Asbestos Removal Works

3.1 Asbestos Removal

3.1.1

Asbestos Removal & Demolition Surveys

Prior to commencing demolition works the following intrusive surveys will be undertaken. All works will be undertaken by an approved Demolition Contractor:

- All properties will be surveyed following vacant possession;
- Demolition and Refurbishment survey to establish the location and quantity of asbestos containing material within the buildings and associated structures to be demolished. All buildings will be surveyed and inspected to confirm asbestos type and location.
- The survey will be undertaken strictly in accordance with the Control of Asbestos regulations (HSG 248) and the appropriate HSE guidance in HSG 264;
- The surveying organisation and individual surveyors will be accredited to an appropriate body as competent to perform such work in compliance with ISO 17020 and ISO 17025;
- Intrusive fabric and structural survey to be undertaken of all buildings. Specified by the Structural Engineer to establish the precast wall to floor slab units joint structural arrangement and reinforcement configuration within wall panels;
- Intrusive building surveys will involve destructive inspection, as necessary, to gain access to all areas and this typically involves breaking open ceilings, floors, partitions and internal boxing;
- Habitat surveys to identify the extent of potential species using the site or existing buildings; and
- A Demolition Environmental Management Plan (DEMP) will be prepared.

The Aboricultural Consultant will prepare a demolition method statement to identify tree and root protection measures to be installed and followed by the demolition contractor. The method statement will also present facilitation tree pruning and felling specification.

The above surveys and the DEMP will be issued to the Demolition Contractor and form part of the preconstruction Health & Safety Plans prepared by the CDM Coordinator. Any constraints associated with the result of these documents will be factored into demolition and construction methodology.

3.1.2

Asbestos Removal Methodology

The Demolition Contractor will record, control, remove and dispose of all asbestos containing materials in accordance with current legislation and best practice and this will include the following:

- Preparation and approval of specific detailed asbestos removal method statements;
- A mandatory 14 day approval period will be required by the Health and Safety Executive (HSE) for each of these method statements (ASB5 Approval);
- No works can commence without the ASB5 notice being approved by the HSE;
- Additional asbestos finds will result in re-notification of ASB5 approval to the HSE;
- Asbestos removal will be carried out under licence with registered firms being members of Asbestos Removal Contractors Association (ARCA);
- Removal of asbestos will be under controlled conditions. Air monitoring for asbestos fibres will be undertaken to ensure the health and safety measures are in accordance with statutory regulations;
- Decontamination units and safe transit routes will be established;
- Asbestos containment enclosures will be formed around areas containing asbestos as indicated in the Demolition and Refurbishment survey;
- Air testing of enclosures will be carried out during the course of the removal works to confirm that the area is clear from asbestos contamination;
- Enclosures will be removed once the area has been signed off and clearance certificate issued;
- Asbestos containing materials will be safely doubled bagged and transferred to the ground level into asbestos waste skips; and
- The asbestos waste will be removed from site by registered carriers for disposal at a registered disposal site.

An independent asbestos consultant will be employed to monitor and audit asbestos removal operations to ensure these are carried out in accordance with Control of Asbestos Regulations 2012 and current good practice.

Site perimeter asbestos fibre checks will be undertaken by the independent monitoring consultant during the entire period of asbestos removal works. Background levels will be taken for the buildings in their dormant state before works commence.

3.2 Demolition

3.2.1

Demolition Phasing

Demolition of all the existing buildings including garages, pedestrian road bridges and high level walkways within the Site will be carried out in four phases. Please refer to the appendix 2 for the demolition sequence drawing. The retained Weir Cottage will be hoarded off for future refurbishment under the contract. Retained trees will be protected in accordance with BS5837 and some material salvaged for re-use as set out below.

3.2.2

Enabling Works

The following pre-commencement and enabling works activities will be carried out prior to the commencement of asbestos removal and demolition works:

- Statutory notifications and consents, i.e. HSE asbestos notices, hoarding and scaffold licences, road closures (if required) etc;
- Identify methods and procedures to comply with Section 61 of the Control of Pollution Act; 1974 agreements and consents;
- Approval of method statements and risk assessments, scaffolding and temporary works designs;
- Prepare a written plan for carrying out the demolition in accordance with Regulation 29 of the CDM regulations to identify how danger and risk from these activities will be prevented;
- Installation of perimeter fencing and gates to suit demolition and asbestos removal works;
- Service terminations / disconnections at the site boundary by utility companies;
- Supply and install site accommodation & welfare facilities;
- Installation of temporary power, lighting and water services;
- Facilitation tree pruning, tree removal and installation of tree protection measures;
- Establishment of fire escape routes / systems & emergency plans; and
- Early environmental clean of the properties, sharps needle sweep, hazardous material identification and pest control within the site boundary
- Resident liaison meetings to be held and newsletters distributed to all local residents and businesses.

3.2.3

Materials to be salvaged

Site inspections have been undertaken of units and from these inspections it is considered unlikely that there will be any items of salvageable value, although there are two Rams heads and some plaques to be salvaged. Demolition concrete arisings will be crushed on site and retained for future use as a piling mat.

We would anticipate that much of the concrete arising from the demolition of the existing buildings on the site could be crushed and used as the piling mat. This material could also be used in the permanent works as sub base for the access roads and hardstandings. Crushed brick may also be used providing it meets certain specification test criteria.

3.2.4

Indicative Demolition Methodology

Demolition methodology will be finalised following tender and appointment of a Demolition Contractor who will undertake both the asbestos removal and demolition. An indicative and preliminary demolition method statement is outlined below. It must be stressed that the methodology outlined below may alter once full access is available and an intrusive structural investigation has been carried out.

Soft strip will commence in areas directly after asbestos removal has been completed and following

certification from the asbestos monitoring consultant, this will include removal of all non structural elements by operatives/small machines. Bulk container wagons will transfer materials to a registered waste disposal site.

The following methods of demolition will be employed.

1. A high reach demolition rig (20+metres) will be used to demolish the structures. This machine will be equipped with hydraulic crushers/concrete cutting jaw on a high reach arm including water spray attachments to minimize dust.

2. Due to the structural form outlined above being somewhat haphazard, the demolition approach utilised will be a combination of dismantling and high reach demolition techniques.

3. Dismantling techniques will involve installing temporary props to floor slabs and inclined props to wall panel units as required with the sections of buildings being dismantled by demolition operatives and cranes to remove larger elements in the reverse order as to which they were built.

4. This method will be employed in sections of the buildings in close proximity to surrounding properties and highways e.g. gable ends etc. The building ends will be stepped back in a “pyramid profile” on a floor by floor basis. Dismantling operations will be undertaken as required behind a sheeted external scaffold.

5. Upon completion of the dismantling phase of a block the remainder of the building will be demolished using a high reach demolition rig equipped with hydraulic crushers/concrete cutting jaw on the machines arm.
Dismantling and concrete munching techniques will keep noise to a minimum.

6. The ground floor slab and foundations below will not be removed except for the first plot where all substructure and services infrastructure will be removed in advance of this plots construction.

7. At ground level the wall and floor panels will be broken into smaller pieces and transported to the centrally located concrete crusher where the material will be crushed to a specified grading for future use as a piling mat reducing lorry movements to and from site. The stockpile of crushed material will be located to suit future construction phasing of plots.

8. A copy of the permit required for the mobile crusher to operate will be submitted to Richmond Borough Council Environmental Health before crushing operations commence on site.

3.2.5

Environmental Considerations during demolition

- A Demolition Environmental Management Plan (DEMP) for the Works will be prepared;
- The Demolition Contractor will adhere to the requirements within the DEMP and produce the Site Waste Management Plan (SWMP). The DEMP will be regularly reviewed and revised as necessary;
- Segregating material on site (considering safety and time/space constraints) will ensure demolition waste can be safely stored or removed from site to a predetermined specialised waste facility, as applicable. This prevents further need for segregation and vehicle movements;
- Ensure careful use of water in dust suppression;
- Use of ‘best practicable means’ on all operations. Selection of demolition methods designed to keep the environmental impacts of the works to a minimum;
- Protection measures for trees and the ecology/biodiversity; and
- Demolition works will be carried out in such a way as to minimise the emissions to air of pollutants (particularly dust and fine particles), employing Best Practicable Means
- Constant liaison with adjacent residents and businesses to ensure that, at all times, they understand what can be expected from the developing site.

Construction plant can be a significant source of emissions although control measures can be implemented to minimise any adverse impacts i.e.

- Site Plant and equipment will be kept in good repair and maintained;
- Plant will not be left running when not in use; also mitigating noise pollution
- Plant dust arrestment equipment will be used where practical
- Maintaining a clean site ensuring debris is not transferred onto adjacent roads.

To keep the surrounding roads clean we will use the following control measures:

- Wheel washing facilities on site to minimise mud from demolition operations being transported on to adjacent roads;
- Damping down of site haul roads by water bowser during prolonged dry periods;
- Regular cleaning of hard surfaced site entrance roads;
- Restricting vehicle speeds on haul roads and other unsurfaced areas on site;
- Hoarding and gates to prevent dust breakout; and
- Ensuring that dusty materials are transported appropriately (e.g. sheeting of vehicles carrying spoil and other dusty materials).

Noise levels will be controlled as set out below to ensure that we are sympathetic to neighbouring residents and businesses.

Details of demolition activities, prediction levels/assessments will be discussed with the Richmond Borough Council Environmental Department, both before and during demolition.

Where potential for noise exists during demolition 'Best Practicable Means' will be used to reduce noise to achieve compliance with the recommendations of BS 5228 and will include:

- Choice of routes and programming for the transport of demolition materials; and
- Design and use of hoardings and screens to provide acoustic screening where practical
- Modern machinery with high levels of noise suppression fitted.

Careful selection of plant items, demolition methods, programming, implementing a noise and air quality protocol which outlines monitoring frequency/action levels.

3.3 Archaeological Investigations

In the event of an unexpected find, it will be reported immediately to the Applicant by the relevant trade contractor personnel. In such circumstances all works will cease in the vicinity and an exclusion zone will be established until further advice has been obtained from a specialist archaeological consultant.

3.4 Ground Remediation Works

A desk based review and assessment of the risks from contamination has been undertaken for the Site based on available information. This assessment has identified that the Site has a low sensitivity based on the existing site conditions.

A geotechnical site investigation will be undertaken prior to excavation works commencing and this will identify the extent of ground contamination and soil remediation required to the existing Site.

Areas beneath existing ground slabs will not be assessed for contamination until demolition and removal of slabs is complete. This process will be managed in accordance with the recommendations of the consultant's earthworks specifications, which will include the process for testing, disposal and removal to the satisfaction of the Environmental Agency.

Existing topsoil on site will be tested to ascertain suitability for reuse and if suitable will be retained on site for reuse in soft landscape.

The area around the Teddington Riverside residential development sustained relatively high levels of bomb damage during World War II. It will be necessary for an unexploded ordnance assessment to be undertaken.

4 Infrastructure Works

The site wide infrastructure installation commences at the start of the Heygate Masterplan construction programme. These works include service diversions and reinforcement and provides the new primary services network, estate roads and public realm.

4.1 Utilities Infrastructure Network

Provision of the new infrastructure will be commenced early to provide the necessary period to design and procure the Energy Centre plant and equipment. This will be facilitated in part, by the introduction of a new district heating network and be designed and installed to provide the combined heating and power requirements for the complete Development.

To support the Teddington Riverside development, the primary infrastructure network also includes the following:

- Installation of the primary services below ground to include potable water, foul water, drainage, telecoms and gas, storm water drainage;
- Installation of HV distribution ducts and cabling;
- Preparation of the plant rooms for the installation and commissioning of the services;
- Install services distribution infrastructure and the HV ring main networks in line with development requirements
- Multi utility trenches will be used where appropriate.

4.2 Road Traffic Management

Notwithstanding on-going investigations into river transport. Due to the reconfiguration at the Site it is necessary to carry out changes to the existing road access and egress points to suit the works whilst ensuring the traffic continues to flow smoothly on the surrounding road networks.

The Site is bound by the following traffic routes below:

- Broom Road adjacent to the site entrance
- Ferry Road, A313
- Kingston Road, A310.

The A313 and A310 are two heavily trafficked trunk roads serving west London.

Road diversions and/or traffic diversions are required and detailed traffic management plans will be developed during the reserved matter applications to address the following:

- Temporary road signage and access routes throughout the construction programme;
- Designated pedestrian routes throughout the works;
- Timing of deliveries to avoid peak hours;
- Use of Site area to prevent delivery vehicles parking on adjacent roads;
- Hoarding/fencing positions to segregate the works; and
- Temporary traffic signals as required.

Mitigation measures could include:

- Signposting the access to the development from the major trunk roads to direct vehicles along the designated routes
- Recycling of materials on site to mitigate extensive traffic movements
- Arranging ‘back-loaded’ materials to mitigate traffic movements
- Operatives to travel to and from site using public transport
- Employing a security and logistics company to operate the site entrance with responsibility to monitor the public highway and facilitate the entry and exit of vehicles from the Site.

4.3 Utilities Diversion

Utilities Diversions will be undertaken as required to provide an unencumbered site. It is the aspiration of the Applicant to maintain and enhance existing services and highways where possible. We will work collaboratively with the statutory providers.

Prior to carrying out the service diversions and highway works, investigation will need to be carried out to establish the nature and extent of the services that exist on the site. The investigation period will be split into two distinct parts, the first is a desktop study that includes gathering information that is available from the statutory service providers.

The desktop study will identify the quality of information available and what further specific site investigations are required to complete the overall diversion strategy. These site investigations may include CAT scans, trial holes and slit trenches in key areas of the site.

4.4 Public realm

Public Realm works include:

- Basement carparking and cycle storage;
- Park construction;
- Tree Management;
- SUDS and water features;
- Play spaces; and
- Hard and soft landscaping.

Completed sections of the public realm will be protected with fencing to separate completed works from on-going construction work areas.

5 Construction Traffic and Access Site

5.1 Construction Routes and Access

5.1.1

Routes for construction traffic involved in the delivery of goods and materials to and from the Site will be agreed with the highways and other necessary authorities preceding each reserved matters application for a construction phase.

5.1.2

Our initial suggestion for construction traffic routes would be via the M3, A316 and the A313 leading into Teddington and finally into Broom Road and directly onto the site. However Richmond Borough Council and adjacent London Boroughs will be consulted prior to the issue of any reserved matters application, ensuring the most appropriate routes are agreed as well as any periodic adjustments are resolved.

5.1.3

A full review of potentially using barges on the River Thames as our primary option to deliver and remove bulk materials is to be reviewed and submitted as part of the application. To reduce the number of vehicles on the road, we are considering transporting demolition waste and construction materials by barge on the Thames. Each barge is able to transport 1000 tons which equates to circa 40—60 lorries being taken from local traffic routes.

Barges are able to pass below Teddington Footbridge to access the riverbank adjacent to the site dependent on tides as the water level can change in excess of 7m.

We will arrange the necessary licenses required for transporting goods on the river. We will work to industry guidelines and ensure all craft operatives are appropriately qualified. All vessels will operate within the Port of London Marine Safety Code.

5.1.4

A full traffic movement desk top study is to be undertaken prior to the reserved matters application and will provide comprehensive numbers of expected heavy goods vehicle movements throughout the construction of the Teddington Riverside project. Initial outline findings would suggest that there will be three spikes in HGV movements coinciding with the busiest periods of the construction; these will be demolition, bulk excavation and concrete frame erection periods.

The full desk top study will demonstrate vehicle movements on a daily basis based on a 5.5 day working week, 10 hours per day. A histogram will be provided to show maximum and minimum vehicle movements every hour.

It should be noted that generally peak construction periods are not typical of construction vehicles and for much of the programme the number of vehicles would be approximately half of the peaks.

5.1.5

Movements of large or abnormal loads will be addressed in advance with Richmond Borough Council, other relevant highway authorities and the Police in order to ensure compliance with regulations and advance notification for local residents.

5.1.6

Site labour levels are to be assessed in a similar manner to those of vehicle movements and whilst they will mirror the spikes of the vehicle movements, they will be truncated as other heavily labour resourced trades elements are released on site.

5.1.7

The site is located within a mile of Teddington Train Station and a number of bus services. Given the excellent availability of public transport services, it is envisaged that the majority of construction personnel will travel to site by public transport.

5.1.8

Provision will also be made for secure bicycle parking to encourage use by the construction workforce.

5.1.9

Certain trades may require short-term parking on site for vehicles due to the transportation of specialist equipment/plant requirements, this will be provided on an exclusive basis within a secured permit zone.

5.1.10

Site access gates will be established around the perimeter of the Site and they will be used for construction access and egress to the Site over the demolition and construction period. External site entrance gates will remain located in the same position for the duration of the project to ensure minimal disruption to the local residents.

5.1.11

Wherever practicable, one way traffic routes for both on and offsite traffic will be adopted to encourage smooth running traffic and minimal congestion.

5.1.12

Access to the site will be via the following gates: (refer to Appendix 2):

- Gate 1 – Entrance from Broom Road
- Gate 2– Exit from Broom Road

5.1.13

Secure access points with wheel cleaning facilities will be established at the site entrance locations. Pedestrian access points will generally be located close to the main vehicular access gates with separate pedestrian gates and footpaths provided.

5.2 Off Loading and Storage Areas

5.2.1

Vehicles will be directed to their designated delivery point or holding/storage areas, which will be marshalled by logistics personnel at all times especially during unloading/manoeuvring activities, ensuring that only authorised personnel are given access.

5.2.2

All deliveries will be notified in advance to the contractor's logistics team. Access slots will be allocated. The provision of an onsite holding area, located on the plot foot prints of the later construction phases, where early or late arrivals can be held to assist in regulating traffic flow into the site.

5.2.3

No delivery vehicle will, as far as it is possible to enforce, leave the site empty. A "back load" policy will be adopted whereby all return vehicles will take "associated waste/packaging" with them.

5.3 Personnel and Vehicle Segregation

5.3.1

All pedestrian routes will be clearly defined utilising temporary fencing and pedestrian route signage where necessary. Pedestrian crossover routes will have appropriate warning signs displayed, e.g. give-way signs, vehicles crossing etc.

5.3.2

All site operatives will be given a specific site induction, and briefed with reference to the use of designated pedestrian access ways and crossover points.

5.4 Traffic Management Highway Works

5.4.1

New junctions will be created and provide some construction access until they become used by public vehicles. Notices and details of traffic management proposals associated with the works to the highways and footpaths will be given under the Highways Acts 1980 and Road Traffic Act 1998.

5.5 Temporary Road Closures

5.5.1

Road closures are not anticipated however they may be required in order to establish and remove the tower cranes or to deliver large items of building plant and infrastructure items. This will be agreed with Richmond Borough Council and TfL in advance. Notices regarding any planned closures and diversions of either roads or footpaths shall be given to Richmond Borough Council, Bus Companies, TfL, the police, fire brigade and other emergency services.

5.6 Road Traffic Control Orders

5.6.1

Realignment of existing bellmouths and crossovers and existing pedestrian walkways. These will be undertaken on a phased basis ahead of the demolition and the commencement of new plot construction.

5.6.2

New highways will be constructed internally to the Site boundary utilising existing and new junctions. These junctions and roads will be constructed early to provide construction site access and egress.

6 Site Logistics

6.1 General Principles

Set out below are the general principles of the site logistics, these will be developed in greater detail to accompany reserved matter applications.

6.2 Site Establishment and Security

- The first stage of the demolition and construction programme will be to establish the area as a demolition/construction site. The working areas will be secure and the general public will be separated from the works by the use of solid, well maintained open mesh fencing;
- Temporary hoardings will be provided on short term boundaries and for highway works;
- All site facilities will be contained within the site area;
- All gates will be maintained by security staff during working hours;
- Flood-lighting in areas adjacent to sensitive receptors (i.e nearby residential properties) will generally be limited to the working hours identified in section 9.2; and
- Site lighting will be kept to a minimum taking into account the needs of site health, safety and security.

6.3 Consents and Licenses

All statutory consents and licences required to start an onsite activity will be obtained ahead of works commencing and giving the appropriate notice period. These will include:

- Notices for works on the Highway in accordance with the Highway Acts 1980 (Ref 5-5) and Road Traffic Act 1998 (ref. 5-6);
- Hoarding and scaffold licences for works on the perimeter boundary;
- Construction Notices; Section 61 of the Control of Pollution Act: 1974;
- Connections to existing utilities and main sewers;
- Licence to discharge water from the Site into the public sewer;
- Approval of the Construction Environmental Management Plan (CEMP) including Site Waste Management Plan (SWMP);
- The plan demonstrates that saddle tower cranes should be suitable for the project and that currently there will be no oversail requirements of adjacent properties. If required, consents will be obtained from adjoining owners for tower crane oversail; we have provided an indicative tower craneage plan in Appendix 4. Consents will also be obtained from the Richmond Borough Council and TfL where tower cranes oversail the public highway, should there be a requirement
- Fixed red aeronautical obstacle lighting to the mast of the tower cranes will be provided; and
- The construction programme and precise requirements for obstacle lighting will be discussed with London Heathrow Airport and the Civil Aviation Authority when the construction programme and crane methodology is finalised and prior to work starting on the tallest building on the Site.

6.4 Access and Egress

- Broom Road is envisaged as the main construction access and egress to serve Teddington Riverside
- Existing pedestrian routes retained to provide safe operative access across Heygate Street;
- Permanent internal road network designed and strengthened if required to accommodate construction traffic loading including underground services protection measures.

6.5 Material Storage and Handling

- Contractors will be expected to maintain a tidy site and to operate a " just in time " policy for the delivery and supply of materials for the works, particularly the final phase of the works when on site storage will be at a minimum;
- Materials stored on site to minimise damage by vehicles, vandals, weather or theft;
- Tanks and drums of liquid chemicals and fuels would be stored in bunded compounds. Packaging would be returned, where possible;
- Tower cranes will be used for general unloading and hoisting during the structural and envelope works.
- Unloading over the public highway would be avoided, unless specific provisions are made with Richmond Borough Council and the Police
- Passenger/Goods materials hoists would be used to hoist materials to the floors, and fork lift trucks and other electric or hydraulically operated plant would be used to distribute and transport materials around the site.

6.6 Craneage

- Generally it is envisaged that six saddle jib tower cranes will be used for the construction of the Teddington Riverside development.
- Dedicated passenger/goods hoists will be available for each building
- Provision of tower crane pick up points/loading bays and served by internal road network; and
- Unrestricted access to tower crane loading bays is critical to maximise efficiency of this plant
- Site specific logistics manager will ensure vehicles are not restricting access on highways.

6.7 Hoisting

- Hoists positioned on the outside of blocks allowing external works to be built simultaneously with the blocks
- Passenger/goods hoist provided for each block
- External cladding assumed erected from mast climbers, subject to detail design of facades.

6.8 Site Accommodation

- We will provide a main site welfare office and as necessary, supporting satellite offices on the site. The location of these facilities is yet to be determined, however they will be agreed with Richmond Borough Council as part of the detailed demolition and construction logistics programme
- Canteen and welfare facilities will be provided for the site operatives
- In line with the requirements of the Considerate Constructors Scheme a high level of site welfare facilities will be maintained and the Site will be cleaned on a regular basis, especially around canteens and toilets; and
- All site facilities will be contained within the Site.

6.9 Visitor Management

- Visitors will only be allowed to enter the site via designated pedestrian access gates and a dedicated segregated footpath to the main site offices for registration and obtaining PPE prior to entering the site;
- Visitors will be expected to attend a specific site induction unless being accompanied by a member of the site team
- Open days for local residents, schools and other members of the local community will be encouraged.

6.10 Site Access

- Single point access to be maintained throughout construction
- Pedestrian biometrics turn stiles will be provided ensuring only authorised access is possible
- Site entrance manned by security staff during working hours.

7 Description of Works and Indicative Construction Methods

7.1 Construction Sequence

The construction sequence for a typical plot following demolition to top of ground floor slab is outlined below. Details may change subject to the detailed design development of individual plots for reserved matters application:

7.2 Enabling Works

- Secure site and set up contractor welfare and site accommodation;
- Ensure all incoming services have been isolated under the preceding demolition contract;
- Relocate or divert any remaining services;
- Install tree protection measures as required by the Aboricultural Method Statement and tree protection plan;
- Excavate and remove ground floor slab and substructure elements of demolished buildings including abandoned services infrastructure, piles to be removed if feasible;
- Outside the plot footprint, hard landscaped area and estate roads will be left insitu to be used as construction access and material storage
- Install temporary hard standing areas and haul roads to augment existing estate roads network, if required
- Install flood protection requirements.

7.3 Substructure

- Excavate, trim formation and install piling platform using crushed concrete material stockpiled from previous demolition contract;
- Install and load test preliminary test piles;
- Install foundation piles and piles for tower cranes;
- Install anchor piles and carry out working test piles as required by the piling specification;
- Excavate, breakdown piles and form pile caps and ground beams, prioritise building core pile caps and lift pits;
- Excavate, lay and test underground drainage, coordinate and install incoming services to plot, backfill including concrete surround and drainage suspension system;
- Trim and prepare suspended ground floor formation including concrete blinding and waterproofing system; and
- Fix rebar, shutter and pour suspended ground floor slab.

7.4 Basement and Foundations Construction

The basement floor construction would be of a 325mm thick reinforced concrete slab with reinforcement to be designed to a crack width limit of 0.2mm, and a proprietary waterproofing admixture such as Pudlo with Pudlo designed water bars to protect all construction joints. Similar principles of reinforcement and Pudlo additives will also be applied to all lift pits and concrete manholes. The concrete surface of the slab is to be float and brush finished and treated with a dust hardener for car park use.

It will be necessary to utilise a piled foundation solution due to the anticipated column loads and the site ground conditions. Analysis indicates that the columns for each block will support loads from 3000kN-4000kN depending on block height. This would result in 3-4 nr piles per column, with piles of the order of 25m long and 600mm diameter. These sizes are subject to the findings of a site specific ground investigation, design team coordination and detailed structural design. For estimate purposes assume 4 nr piles supporting each and every column. Pile caps would be 1000mm deep and 2.7m x 2.7m on plan.

The perimeter retaining wall around the basement is at this stage assumed to be formed from a secant piled wall using 450mm diameter piles. The piles would be faced with a 250mm thick insitu concrete liner wall with a proprietary waterproofing admixture such as Pudlo or Caltite to provide the grade 2 watertightness required. This is adequate for the car parking areas. In the lift lobbies consideration may be given to introducing a drained cavity in addition to provide an increased watertightness to grade 3.

The secant piled wall would have a 1.0m x1.0m capping beam at it's head, integral with the ground floor slab.

As an alternative to the secant piled wall consideration may be given to using a steel sheet piled wall. This would eliminate the need for the concrete liner wall. All the steel sheet piles will have clutches continuously welded from the capping beam to the underside of the basement slab thickening to provide a water tight seal. This provides watertightness to grade 2 suitable for the carpark. The steel sheets are exposed within the carpark and would therefore be painted with a suitable gloss paint finish.

A welded puddle flange with two lines of hydrophilic strips will be applied to the edge thickening to the basement slab junction at the perimeter with the steel sheet piling to provide a waterproof seal between the basement slab and sheet piles.

7.5 Superstructures

The superstructure of the buildings will generally be designed using grade C40 reinforced concrete with typically 250mm thick flat slabs that are to be supported onto in-situ concrete shear walls and columns. The typical structural grid is generally based on a maximum size of floor panel not to exceed 7.0m x 7.0m. Generally there will be four columns across the width of each block (a column at each perimeter and a pair of columns internally, equally spaced). Column centres down the length of the block will generally be in each party wall line between adjacent flats and internal partitions within flats as necessary to limit spans to 7.0m maximum. Actual column locations are subject to coordination with the Architect but for estimate purposes assume that there are four columns across the width of each block and on a 7.0m grid down the length of the block.

All the columns are generally formed as blade columns 200mm thick at ground level and above and up to 800mm long. Columns within the car park areas are 400mm square. All reinforced concrete walls around stair and lift cores are to be a minimum of 200mm thick above ground level and 250mm thick within the basement. In addition, there will be reinforced concrete transfer downstand beams provided under the ground floor slab to transfer column loads where column lines change to suit the car park bay grid where this differs from the column grid within the flats above.
Floor finishes to accommodation are assumed to be 25mm with a resilient layer for upper floors. Ground floor flat units are to have thermal insulation plus floor finishes.
Car parking areas and vehicle access ramps are to have a floated and brushed finish with a surface hardener.
Roof slabs are to be constructed in insitu concrete flat slabs 250mm thick.
All internal and inner skins of the external walls are assumed to be lightweight construction (i.e. cold rolled metal stud).
The external skin of the cavity walls of masonry construction is to be supported via proprietary stainless steel brick support angles, brackets and cast in anchors to the floor slab edges.
Lateral stability of the buildings is to be provided by the walls around the lift and stair cores.
Balcony Structures
Projecting balconies are of cantilevered structural steel framing supporting decking. The structural steel cantilevers are connected to the main structural floor slabs of the building with proprietary thermal break connectors to be designed and supplied by a specialist manufacturer.

7.6 Raised Courtyard Structure

Raised Courtyard structure will be suspended reinforced concrete slabs with vertical concrete elements constructed using traditional formwork methods.

7.7 Fit Out and Finishes

- Roof waterproofing system will be installed as soon as the roof slab concrete has cured to achieve the earliest watertight date for both mid-rise and tall buildings;
- Fit out of residential units will use traditional fit out techniques and finishing trades sequence, serviced by external hoists and beneficial use of lifts in the buildings;
- Bathroom pod units may be utilised; and
- Residential units will be completed from roof downwards and handed over following hoist removal and mechanical and electrical services commissioning.

8 Safety, Health and Environmental Considerations During Construction

8.1 General Safety, Health and Environmental Consideration

8.1.1

Construction and demolition works will be carried out in such a way as to limit, as far as is practicable, adverse environmental impact.

8.1.2

Works will be carried out in accordance with the following general provisions:

- Planning approvals from Richmond Borough Council
- Considerate Constructors Scheme; and
- Requirements of highways and utility authorities.

8.1.3

As part of the Construction Method Statement, the Design Management and Review process will ensure that construction techniques and materials used are a fundamental consideration of the design and intended long-term use, the aim being to achieve:

- Design for durability and low maintenance;
- Design for flexibility and adaptability;
- Use of materials from sustainable sources; and
- Use of local materials where possible.

8.1.4

Safety, health and environmental issues on the Development are a primary factor in influencing the construction methods adopted. The construction team will develop detailed health and safety plans, specific environmental, fire and accident procedures to suit the construction sequences of the Development. It is intended to agree a protocol process with Richmond Borough Council Environmental Services Division under Section 61 of the Control of Pollution Act: 1974 in relation to controlling hours of operation, noise, vibration and pollution impacts of equipment used on the Site.

8.1.5

Contractors involved in the Development will ensure:

- That all non-English speaking employees are provided with relevant health and safety information in their national language;
- That adequate multi-lingual supervision is provided so as to ensure that employees continue to be adequately and effectively informed and supervised on all matters affecting their health and safety; and
- That suitable bi-lingual arrangements are in place to ensure that statutory related matters are complied with.

8.1.6

All contractors will be required to adopt the Construction Skills Certification Scheme (CSCS) or equivalent skills certification, combined with health and safety training for 100% of their workforce. General operatives will be required to complete the health and safety training element of the CSCS scheme and may be given the opportunity to pursue a relevant NVQ qualification. Supervisor training shall also be provided by the contractor/subcontractors.

8.1.7

A formal Health & Safety Policy Statement will be adopted, in accordance with the requirements of the Health & Safety Executive and other statutory and local authority guidelines.

8.1.8

Compliance with the following mandatory provisions shall be enforced:

- COSHH, 1999;
- Provision and Use of Work Equipment Regulations, 1998;
- Highly flammable Liquids & Petroleum Gases Regulations, 1972; and
- Health & Safety at Work Act, 1974.

8.2 Control Substances Hazardous to Health

The strategy for controlling all substances coming onto site and all work activities and progress which may generate hazardous substances will be managed and controlled in accordance with the 'Control of Substances Hazardous to Health' regulations (COSHH), 1999 and best practise guidance, such as that published by the Environment Agency.

Some control measures to be employed are as follows:

- All fuels and chemicals will be stored in designated areas, with deliveries of all hazardous materials supervised;
- Storage tank or container facilities will be appropriately bunded with designated areas as far as possible from any watercourses or surface drains;
- In case of spills or discharges, remedial action will be taken as soon as possible, and set procedures will be compiled with;
- A logistics plan will be developed to take into account the management and control of hazardous substances on site; and
- Personal protective equipment (PPE) suitable to prevailing conditions will be used by all construction workers
- Records of all hazardous materials will be kept in a location plan held by the construction team.

8.3 Outline Environmental, Emergency Fire and Accident Procedures

8.3.1

Measures will be carried out to avoid environmental incidents, however if these occur then the following types must be reported to the responsible person within the Construction Team.

The overall strategy in the event of a spillage will be to "Stop-Contain-Notify"

- Spills or discharges to the atmosphere, water supplies, sewerage systems, rivers and other watercourses, or to the ground of:
  - Any chemical product or formulation;
  - Oils and fuels;
  - Effluents/fumes and gases;
  - Waste or contaminated materials.
- Damage to existing:
  - Trees and wildlife;
  - Flora and existing local habitats.
- Any environmental incident that could lead to:
  - Local authority or regulatory enforcement;
  - Public complaint.

8.3.2

Emergency routes and procedures will be continuously adapted to suit the construction sequence and stage of the Development. An Emergency Fire and Accident plan will be prepared, generally following the guidelines for plan contents below and updated on a regular basis to take account of construction progress:

- Definition of the management organisation and responsibility for safety;
- Definition of appropriate fire prevention measures, including good housekeeping of site, welfare facilities and offices;
- Use of non flammable/fire retardant materials for protection of finished works;
- Safe use and safe storage of flammable materials of all categories, whether solid, liquid or gas;
- Appropriate waste management procedures;
- Monitoring the type and frequency of fire inspection/audits;
- Suitable site accommodation location, construction and detection/fire fighting systems;

- During construction, the installation of temporary detection and alarm systems, together with appropriate use of existing systems and early use of final as installed systems when possible;
- Development of evacuation plans, to include escape routes, muster stations, means of sounding alarms and the setting of systems in place to ensure that emergency vehicles have been called and all personnel have safely left the area;
- Training and fire drills;
- The application of permit systems for Hot Works, Confined Space Entry and Electrical Access Control;
- The provision of Fire Watchers and First Aiders;
- Checking that emergency routes/exits are available and unobstructed at all times;
- Dissemination of the plan; and
- Continuous liaison with fire brigade/police/ambulance services and other emergency services, plus
- clients/occupants of adjacent buildings.

8.3.3

The Emergency Fire and Accident Plan as outlined above will be developed in consultation with the local Fire Brigade and emergency services. As sites are dynamic environments, emergency planning will be under constant and critical review to ensure the continued relevance of the plan and procedures. This will be the responsibility of the Site Logistics Manager, overseen and checked by the Project Director.

8.3.4

First aid facilities will be established in multiple locations as appropriate around the site.

8.4 Particular Health, Safety and Environmental Considerations
Works to Adjacent Trees

8.4.1

Contractors appointed for works in close proximity to trees and in consultation with the arboriculture and landscape consultants undertake specific tree protection measures and procedures for the execution of their works to protect the trees.

8.4.2

Where trees are identified for retention construction work will be undertaken in accordance with relevant guidelines in BS 5837 : 2005 “Trees in relation to Construction – recommendations” to ensure that any construction within close proximity of these trees is undertaken without significantly impacting on them.

8.4.3

Retained trees will be adequately protected from damage throughout the demolition and construction works, tree protection measures will include some or all of the following:

- Assessment of location of roots;
- The Root Protection Areas (RPA) will be designated as a construction exclusion zone (CEZ) within which trees will be protected from activities that have a potential to cause damage. CEZ’s will be appropriately protected, e.g. fencing;
- generated in accordance with BS5837:2005 provides a sufficient precautionary zone where rooting conditions are more or less open, unobstructed and level;
- Where root conditions are such that it is not possible to confidently accept the RPA as providing a more or less accurate illustration of the location of roots then it will be necessary to carry out soil investigation to ascertain location of roots;
- Prepare detailed Arboricultural Method Statements for specific operations near trees;
- Training (e.g. tool box talks) in how to avoid tree damage;
- Facilitation Pruning;
- Supervision of sensitive operations and regular monitoring by an Aboricultural Consultant;
- Appropriate Tree Protection Fencing and Barriers;
- Appropriate Ground Protection measures; and
- Contingency planning.

8.5 Air Quality

General Provisions

8.5.1

Construction and demolition works will be carried out in such a way as to limit the emissions to air of pollutants employing Best Practicable Means. The site will be managed in accordance with the CMP to minimise the potential effects on air quality from construction.

8.5.2

Monitoring will be undertaken throughout the construction period to enable proactive management of dust and PM10 levels. Wind speed and direction will be included in the monitoring. There will also be on-going liaison with Richmond Borough Council Environmental Officer regarding the construction control measures set in place. Richmond Borough Council has agreed that dust related issues will be addressed through Section 61 of the Control of Pollution Act 1974 submissions for the various project activities.

Effective material storage and handling

8.5.3

The storage and handling of construction materials can be a significant dust emission source. The adoption of appropriate dust control measures will greatly reduce dust emissions from these sources and ensure that any adverse effects are reduced or eliminated.

8.5.4

Handling and storage areas will be sited as far away as is reasonably and practically possible from public/ residential areas. Handling and storage areas will be actively managed and fine, dry material will be stored inside enclosed shield/coverings or within a central storage areas. Any storage areas that are not enclosed will be covered/sheeted. Prolonged storage of debris on site will be avoided. Vehicles carrying dusty materials into or out of the site shall be sheeted down to prevent any escape of materials.

Construction Plant

8.5.5

Construction plant can be a significant source of emissions although control measures can be implemented to minimise any adverse impacts. The following measures will be employed:

- Site plant and equipment will be kept in good repair and maintained in accordance with the manufacturers specifications.
- Plant will not be left running when not in use
- Plant with dust arrestment equipment will be used where practical
- Where practical, cleaner fuels will be employed for construction plant
- Enclosures will be erected around major construction plant items as appropriate and where practical.

Vehicle Movements

8.5.6

Vehicle movements may result in dust emissions (by re-suspending dust from the road or from spilling dusty loads) and exhaust emissions. However, a number of control measures can be adopted to eliminate or minimise such emissions:

- Wheel washing facilities on site to prevent mud from construction operations being transported on to adjacent public roads;
- Damping down of site haul roads by water bowser during prolonged dry periods;
- Regular cleaning of hard-surfaced site entrance roads;
- Ensuring that dusty materials are transported appropriately (e.g. sheeting of vehicles carrying spoil and other dusty materials);
- Confinement of vehicles to designated haul routes within the site;
- Restricting vehicle speeds on haul roads and other unsurfaced areas on the site;
- Hoarding and gates to prevent dust breakout; and
- Appropriate dust site monitoring will be included within the site management practices to inform site
- management of the success of dust control measures used.

Dust

8.5.7

Dust control will be best achieved at sources, and if possible activities will be carried out in a manner so as to preclude dust generation.

8.5.8

Dust levels will be controlled and, if required, consent sought from the relevant local authority under the Control of Pollution Act 1974, Environmental Protection Act 1990 and local policy guidelines, to ensure that the Development is operated in a way which is not detrimental to the amenity of local residents.

8.5.9

If dust is generated, steps will initially be taken to protect workers in the vicinity who shall, as a minimum, be issued with dust masks. Dust will, if possible, be contained in the location in which it is generated, and be controlled and managed therein. Dust suppression measures will be carried out to mitigate the impact on neighbouring properties.

8.5.10

Dust emissions from construction will be controlled through careful pre-project planning and effective site management. The following control measures and good management practices, will be employed:

- Site operations will be planned to take into account local topography, prevailing wind patterns and local sensitive receptors e.g. schools, residences and ecological designated sites;
- Burning and materials on site will be prohibited;
- Loading and unloading will only be permitted in designated areas;
- Provision of water sprays and wind/dust fences where possible, particularly in dust sensitive locations, for example, during demolition works. Water spraying and/or screening will be undertaken prior to and during demolition;
- Stockpiles of soil, arising or other granular material will be sheeted and/or treated using “Dust Buster” or similar to prevent dust raising that may cause risk to health or nuisance to the public;
- An appointed person will oversee/control activities and handle complaints; and
- Dust on tree foliage will be minimised where practical.

8.6 Built Heritage

The Cottages adjacent to Broom Road are to be maintained as built heritage, however there are a number of items with the remaining buildings that are to be salvaged and reinstated within the project. These include salvaged plaques and stone Rams heads.

8.7 Ecology

8.7.1

All construction works would be carefully controlled in terms of their potential environmental effects through implementation of this CMP and a Construction Environmental Management Plan as agreed with all relevant statutory bodies (Richmond Borough Council, Environmental Agency (EA) and Natural England).

8.7.2

Procedures to minimise risk of pollution incidents relating to machinery or building materials would be as agreed with the EA and facilities installed for rapid appropriate response to any accidental spillages.

8.7.3

Construction activity scheduled to occur in any areas where bats’ nesting is considered likely to occur (at any time of the year) would be progressed under the supervision of an expert bat worker. If bats are found construction works will be adapted locally to avoid disturbance as required by DEFRA.

8.7.4

Monitoring of bird breeding activity on site will be continuous. Where feasible and within reasonable cost, works would be delayed in the local area of birds’ nests to permit fledging, nesting is considered negligible. Where this was not possible, the full circumstances would be recorded and conveyed to Natural England and the Wildlife Liaison Officer.

8.7.5

A strategy of eradication or control of noxious weeds will be developed before works commence. Monitoring, control and eradication will take place on a continual basis. Japanese Knotweed (Reynutria japonica) has not been identified to date.

8.8 Noise and Vibration
General Provision

8.8.1

Noise and vibration levels will be controlled as set out below to ensure that the Development is operated in a way that minimises detrimental impact to the amenities of local residents.

Construction Noise

8.8.2

Infrastructure works, excavations, piling works and foundation construction will be among the most significant activities. The noisiest activities are likely to be demolition and piling works. Although concreting operations will also give rise to noise, although the levels generated would not be considered to be significant.

8.8.3

As the buildings within the proposed Development rise above the ground, there will be some noise from scaffolding and formwork erection but the majority of activities and plant (e.g. concrete pumping) are considered to generate low noise levels.

8.8.4

On occasions it may prove necessary to carry out noisy activities outside of normal working hours. In such instances prior consultation will be carried out with Richmond Borough Council, for example concrete finishing will extend beyond normal working hours.

8.8.5

During construction, the measures summarised below, are to be employed:
Details of construction activities, prediction levels/assessments will be discussed with the relevant authority, both prior to construction and during construction. Detailed construction programmes will be available in advance of work starting on site. Prediction, evaluation and assessment of noise and vibration as well as discussions between the construction team and Richmond Borough Council will be an on-going activity throughout the construction period.

Where work outside of agreed hours or likely to exceed specified noise limits is necessary then this shall only proceed subject to notification to Richmond Borough Council Environmental Health Officer and approval given. Except for emergency situations, notification will be in advance of any requirement for out of hours/ noisy working.

- Where the potential for noise exists, e.g. during demolition/piling, 'Best Practicable Means' will be used to reduce noise to achieve compliance consistent with the recommendations of BS 5228, and may include:

  Careful selection of plant items, construction methods, programming, implementing a 'noise and vibration protocol', which outlines monitoring frequency and action levels etc;
  Design and use of site hoarding and screens/noise barriers, to provide acoustic screening at the earliest opportunity; and
  Choice of routes and programming for the transport of construction materials.

8.8.6

Discussions will be held with Richmond Borough Council's Environmental Health Department and the format of Section 61 submissions will be agreed in principle prior to works commencing.

8.9 Soils and Contamination
Existing Conditions

8.9.1

The geological sequence at the site comprises Made Ground over River Terrace Deposits which are underlain by London Clay. It is possible that Alluvium may be present between the Made Ground and River Terrace Deposits, especially in the north of the site. The overall environmental sensitivity of the site is considered to be:

- **Hydrogeology (Medium to High):** The site is situated on Alluvium and River Terrace Deposits which comprise a Principal Superficial Aquifier over bedrock of unproductive strata (London Clay).
- **Hydrology (Medium to High):** the nearest surface water is the River Thames on the Northern site of the boundary.
- **Sensitive Land Uses (Low):** There is a local Nature Reserve 135m north of the site and a Nitrate vulnerable zone 120m from the site.

The site and central building comprises studios (audio, photographic and television). A building in the north east of the site comprises offices and the building along the eastern site boundary comprises multi-storey car parking and further office space to the south. Surface car parking areas are situated in the north and west of the site.

Historically the site has been a film studio from 1959 and its use has not changed substantially except when it was marked as 'television studios' in the 1978 historic maps. A Low-Medium UXO risk is indicated from a Preliminary Risk Assessment (and further assessment is recommended).
A number of possible geotechnical hazards exist at the site which will require further investigation:

- High anticipated structural loads
- A riverside wall adjacent to the north (with possible tiebacks)
- Made Ground and obstructions
- Compressible soils (Alluvium) in the north of the site
- Soils aggressive to buried concrete and
- A potentially shallow groundwater level.

A number of potential contamination sources have been established on the site including:

- Car Parking on-site
- Substation on site
- Diesel fuel storage tank
- Gas/oil tank
- Generator and unlabelled tank
- Below ground sewage tank
- Chemical storeroom
- Recycling area and any
- Areas of backfilling and Made Ground from historical demolition.

There is considered to be **Low-Medium** risk of contamination at the site. A degree of localised contamination may exist but this is not likely to be widespread.
A site investigation is required in accordance with BS 10175 and BS5930 (+A2:2010), reported in accordance with current technical guidance. This should provide information on the general ground conditions and also target the identified potential pollutant linkages (in accordance with CLR11 and associated guidance). In addition it should consider geotechnical elements in accordance with Eurocode 7 and could also potentially consider elements such as soils reuse and water classification.

Given the proposed development, a piled solution is likely to be required. Specific consideration should be given to the potential interaction of the proposed basement and the river wall.

Strategy

8.9.2

The strategy for controlling and mitigating potential adverse environmental or health and safety effects during construction will be to adopt the procedures and methods set out within this CMP.

Operational Control

8.9.3

The strategy for controlling and mitigating potential adverse environmental or health and safety effects during construction will include the following, as appropriate;

- Identification and assessment of the potential for residual ground contamination to be presented prior to the start of any piling or excavation construction work;
- Minimisation of potential risks to site workers as required by the Construction (Design and Management) Regulations 2007;
- Sampling and testing of excavated spoil and piling arising, in order to assess the suitability of materials for re-use on site against site-specific criteria;
- Use of piling systems designed to minimise impacts on the groundwater;
- Dust suppression from any contaminated soils by the regular use of water sprays during any dry conditions, sheeting of haulage vehicle loads, use of wheel washers;
- Stockpiling of contaminated materials will be avoided whenever possible. If this is necessary, stockpiles will be located on areas of hard standing or plastic sheeting to prevent contaminants infiltrating into the underlying ground;
- Stockpiles will be treated to prevent windblown dust;
- Adequate drainage will be designed and installed during construction work to manage surface water runoff and prevent any contaminated water from entering watercourses, either directly as surface run-off, or indirectly via the surface water drainage systems;
- The flow of traffic across the site, speed restrictions, the siting of wheel wash facilities and sheeting gantries will be designed to take account of the potential presence of contaminated ground during construction activities in certain areas and the minimisation of associated potential safety, health and environmental risks;
- Any arising containing remnants of invasive/noxious weed-type materials will be treated as controlled waste and disposed of off-site at a landfill site that is licensed to receive such material. Disposal of any invasive weed-type material will follow the disposal recommendation referred to within the relevant Environmental Agency code of practice;
- The handling and storage of any potentially hazardous liquids on site, e.g. fuels and chemicals, will be controlled and best practice guidance such as that published by the Environment Agency, will be followed. Storage tank/container facilities will be appropriate bunded within designated areas and sited as far as possible from any watercourse or surface drain;
- If hazardous liquids escape, remedial action will be taken as soon as possible; and
- Where unforeseen contamination is identified during the course of the work specific investigations will be carried out in the areas in question and appropriate Health & Safety procedures will be implemented during decontamination or removal of material.

8.9.4

A strategy will be prepared to identify, analyse, segregate and control existing contaminated soils on this site. Richmond Borough Council and the Environment Agency will be consulted on the strategy prior to commencement of earthworks.

8.9.5

Procedures will be drawn up to control all potentially contaminating materials brought on site.

8.9.6

Should soil contamination occur as a result of a pollution incident on site, reference will be made to the material COSHH data, and the soil will be decontaminated as recommended therein.

8.10 Transport
General Provisions

8.10.1

Estimates of construction traffic generation will be provided as part of the reserved matters application.

8.10.2

The works will be carried out in such a way that allows local residents and businesses to operate effectively during the works. All diverted or replaced rights of way will be notified in advance and where appropriate, temporary routes will be provided.

8.10.3

A key principle of the traffic management plan is to ensure the safety of all personnel (drivers & pedestrians). This means that separate dedicated routes will be established for vehicles and pedestrians. The onsite traffic flow will change through the course of the Development, wherever practicable one way systems will be used, with designated areas for unloading, reversing and turning. All site traffic will be subject to speed restrictions. Failure to comply with on site traffic rules will result in appropriate measures being taken.

8.10.4

Vehicles and pedestrians will be segregated at site entrances by means of physical barriers. Site operatives will be required to wear high visibility clothing. Plant operators and drivers will be required to hold valid certificates and will undergo safety training.

8.10.5

Specific materials storage areas will be identified for each area of the site and managed as the interface locations between the bulk deliveries and the on-site distribution by forklifts, cranes and hoists.

8.10.6

Dedicated circulation routes for site spoil movement will be set up, segregated where possible from the material delivery route.

8.10.7

For large pre-planned loads, or abnormal loads, Richmond Borough Council, Metropolitan Police guidelines and designated routes will be complied with.

8.10.8

Site routes within the Development will change during the construction sequence to provide the safest, most economical traffic circulation and the minimum environmental impact through noise and dust.

8.10.9

Site personnel access to the site will be via security-manned posts/gates and segregated from on site construction traffic, by means of vehicular barriers/fencing/hoardings etc, as outlined within the Traffic Management Plan.

8.10.10

A Traffic Management Plan will be developed for the project (in accordance with the HSE Guide – The Safe use of Vehicles on Construction Sites) prior to works commencing. It will be reviewed and updated on a regular basis to reflect the changing access requirements and route availability. This will take into account current legislation, Police, Fire Authority and HSE Guidance, Local Authority Transport Schemes and neighbourhood Lorry Restrictions. The Traffic Management Plan will be reviewed and updated in line with the construction programme and will typically include details of the following:

- Temporary traffic control measures;
- Temporary and permanent access to the works – for personnel/vehicles;
- Off-loading and storage areas;
- Traffic management procedures for waste disposal vehicles;
- Personnel and vehicle segregation;
- Equipment, e.g. road cones, temporary fencing and signage etc;

- Ensuring all work is planned and method statements prepared detailing safe systems of work;
- Ensuring that all sub/trade contractors make adequate provision for vehicle selection and supervision of drivers;
- Making vehicle safety an integral part of the Development health and safety plan;
- Defining standards for driver competence, vehicle safety and maintenance;
- Ensuring co-ordination and co-operation between contractors;
- Ensuring all workers receive site induction training covering safe traffic routes and site rules for operating vehicles;
- Establishing safety monitoring procedures for the use of vehicles on site e.g. permit to work etc.

8.11 Waste
General Provision

8.11.1

The disposal of waste generated during construction, including any surplus spoil, will be managed to maximise the environmental and development benefits from the use of surplus material and to reduce any adverse effects of disposal. In general, the principles of the waste management hierarchy, which favours waste minimisation, re-use and materials and recycling over disposal to landfill will be favoured.

Construction and Demolition Waste

8.11.2

Methods for waste reduction will form a basic strategy for construction waste management from the start. These materials will generally be inert or environmentally benign and may have alternative uses elsewhere on the Site. Opportunities will be investigated to maximise the recycling potential of demolition and construction materials. It is anticipated, that demolition concrete and masonry will be crushed for possible as a piling platform and other purposes.

Buildings and materials containing asbestos will be assessed in advance of demolition works commencing, and all asbestos identified removed. A final verification will be undertaken of the few areas that were inaccessible in the original demolition and refurbishment survey and, if necessary, further removal works carried out, followed by the issue of clearance certificates.

Care will be taken by contractors to identify all asbestos related materials and to record, control, remove and dispose of all such materials in accordance with current legislation.

Some contaminated materials may be found during the Development. Any contaminated materials that may be generated shall be stored and disposed of in accordance with relevant best practise guidance and legislation.

Licensed carriers will remove other residual waste, i.e. general office waste, etc from site to suitable licensed disposal sites. Where possible, segregation and recycling of materials, such as office paper, food waste will be undertaken.

Control during Construction

8.11.3

The contractor will ensure minimisation of wastes arising on site and reuse where possible, either directly or by recycling, waste monitoring and setting of targets. Recyclable materials such as metal, timber, cardboard and office paper will be put in colour-coded bins, ready for collection by the appropriate contractor.

Initiatives to reduce other waste streams include as far as practically possible:

- Minimising raw material waste through analysing design and construction techniques where possible;
- Making a commitment to develop waste minimisation opportunities by maintaining a role in the management of the supply chain during construction. Measures such as bulk buying and the use of ‘large customer purchasing power’ to influence and make demands on suppliers will be utilised;

- Liaison with suppliers to enable packaging material to be sent back for reuse, the use of off-cuts where possible and the recycling of off-cut material by the supplier;
- Engaging contractors in the process of maximising the use of recycled aggregates for hardcore and alternative cements according to application; and
- Ensuring no vehicle leaves the site empty, i.e. all return vehicles will take 'associated waste' off-site.

To ensure compliance with legislative requirements, only Environment Agency licensed waste hauliers, waste management contractors and landfill sites will be used.

Suitable protection measures will be incorporated in the design of the waste management area to prevent pollution, and regular inspections carried out to ensure that stored waste is covered by present accidental spillage and from being blown away.

Movement of waste by haul road and public highways will avoid, where possible, the use of access routes through residential areas. When leaving site, vehicles will be sheeted/covered to prevent any escape of materials onto public highway.

Waste transfer notes will be retained and will fully describe the waste in terms of type, quantity and containment in accordance with relevant regulations. Information regarding the type and quantity of material returned to the supplier and the contractor or contractors will also hold copies of all waste documentation.

Materials stored on Site for disposal (e.g. spoil arising) will be subject to the provisions of the duty of care, and may require a waste management permit. Where this is identified the permit or any exemption will be managed by the Applicant.

8.12 Water Resources

The works will be carried out and working methods adopted to ensure that construction activities do not disturb ground contamination to adversely affect surface water and ground water quality. The following Best Practice measures will be adopted:

- Discharge to public sewers – after prior agreement with Thames Water;
- The existing storm water connection will be retained where possible during construction, with modifications made as necessary to prevent ingress of debris;
- Discharge via sediment traps/settlement tanks or ponds;
- Installation of interceptors;
- Control of spoil and other materials to prevent spillage, particularly during period of high local surface flood risk (September to March), and through appropriate handling and selection of spoil/material storage locations;
- Issues relating to contaminated land affected by the construction, together with proposals for protection of surface and groundwater;
- All drainage arrangements will be determined in consultation with the Environment Agency and Richmond Borough Council; and
- Careful siting and bunding of fuel storage facilities and any areas used for the storage of potentially hazardous materials.

Appropriate construction techniques will seek to ensure that groundwater seepage into excavated areas does not take place.

Subject to appropriate discharge consents, water arising during excavation works will be discharged to the surface water drainage network after attenuation in oil/water separators and settlement ponds/tanks. The discharge would be monitored to meet any requirements set by the EA. Any water not meeting the criteria set by the EA would be discharged to sewer and in accordance with Thames Water's requirements.

Consents to discharge from the Environment Agency or Thames Water may be subject to specified conditions. Monitoring will be undertaken as appropriate and records kept to demonstrate compliance with any specified conditions.

8.13 Construction Environmental Management Plan

A site specific Construction Environmental Management Plan (CEMP) covering the demolition and new construction for each phase of the Development. Some aspects will be common across each of the phase specific CEMP's.

These plans will deal with the potential impacts arising from these activities and identify implementation of effective management controls, for example the employment of dust suppression methods and use of properly maintained plant. This plan would set out the management, monitoring, auditing and training procedures in place to ensure compliance with the relevant legislation and ensure significant impacts on the surrounding environment are mitigated. The site specific CEMP will:

- Identify environmental aspects;
- Specify measurable targets to be adhered to; and
- Detail mitigation measures to be undertaken and management tools and procedures required for environmental management.
- The CEMP will include, but will not be limited to the following main items:
- Programme and phasing of the works;
- A broad plan of the demolition and construction works, highlighting the various stages and their context within the project, including a schedule of materials and manpower resources as well as plant and equipment schedules;
- Detail of site layout arrangements including temporary works plans for storage, accommodation, vehicular movements, delivery and access;
- Site working hours;
- Prohibited or restricted operations (locations, hours etc);
- Details of plant to be used and associated noise levels;
- Details of operations that are likely to result in disturbance and the expected duration with key dates , including a procedure for notification of Richmond Borough Council and relevant statutory and non statutory (including neighbours) parties so that local arrangements can be agreed;
- Environmental Impacts and EIA Mitigation Register;
- A procedure to ensure communication is maintained with Richmond Borough Council and the local community to provide information of any operations likely to cause disturbance (through meetings and newsletters);
- Provisions for affected parties to register complaints and the procedures for responding to complaints;
- Provisions for reporting to Richmond Borough Council;
- Details of access and egress and proposed routes for HGV's; and
- Details of Emergency Incident Procedure.

8.14 Site Waste Management Plan

At the outset a site waste management plan will be produced using BRE's SMARTWaste tool - a sample is enclosed within the appendix. This includes a waste forecast identifying options for reuse, recycling and avoidance of landfill and to record actual waste arisings.

The SWMP will also record responsibilities for waste management on site, any waste eliminated or reduced through the design process, compliance with the "Duty of Care", Environmental Protection Act 1990, and any training or awareness raising measures undertaken and reviews undertaken. It will also provide environmental KPI's which will be used to demonstrate performance levels against specified targets. The SWMP will be used in evidence toward environmental building assessments such as the Code for Sustainable Homes.

8.15 Hazardous Waste

In anticipation of production of Hazardous waste, the Heygate Masterplan will be registered as a producer of Hazardous Waste with the Environment Agency as required by the Hazardous Waste (England & Wales) Regulations 2005.

Hazardous wastes will be segregated and stored separately from other waste fractions to avoid contamination and risk to the environment and personnel.

9 Work Force

9.1 Employment and Management Workforce

9.1.1

Site labour levels will be provided as part of the reserved matters application.

9.1.2

Catering and other essential welfare facilities will be provided on site.

9.1.3

An employment strategy will be delivered via an Employment Centre in partnership with Wates Construction, Richmond Borough Council, local agencies, training providers and Contractors. The Contractors shall engage with the Employment Centre service to encourage local residents to apply to meet the employment requirements of construction.

Contractors Working Agreement – Union Involvement

9.1.4

The Contractor will endeavour to ensure that all appropriate measures necessary are taken to maintain good industrial relations in connection with the Development.

9.1.5

The Contractor will notify Trade Unions of the scheme and estimated timetable. A list of contractors together with, where applicable, the National Joint Council for the Building Industry (NJCBI) register number and/or reference with the Building and Civil Engineering Holiday Scheme Management or its equivalent will also be supplied.

9.1.6

The contractor/sub contractors (Building Trades) appointed must abide by the terms of National Working Rule Agreements as appropriate. Contractors outside Building Trades are to abide by their national agreements as appropriate.

9.1.7

An Equal Opportunities Policy will be adopted and contractors (and their sub- contractors) must adopt a positive approach to the employment and training of minority groups.

9.2 Working Hours

9.2.1

Noisy construction work which is audible at residential properties will generally only take place during the following hours:

- Monday to Friday, 08:00 to 18:00 hours
- Saturday, 08:00 to 13:00 hours
- No working on Sundays, Bank Holidays or Public Holidays

In order to maintain the above working hours, the Principal Contractor may require at certain times a period of up to one hour before and after normal working hours to start and close down activities (this will not include works that are likely to exceed agreed maximum construction noise levels). Specialist construction operations and deliveries may also be required to be carried out side these core hours in agreement with Richmond Borough Council.

Works will take place outside these hours but will mostly be within noise limits set by Richmond Borough Council. Consultation with Richmond Borough Council will be required prior to noisy activities taking place outside normal hours of operation, with the exception of emergency work which may need to take place as required.

9.3 Local Training and Employment Opportunities

9.3.1

The Development is committed to meeting the needs of local people wherever possible and to this end pro-actively
encourages the employment of local residents and the use of local businesses and services. Given the scale and timetable for the Development it is anticipated that the Development's employment strategy will contribute to long term improvements in participation and skills in London's construction industry. Contractors are expected to support Wates Construction in its delivery of any economic development and community investment commitments and targets Wates Construction has set.

9.3.2

Contractors are expected to provide employment and upskilling opportunities for local residents of Teddington and surrounding areas in line with the employment strategy. The employment strategy will be developed in detail and delivered in partnership with local agencies and training providers, and will include:

- Richmond Borough Council
- Social Enterprise Brokerage and Wates Apprenticeship Training Academy
- A consortium approach between local partners – including local authorities, Job Centre Plus and education and training providers; and
- A commitment from contractors and sub-contractors to use specified methods of recruitment.

9.3.3

Contractors are expected to participate in the programmes of training (or re-training) of local people in such skills appropriate to the Contractor's works. These initiatives may include, but are not limited to activities such as providing paid or unpaid work placements, participating in work experience programmes, providing employment opportunities, promoting National Construction Week and employers giving time to visit local community organisations, schools, colleges etc.

9.3.4

Where there is a requirement for casual or temporary employment this should, wherever possible be drawn from the local labour workforce, via the employment centre.

9.3.5

Contractors shall seek to offer all types of jobs and at all levels to local people as far as possible. It is expected that where local residents are appropriately qualified or experienced in any relevant trade, administrative or managerial / professional skills, they should be given the opportunity of employment

9.3.6

Contractors will ensure that local contractors and suppliers are provided with information about the proposed Development and are given the opportunity to tender for all appropriate contracts or sub-contracts that arise. The Applicant will seek to ensure that the prime contractor engages local labour and local sub-contractors whenever possible and that appropriate local employment clauses are included in the contract documentation.

9.3.7

Richmond Borough Council and relevant training partners will be notified at an early stage of the intended construction programme and start date on site and will work with Contractors to review and identify available skills and skills shortages and to commence appropriate up-skilling programmes for local labour.

9.3.8

The Applicant and/or contractor/contractors (and sub-contractors) will nominate a person to be responsible for training on each section of Development and be required to attend meetings where necessary and to liaise with the responsible person in the contractor/contractors on matters pertaining to the training being carried out by them. The person appointed will also be responsible for collating information on training carried out by sub-contractors and ensuring that similar provisions apply to those sub-contractors.

9.3.9

To evaluate the success of the local employment initiatives, it is expected that Contractors record local labour statistics. As a minimum, Contractors shall monitor and record the number and proportion of local people and local businesses utilised from the Richmond area.

9.3.10

Wates have an annual Community Matters Week where our teams carry out projects that benefit local organisations. We will welcome suggestions as to where this can best serve the local community.

9.4 Temporary Site Accommodation

9.4.1

Site accommodation and welfare facilities will mainly be within the site boundary, laid out in a regular manner and decorated in uniform colour. No overnight or living accommodation will be provided/located on site. Should the need arise local accommodation (external to site) would be used.

The principal site welfare accommodation will comprise mess rooms, locker rooms, toilets, canteens and showers, all of which will be prefabricated as far as possible with final assembly taking place on site. Preventative pest control measures will also be put in place, i.e. appropriate storage and regular collection/ handling and disposal of waste. Regular inspections will be carried out to ensure that good housekeeping measures are maintained at all times.

9.4.2

Siting of temporary site accommodation will be located to facilitate ease of access and construction, in order to minimise any environmental impact as far as possible.

9.4.3

It is proposed that the Site Accommodation housing the construction teams, site canteen and welfare facilities will initially be located within the area adjacent to the Broom Road site entrance for the demolition works. The site accommodation will subsequently be relocated adjacent to the River Thames once construction works have commenced.

9.4.4

Additional satellite offices and welfare facilities will be provided elsewhere on the site to suit the construction activities.

9.4.5

The Site will be managed in accordance with the requirements of Richmond Borough Council and other local and statutory authorities, codes and guidelines. In considering site layout, the following will apply:

- Storage sites, fixed plant and machinery, equipment and temporary buildings etc, will be located to limit adverse environmental effects. All reasonable precautions will be taken for the operation of plant and equipment, to avoid nuisance and excess noise impact on the surrounding residents;
- Lighting to the site boundary and associated areas will be provided with sufficient illumination for safety of the passing public/personnel, and positioned such that it does not intrude on adjacent buildings and land uses, or to cause distraction or confusion to passing drivers or constitute a road hazard and will be chosen to limit light pollution effects such as ‘glow in the sky’;
- Emergency Response Plans will be developed; and
- The standard of fencing/screening during construction on a particular site will be selected in order to maintain effective site security and achieve appropriate noise attenuation and visual effect – laid out in a regular pattern and decorated in uniform colour.

9.4.6

Control of pests (rats, pigeons, etc.) will be carried out using a professional pest control company. All products used will not be harmful to wildlife.

9.5 Site Security

9.5.1

It is intended to provide a fully enclosed site utilising solid hoarding where possible.

9.5.2

If sections of the solid hoarding are required to be removed to allow works to progress, then Heras type fencing will be used to maintain a secure perimeter. A designated manager will be responsible for the day-to-day maintenance of the perimeter and removing any offending material. Solid hoarding will be reinstated once works have been completed.

9.5.3

It is proposed that 24-hour security will be provided for the duration of the Development, this will be provided by a professional security company. All access points to and from the Site will have a manned security point that will be responsible for the control of all vehicular and pedestrian access and egress.

9.5.4

A computerised identity biometrics system will be used to control and monitor access to the Site of all persons. The system will provide detailed reports on operative numbers, including entry and exit times.

9.5.5

Pedestrians will be permitted entry at pedestrian entrances. No access will be allowed through vehicle gates. Safe non-hard-hat access to the Contractor's office and welfare facility will be created. When the satellite offices are created safe access routes will be introduced. All persons working on the Development and visitors will be issued with security passes. Biometrics will be linked to turnstiles in security cabins.

9.5.6

Vehicle movements in and out will be recorded.

9.5.7

All personnel and vehicles will be liable to security searches.

10 Public Relations and Community Liaison

10.1 Considerate Constructors Scheme

10.1.1

The Principal Contractor will be required to register the Site with the 'Considerate Constructors Scheme' which is administered by the Construction Industry Board. This is a voluntary code of practice that seeks to:

- Minimise any disturbance or negative impact (in terms of noise, dirt and inconvenience) sometimes caused by construction sites to the immediate neighbourhood;
- Eradicate offensive behaviour and language from construction sites; and
- Recognise and reward the constructor's commitment to raise standards of site management, safety and environmental awareness beyond statutory duties.

10.1.2

The scheme requires constructors to adhere to a Code of Practice that includes the following principles:
Be environmentally aware in the selection of resources. Pay particular attention to pollution avoidance and waste management. Use local resources wherever possible and keep to a minimum at all times noise from construction site activity;

- Be considerate to the needs of all those affected by the construction process and of its impact on the environment. Special attention to be given to the needs of those with sight, hearing or mobility difficulties;
- Keep the Site clean and in good order and ensure that the surrounding area is kept free from mud, spillage and any unnecessary construction debris;
- Be a good neighbour by undertaking full and regular consultation with neighbours regarding site activity from prestart to final handover. Provide site information and viewing facilities where practical;
- Promote respectable and safe standards of behaviours and dress. Derogatory behaviours shall not be tolerated under threat of the strongest possible disciplinary action;
- Be safe. All construction operations and vehicle movements to be carried out with care of the safety of passers-by, neighbours and site personnel;
- Be accountable to the public by providing site contact details and be available to deal with their concerns and develop good local relations;
- All contractors will be required to adhere to the requirements of the code of practice. Information about the scheme will be provided to all personnel at induction and through ongoing awareness raising such as posters and tool box talks as appropriate; and
- The scheme will also be publicised to local residents by the use of appropriate banners and posters with contact details posted at the boundary of the Site
- A minimum score of 40 is to be achieved on the Considerate Constructors Scheme.

Public Relations

10.1.3

During the works, there will be regular communication with neighbouring residents. A regular newsletter will be issued to the surrounding residents to keep all parties informed about progress to date and forthcoming works. Any special or unusual activities to take place (such as road closures or deliveries of large plant) will be notified by way of a supplementary letter, issued to the relevant neighbours and local amenity centres.

10.1.4

The Developer will provide a point of contact to the neighbouring residents and relevant statutory and non statutory bodies and a contact telephone number will be provided.

10.1.5

A complaints register will be established to provide a permanent record of the performance of the project. Any complaint from residents or other parties will be treated seriously, and the complaint logged and cause investigated. Analysis of any complaints made will allow procedures to be implemented with the aim of avoiding any re-occurrence.

10.1.6

A proposal to use the Site fencing to display information regarding the Development, status etc will be made in order that the local community and passers by can be informed of progress of the Development.

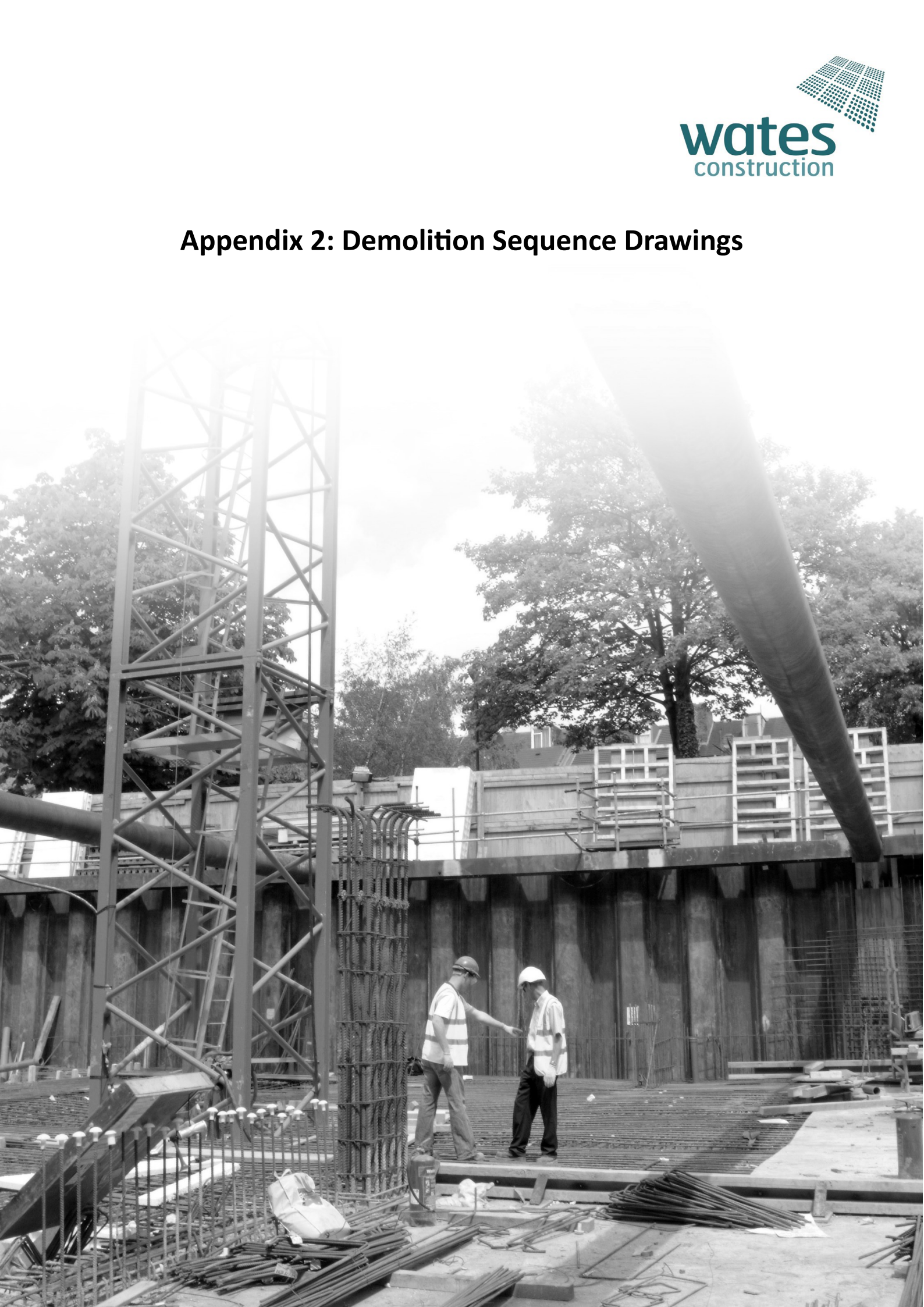
Site viewing stations will be provided to allow the public to safely view the current works being undertaken on site.

Appendix 1: Demolition and Construction Programme

Construction and Demolition Programme

The following timetable is illustrative only to indicate likely timelines should members be minded to grant and it prove possible to move immediately to the delivery stage. These timeline periods and durations are applicable regardless of in which year implementation was to occur.

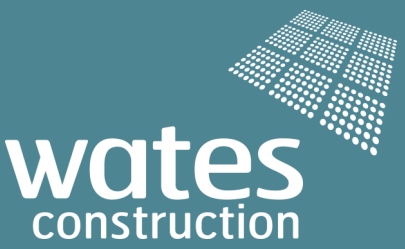
Appendix 2: Demolition Sequence Drawings



Appendix 3: Traffic Management Plan

Appendix 4: Tower Craneage Plan

Appendix 5: Generic Construction Programme



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