GUILD LIVING

MORGAN SINDALL

Guild Living, Epsom

Construction Environmental Management Plan

Revision 04

Contents

1.0 Introduction

The project involves the demolition of land adjacent to Epsom General Hospital into a new 'Later Living' complex of residential apartments, care facilities and amenities.

The purpose of this Construction Environmental Management Plan (CEMP) is to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area.

Construction Environmental Management Plans often detail the implementation of measures in accordance with environmental commitments outlined in; an Environmental Policy or Environmental Plan, requirements of planning conditions, section 106 agreements or other legislative requirements. They are 'live' documents that are reviewed and updated at regular intervals throughout the project life cycle.

This document forms part of a suite of site documentation, this report focuses exclusively on environmental effects and the delivery of mitigation identified in the Environmental plan. Site health and safety will be covered in our Construction Phase Health and Safety Plan.

The purpose of a construction environmental management plan is typically to:

- Highlight stakeholder requirements.
- Ensure that the development is compliant with current environmental legislation.
- Outline environmental management system requirements (in accordance with ISO 14001).
- Detail the mitigation committed to within the Environmental plan and how it will be implemented on site.
- Ensure that any adverse effects are minimised during construction.
- Describe any site-specific method statements required.

1.1 The Site

The site is located in the Borough of Epsom & Ewell and the project consists of the following:

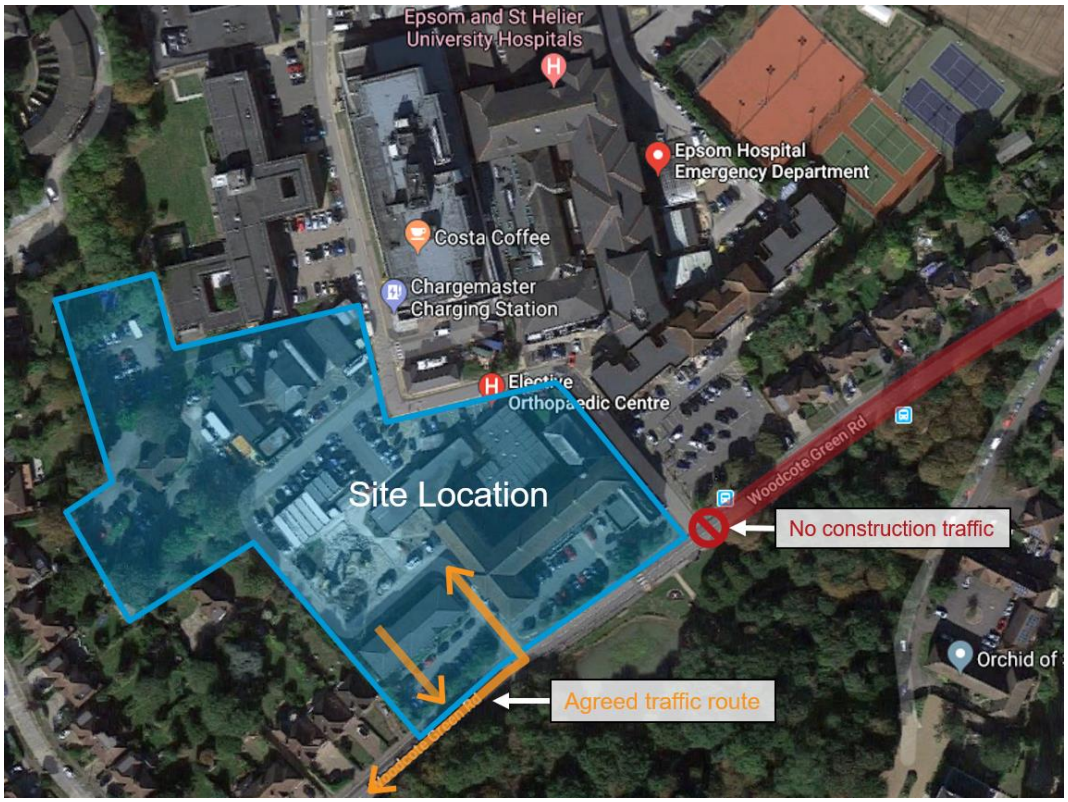
- Demolition of existing York House, Rowan House, Woodcote Lodge and disused Boiler House adjacent to Epsom General Hospital.
- Creation of 306 new apartments / care facilities along with car parking and associated amenities to form a later living village.

These works are due to commence in February 2020 with the asbestos removal and demolition works. The construction of the building is due to commence in February 2021 and complete in early 2024.

Figure 1: Site Location

Directly in front of the area to be developed in Woodcote Road, which will be used for construction access. No construction vehicles will use the hospital delivery route or M&E entrance to the hospital to ensure segregated access of the construction works.

Figure 2: Existing Site Layout



1.2 Stakeholders & Project Team

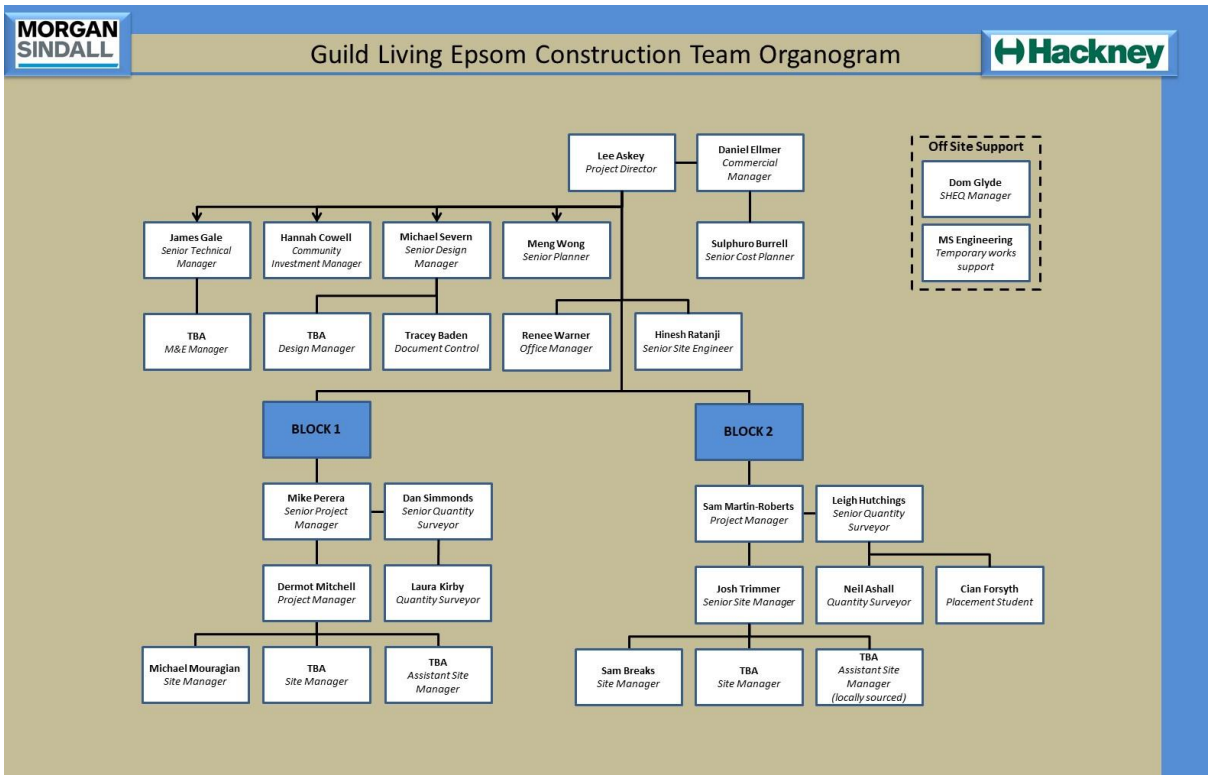
The parties involved include:

Landowner	-	Guild Living
Project Manager	-	Cast
Main Contractor	-	Morgan Sindall
Cost Consultant	-	Cast
Architect	-	Marchese
Structural Engineer	-	Hydroc

Our Project Director, Lee Askey will have overall responsibility for the Construction of the project. He will be supported by a series of Project Managers for each of the new buildings. Each Project Manager will have responsibility for their respective areas, and will be supported by Site Managers, who will have day to day responsibility for the works inside their allocated areas. Hannah Cowell, our Community Investment Manager who reports directly to Lee Askey, will be employed on the project to assist with community liaison. Hannah, who shall be supported by the site team, will be the dedicated single point of contact for the local community, Epsom General Hospital, neighbouring properties and local businesses to speak to about the project.

The full breakdown of the construction team is illustrated in Figure 3 below.

Figure 3: Morgan Sindall Construction Team



1.3 General Provisions

1.3.1 This Construction Environmental Management Plan (CEMP) incorporating an overview of the separate document, the Traffic Management Plan (TMP), has been prepared by Morgan Sindall and submitted to Epsom & Ewell Council to support planning of the Guild Living project. This document provides a summary of the likely environmental issues that may arise during the construction works and the Applicant's approach to managing these issues. This CEMP also demonstrates how the mitigation identified in the Environmental plan will be implemented. A schedule of mitigation is presented at Appendix A of this CEMP.

1.3.2 This CEMP describes the anticipated construction and demolition programme for the Guild Living 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 their mitigation.

1.3.3 Planning for the construction and demolition works is necessarily broad at this stage and will be subject to modification, and revision during the development of the detailed design and methodology.

1.3.4 This assessment has been made using the experience of the Applicant - Morgan Sindall - 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.

1.3.5 The demolition and construction phases are complex in nature due to the requirement to not affect the operation and running of the adjacent Epsom General Hospital whilst construction proceeds.

1.3.6 Construction traffic routes and construction traffic volumes will vary throughout the Development's overall programme, however will always be segregated from the Epsom General Hospital entrance.

1.3.7 Construction and demolition works for the Guild Living development may impact the local environment. Mitigation measures have been identified in the ES and will be implemented through this CEMP. Health and safety issues need to be addressed in a proactive manner during the demolition and construction phases.

1.3.8 Construction management and planning, adoption of environmental best practices, good neighborhood policies and regular meetings with the Epsom & Ewell Council, the management of the neighboring Epsom General Hospital, local stakeholders and community engagement will contribute to mitigating adverse environmental effects and ensuring good construction, environmental, health and safety practices.

1.3.9 These issues will be assessed in ES submitted in connection with the Guild Living development Planning Application. This CEMP is based on the base line studies and assessments carried out in preparation for the ES.

1.3.10 This CEMP sets out a number of strategies, standards and procedures in order to ensure compliance with the relevant legislation and mitigate anticipated environmental impacts and ensure good site health and safety practices.

1.3.11 The CEMP includes, but will not be limited to the following main items;

- Programme and phasing of the works.
- Demolition work for York House, Rowan House, Woodcote Lodge and the boiler room.
- Description of construction works.
- Indicative construction works timeline.
- Infrastructure works.
- Site logistics including plans for accommodation, welfare facilities, security and access.
- An overview of the Traffic Management Plan (TMP)
- Safety, health and environmental considerations including emergency incident procedure.
- Waste Management.
- Workforce including site working hours.
- Public relations and community liaison including the procedure to ensure communication is with all project stakeholders and the local community, provide information of any operations likely to cause disturbance, the provisions for affected parties to register comments on the project and the procedures for responding to any comments raised.

1.4 Implementation & Updates

The Contractor's Project Director, Lee Askey, will be responsible for the implementation of this CEMP. Responsibility for implementation of aspects of the CEMP will be delegated to other members of the contractor's project delivery team as shown in Figure 4.

The CEMP will continue to be developed for the project prior to works commencing and as they progress. It will be reviewed and updated on a regular basis to reflect the changes that arise. This will take into account current legislation, Police, Fire Authority and Health and Safety Executive (HSE) Guidance, Epsom & Ewell Council requirements and development of the design.

2.0 Demolition & Construction Phasing

The development project is broken down into a number of distinct construction phases. For each phase of the development some or all of the following activities will be required;

- Archaeological Written Scheme of Investigation (WSI) and if necessary a 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.
- Demolition of York House, Rowan House, Woodcote Lodge and the boiler house.
- Site clearance and enabling works, including minor earthworks to create a suitable development platform, and remediate if required.
- Sub-structure works (piling and foundations).
- Construction of superstructure, envelope and building fit out.
- External works including implementation of a landscaping scheme and public realm

2.1 Survey & Demolition

Works will commence on site in January 2020 with a full refurbishment and demolition asbestos survey of Rowan House, York House and Woodcote Lodge. Any subsequent asbestos will then be removed. Soft strip of Rowan House and York House will then commence in March 2020. Woodcote Lodge will commence soft strip in June 2020 once the building becomes vacant.

Demolition of York House and Rowan House will commence in May/ June 2020 with Woodcote Lodge commencing July 2020.

Finally, the boiler House and chimney area currently occupied by the Epsom General Hospital will become vacant on the 1st January 2021. A full asbestos survey will then be carried out with any asbestos removed. At the same time scaffold will be erected on the chimney to commence demolition. The main demolition of the boiler room will commence in February 2021 and will be complete by approximately June 2021.

Figure 4: Rowan House

Figure 5: York House

Figure 6: Woodcote Lodge

Figure 7: Boiler House and Chimney

2.2 Construction

Commencing in Spring 2020 and scheduled to complete in late 2023, the new Later Living village will be a new concrete framed construction with brick/ rainscreen cladding and extensive glazing. Within this, the village will contain:

- Nine storey-high structure with a mix of intermediate care facilities, one, two and three bedroom apartments and wellbeing centre
- Retail units
- Restaurant
- Parking facilities
- Extensive landscaping

Figure 8: Proposed Guild Living Epsom

3.0 Consideration of Environmental impacts during the works

Consideration has been given to local environmental impacts of the project on local wildlife as below.

<table>
<tr><th></th><th>Jan</th><th>Feb</th><th>Mar</th><th>Apr</th><th>May</th><th>Jun</th><th>Jul</th><th>Aug</th><th>Sept</th><th>Oct</th><th>Nov</th><th>Dec</th></tr>
<tr><td rowspan="2">Bats</td><td colspan="3">Inspection of hibernation roosts</td><td>Limited Activity</td><td colspan="4">Emergence, dawn, transect and building roost surveys</td><td>Limited Activity</td><td colspan="2">Inspection of hibernation roosts</td></tr>
<tr><td colspan="11">Potential roost and building inspection surveys throughout the year</td></tr>
<tr><td>Birds</td><td colspan="2">Surveys for wintering birds</td><td colspan="4">Bird breeding surveys</td><td>Little activity</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td colspan="2">Unrestricted construction activities</td><td colspan="5">Bird breeding and nesting season</td><td colspan="4">Unrestricted construction activities</td></tr>
</table>

Any trees that are removed as part of the construction will be removed before February 2020 when there are unrestricted construction activities prior to bird breeding and nesting season.

A survey for roosting bats has been carried out to all buildings that are being demolished. Whilst no visible signs of roosting bats was noted all of the buildings have the potential for bats to nest due to small opening vents/ gaps in the roof structures. The presence of roosting bats within one of the trees along the western boundary (T27). Therefore, a second bat survey will need to be carried out in May 2020 when bats start to emerge. The results of this survey will then all the demolition to commence.

4.0 Demolition & Asbestos Removal Works

4.1 Enabling Works

The following pre-commencement and enabling works activities will be carried out prior to the commencement of the main demolition works for Rowan House, York House Woodcote Lodge and the boiler house:

- Obtain any necessary consent, including but not limited to; hoarding and scaffold licences, necessary road closures.
- Install perimeter hoarding and gates for demolition and asbestos removal works to segregate the works from Epsom General Hospital.
- Identify methods and procedures to comply with Section 61 of the Control of Pollution Act; 1974 agreements and consents.
- Obtain approval of method statements and risk assessments and temporary works designs.
- Ensure all service terminations and utility disconnections are complete at the site boundary by relevant organisations.
- Relocate or divert any retained services.
- Supply and install site accommodation and welfare facilities.
- Install temporary power, lighting and water services.
- Establishment of fire escape routes / systems & emergency plans.
- Measures put in place to ensure no deliveries to the Epsom General Hospital, including the hospital shuttle bus are disrupted.

4.2 Surveys

- Surveys will be undertaken to the footprint of Rowan House, York House, Boiler House and Woodcote Lodge to gain a better understanding of the ground conditions, including the presence of any contamination.
- Surveys will also be undertaken in Woodcote Green Road to determine the presence and location of any existing services. This will allow considered planning and coordination of the new incoming statutory services for the project.
- A survey will be carried out to determine whether there are any archeological artifacts in the ground local to the construction works. As the site has previously been developed, this is not expected to be likely.
- Demolition and Refurbishment Asbestos Surveys will be carried out prior to the demolition of Rowan House, York House, Woodcote Lodge and the boiler house to establish the location and quantity of asbestos containing material within the buildings and associated structures to be demolished will be undertaken following vacant possession.
- Surveys will be undertaken strictly in accordance with the Control of Asbestos Regulations (HSG 248) and the appropriate HSE guidance in HSG 264 and will be carried out by a suitably qualified contractor in accordance with ISO 17020 and ISO 17025.
- In accordance with construction best practice, prior to the commencement of the survey, a suitably qualified ecologist will carry out a visual inspection to ensure that there are no roosting bats or birds.
- The surveys and DEMP will be issued to the asbestos removal and demolition contractors and form part of the pre-construction Health and Safety Plans prepared by the CDM Coordinator. Any constraints associated with the result of these documents will be factored into demolition methodology.

4.3 Ground Remediation

A geotechnical site investigation has been undertaken which identified ground contamination within the Made Ground and recommended soil remediation for landscaped areas. The mitigation measures identified in the Environmental plan will be implemented during the construction phase. A full briefing will be given to all operatives working on site as part of their site induction process.

4.4 UXO Investigations

An initial Unexploded Bomb Risk for the local area was obtained from Zetica which shows that the site is within an area of Low London Bombing Density. Low risk areas are those which have seen a bombing density of up to 10 bombs per 1000 acres. No abandoned bombs, UXO finds or strategic targets were identified within 1km of the site.

A further desktop UXO survey will be carried out before any construction works commence, if necessary a site UXO survey will be carried out with a magnetometer survey on pile locations.

4.5 Archaeological Investigations

An archaeological desk-based assessment of the sites has been conducted, there are no identified archaeological assets within the site. The site has a high potential for post-medieval and modern evidence, and a low potential for evidence from the prehistoric to medieval periods. If present, these would be anticipated to be of local significance, with the exception of prehistoric remains which may be of regional significance.

Identified adverse impacts may be offset through a programme of archaeological investigation defined through an agreed written scheme of investigation for an archaeological watching brief. Consultation and engagement with the Archaeological Officer will be required to agree the scope of any further archaeological investigation.

In the event of an unexpected find during construction works, the find 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.

5.0 Description of Construction Works & Indicative Measures

The general construction sequence for each phase is outlined below. Details may change as the design is developed and supply chain input is incorporated.

5.1 Demolition of the existing Rowan House, York House, Woodcote Lodge & Boiler House

Asbestos Removal:

Prior to demolition of the existing buildings, a full demolition asbestos survey will be carried out to determine the presence of any asbestos. If found, any asbestos will be treated as below.

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 HSE for each of these method statements.
- 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 a clearance certificate issued.
- Asbestos containing materials will be safely doubled bagged and transferred to the ground level into asbestos waste skips.
- The asbestos waste will be removed from site by registered carriers for disposal at a registered disposal site.
- Site perimeter asbestos fibre checks will be undertaken during the entire period of asbestos removal works. Background levels will be taken for the buildings in their dormant state before works commence.

Demolition:

As previously mentioned, the demolition of each site will be carried out at different stages. The demolition of Rowan House and York House will commence in May/ June 2020, whilst the demolition of the existing Woodcote Lodge will commence in June/July 2021. The boiler house and chimney will be demolished from January 2021 once it becomes vacant.

A Demolition Environmental Management Plan (DEMP) for the Works will be produced prior to commencing demolition in accordance with Regulation 29 of the CDM Regulations to identify how danger and risk from these activities will be prevented.

Prior to any demolition works taking place, representatives from Epsom & Ewell Council will be invited to inspect the areas to be demolished, and from these inspections it will be determined if there are any items to be retained or if there are any items of salvageable value. It has already been assumed that demolition concrete arising from the existing buildings will be crushed on site. This crushed material shall be used for a piling mat.

Demolition methodologies will be finalised following the appointment of the demolition contractor(s) who will undertake any asbestos removal and the demolition works.

Environmental Considerations during demolition:

- Segregation of material on site (considering safety and time/space constraints) to ensure demolition waste can be safely stored or removed to specialised waste facility, as appropriate; this prevents further need for segregation and vehicle movements.
- Ensure careful use of water in dust suppression.
- Implement 'best practicable means' during demolition to minimise environmental impacts, such as emissions to air, throughout the duration of the works.

The Demolition Contractor will adhere to the requirements within the CEMP. The CEMP will be regularly reviewed and revised as necessary.

Construction plant can be a significant source of emissions although control measures can be implemented to minimise any adverse impacts measures include ensuring:

- Site Plant and equipment will be kept in good repair and maintained.
- Plant will not be left running when not in use.
- Plant dust arrestment equipment will be used where practical.
- Plant and non-road moveable machinery will comply with NRMM regulations.

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

- 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.
- 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 the works are undertaken in a way that minimises potential effects on adjoining owners Epsom General Hospital and local residents. Details of demolition activities and predicted and actual noise levels will be discussed with the Epsom & Ewell Council Environmental Department, both prior to demolition 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 may include:

- Choice of routes and programming for the transport of demolition materials avoiding the hospital entrances.
- Design and use of hoardings and screens to provide acoustic screening where practical.
- Careful selection of plant items, demolition methods, programming, implementing a noise and air quality protocol which outlines monitoring frequency/action levels.

5.2 New Guild Living Later Living Scheme

Substructure:

- Excavations where necessary, trim formation and install the piling platform using crushed concrete material from the demolition works.
- Form foundation piles and piles for tower cranes, these will be CFA piles (TBC).
- Excavate to foundation level and the formation level of the swimming pools and install temporary works to enable the construction of the lower pile caps. Formation of pool and lift shaft slab, walls to ground floor level.
- Breakdown piles and form ground beams.
- Excavate, lay and test underground drainage, coordinate and install incoming services to the building, backfill including concrete surround where required.
- Trim and prepare ground floor formation including concrete waterproofing system.
- Fix rebar, shutter and pour ground floor slab.

Superstructure:

- The building's concrete framed structure will be constructed using four saddle-backed tower cranes and concrete pumps.
- Temporary edge protection will be used during superstructure construction and remain in place until replaced with the external envelope.

Envelope:

- Installation of the external envelope will commence as the superstructure is constructed.
- It is anticipated that bricks for the external façade will be lowered into place using the four saddle back tower cranes, and constructed with scaffolding.
- Glazing will be carried out from within the building, and the ground floor glazing will be left out to allow access for swimming pool formation.
- Roof waterproofing system will be installed as soon as the roof slab concrete has cured to achieve the earliest watertight date.

Fit Out:

- Services and finishes will commence as soon as the building is watertight.
- Fit out will use bathroom pods and finishing trades sequence, serviced by external hoists.

5.3 Temporary Works

During the course of construction there will be a number of temporary works measures required, all of which will be in accordance with Morgan Sindall's temporary works procedures, and overseen by our on-site temporary works coordinator (TWC). All temporary works will have a design, and where required a third party independent design check, prior to being carried out on site. An indicative list of temporary works will consist of, but not be limited to:

- Scaffolding.
- Sheet piling.
- Temporary hoists.
- Temporary cranes.
- Temporary supports and formworks falsework.
- Temporary weatherproofing during demolition and construction.

All temporary works will be carried out from within side the temporary hoarding and will not affect any activities outside of the hoarding boundary, or the operation of Epsom General Hospital.

6.0 Infrastructure Works

Public Realm works: Woodcote Green Road

- A new entrance for the project is formed on Woodcote Lodge. This will be installed early in the construction sequence to allow temporary access for construction works to avoid disruption to Epsom General Hospital.

Figure 9: Proposed Guild Living Epsom

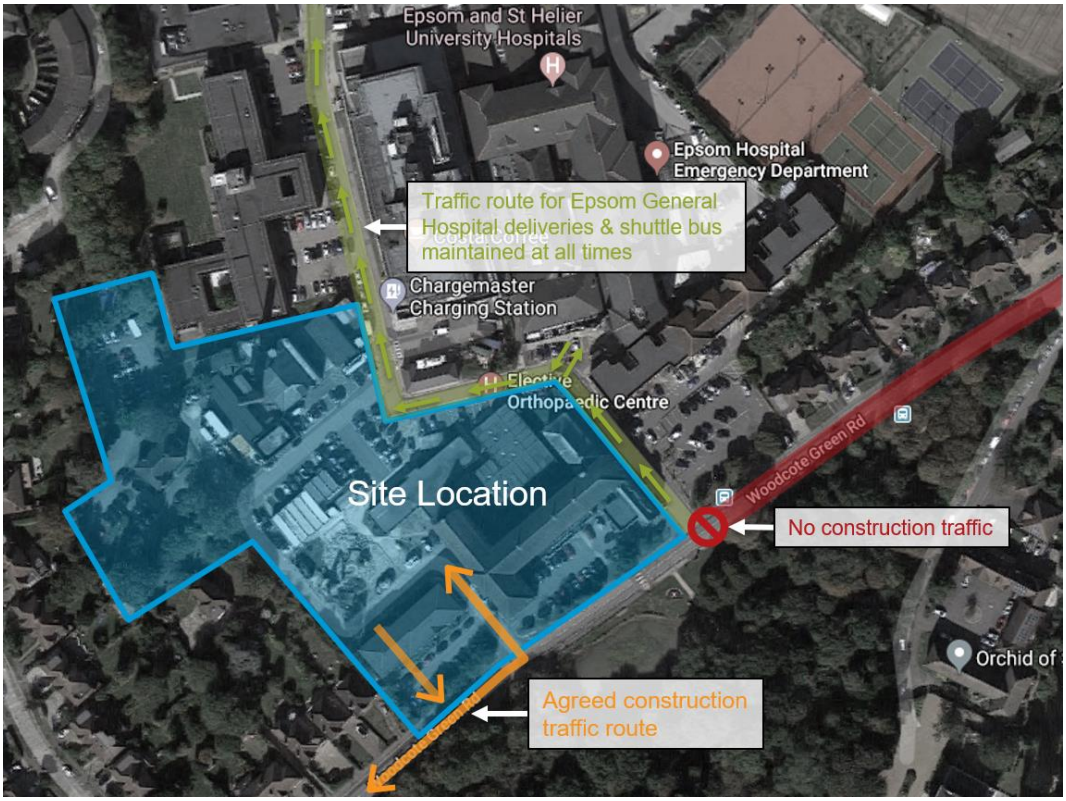
7.0 Site Logistics

Set out below are the general principles of the site logistics, these will be developed further with the logistics contractor, and are subject to change as the project develops. However, there are a number of key considerations that cannot be compromised by the site logistics;

- The existing Epsom General Hospital will remain operation throughout the works. A separate access to the site will be maintained to prevent disruption to the hospital and fire escape routes will be maintained.
- Access is to be maintained for the Epsom General Hospital deliveries and shuttle bus.

Access to neighbouring residential properties always maintained.

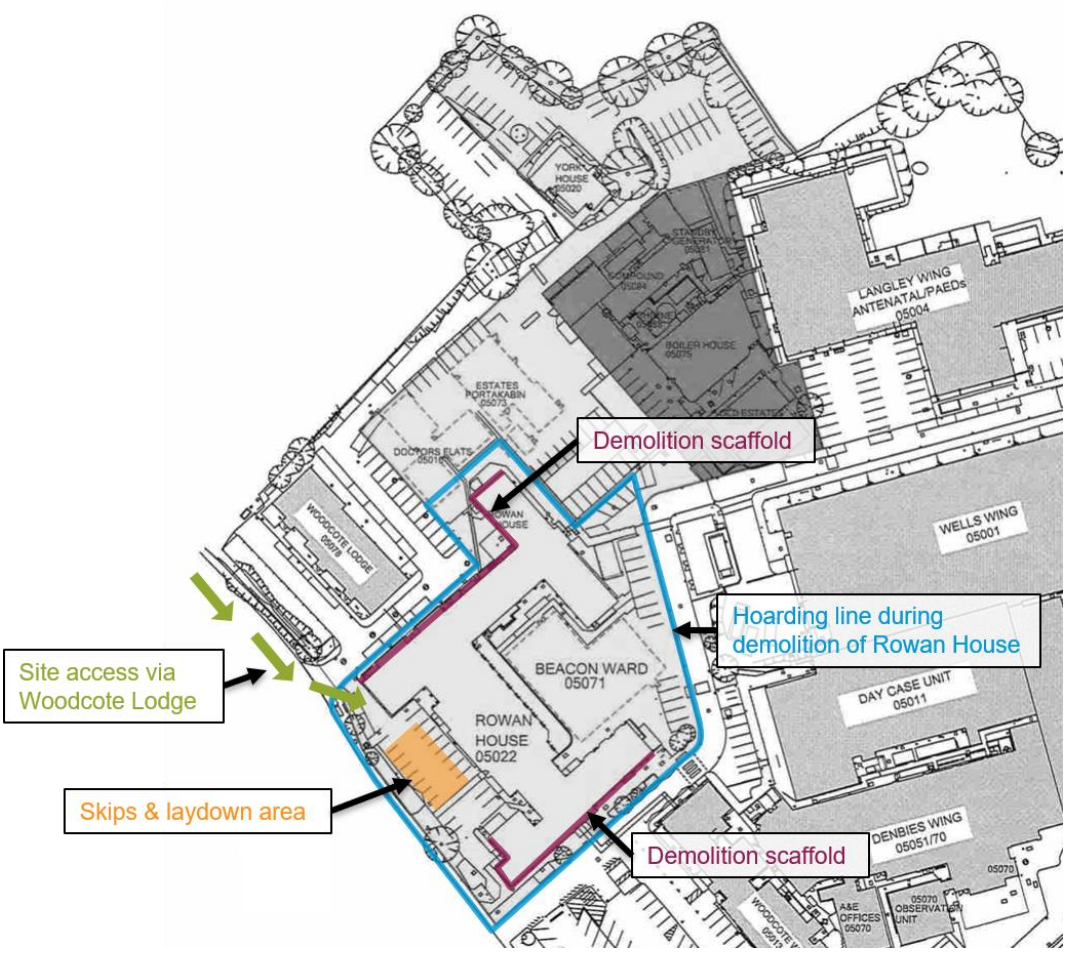
Figure 10: Site Logistics



7.1 Site Establishment

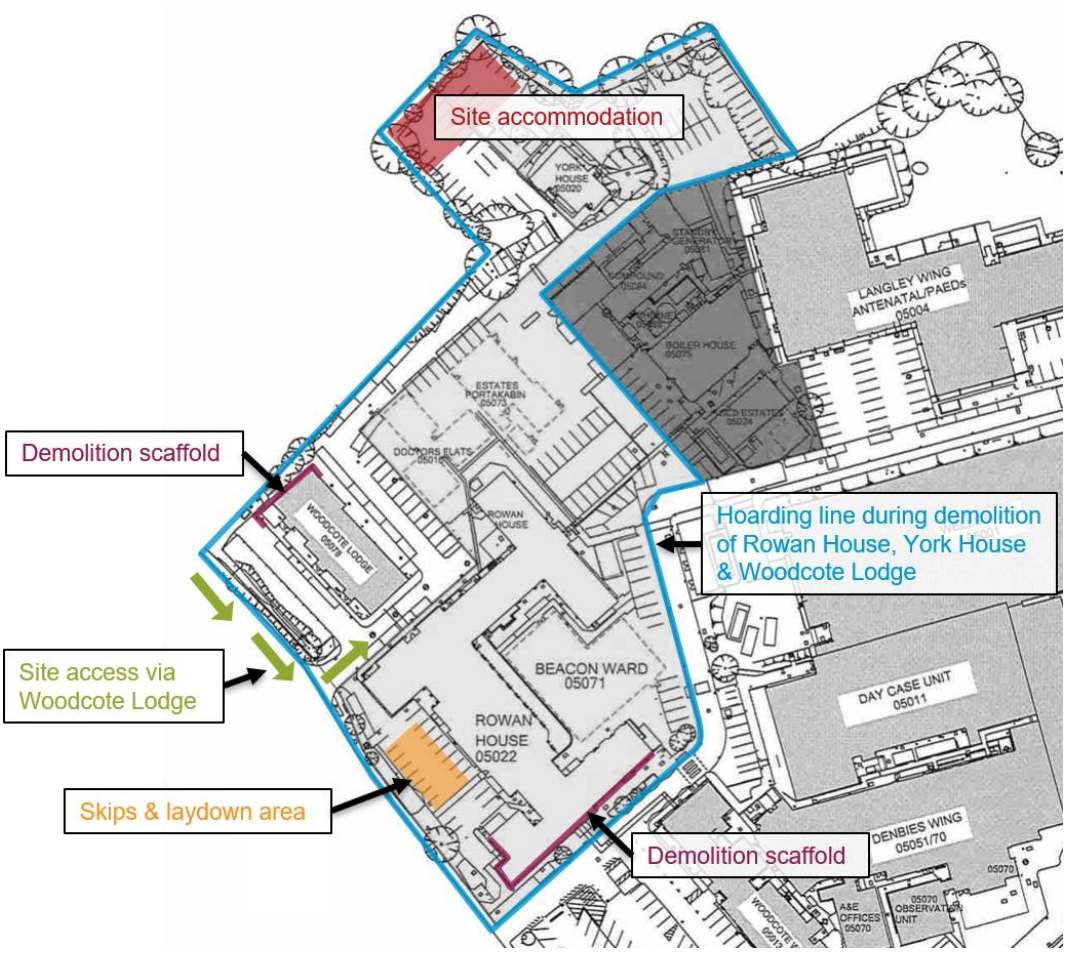
7.1.1 The first stage of the demolition and construction programme for each phase will be to establish the area as a demolition site. The sites will be secured and separated from the public using solid plywood hoarding a minimum of 2.4m high, decorated as required by the client team. The blue line in Figure 10 demarcates the suggested hoarding line for the demolition and construction phases. As shown below the first area that will be hoarded off is around Rowan House to allow demolition to commence (see figure 12 below).

Figure 11: Suggested Site Set-up May/ June 2020



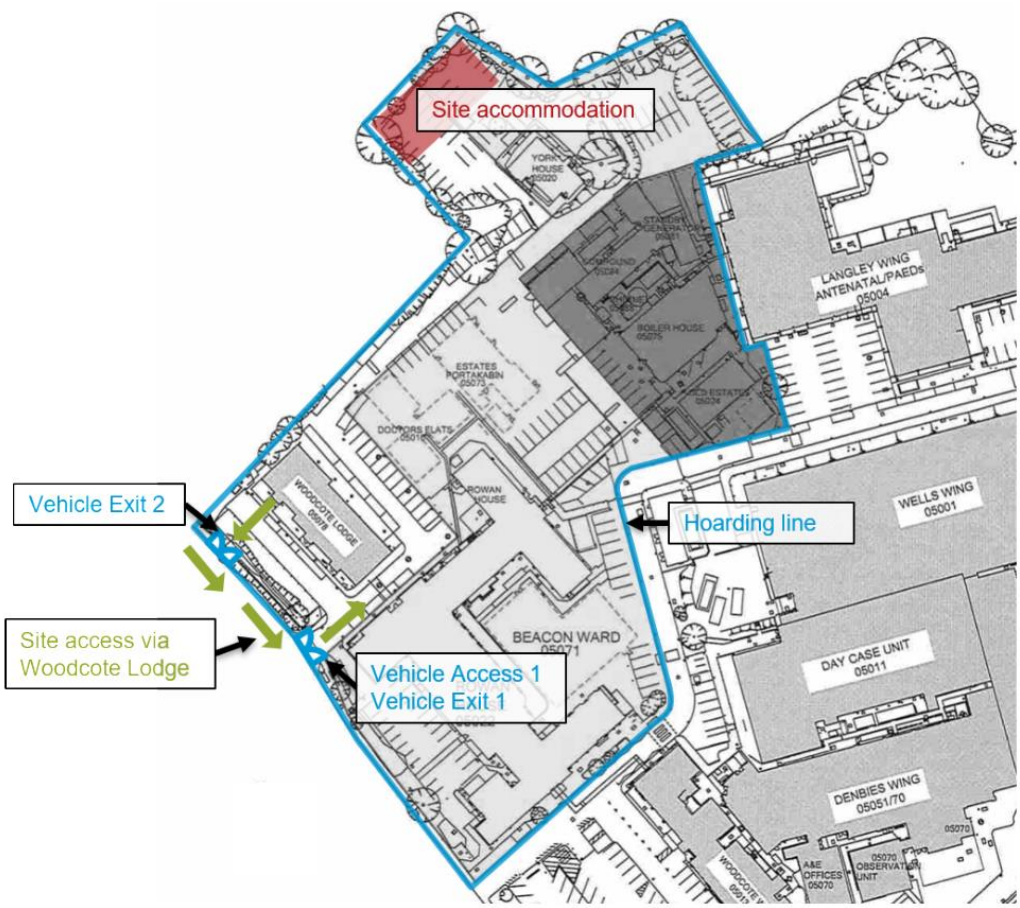
7.1.2 The hoarding will then be extended around Woodcote Lodge, Your House and the car park areas once these areas become available to allow the respective building demolition to commence (see figure 13 below). The area around the boiler house will not be hoarded off at this stage until it becomes available in January 2020.

Figure 12: Suggested Site Set-up June/ July 2020



7.1.3 Once the boiler house and chimney become vacant for demolition the hoarding line will be amended one final time as shown in figure 14 below, to hoard off this area for demolition to commence.

Figure 13: Suggested Site Set-up January 2021



7.1.4 Where short term temporary segregation is required for works outside the boundary – such as during the new services install site entrance formation – this will be provided through the use of Heras fencing

7.1.5 Gates will be installed in the hoardings for both vehicles and pedestrians as shown on the logistics drawings in Appendix C. These gates will be manned during working hours

7.1.6 It is proposed that 24 hour security will be provided be provided for the duration of the Development; this will be provided by a professional security company. All regularly used 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

7.1.7 A biometric turnstile system will be used to control and monitor access to each Site of all persons. The system will provide detailed reports on operative numbers, including entry and exit times.

7.1.8 Pedestrians will be permitted entry only at the designated gates off Woodcote Green Road. Safe non-hard-hat access to the Contractor's office and welfare facility will be created.

7.1.9 Vehicle movements in and out will be recorded

7.1.10 All personnel and vehicles will be liable to security searches.

7.2 Consents & Licenses

7.2.1 All statutory consents and licenses required to commence an onsite activity will be obtained ahead of works commencing and giving the appropriate notice period. These will include;

- Hoarding and scaffold licenses for works on the perimeter boundary.

- Construction notices.
- 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 traffic management arrangements.
- Where required, consents will be obtained from Epsom & Ewell Council and Epsom General Hospital owners for tower crane over sail over the relevant buildings/roads.
- Consents will also be obtained from the Epsom & Ewell Council where tower cranes over sail the public highway.
- Fixed red aeronautical obstacle lighting to the mast of the tower cranes will be provided.

7.3 Access & Egress

7.3.1 Site personnel access to the site will be segregated from construction traffic by means of vehicular barriers/fencing/hoardings etc. using the pre-agreed delivery route shown below. This is to ensure no construction vehicles use A24 in front of Epsom General Hospital. All plant/vehicular maneuvering and turning will be strictly within the site boundary and will be managed by site security and traffic marshals. Any movements into and out of the site will be managed by both site security and the traffic marshals who will hold the lorries within the site boundary until egress is free of both road users and pedestrians. Warning signage will be positioned for both path and road users of the work site area.

Figures 14 & 15: Suggested delivery route

All roads around our site entrance will be cleaned down daily with a jet wash. We will have a full-time gate man / banksman positioned at the entrance/exits into the site who will monitor the roads and implement additional cleaning if required.

A Traffic Marshal will be located at both site entrances / exits off Woodcote Green Road to control the entry and exit of vehicles from site and prevent unauthorised access.

The existing hospital delivery route off Woodcote Green Road will not be used by construction traffic, ensuring no disruption to the hospital deliveries and hospital shuttle bus.

7.4 Material Storage & Handling

7.4.1 We will operate a “just in time” policy for the all deliveries and supply of materials for the works, particularly the final stages of the works when on site storage will be at a minimum.

7.4.2 Materials will be stored on site to minimise damage by vehicles, vandals, weather or theft.

7.4.3 Tanks and drums of liquid chemicals and fuels will be stored in bunded compounds.

7.4.4 Packaging will be returned, where possible, to the material supplier for re-use and recycling.

7.4.5 Tower cranes will be used for general unloading and hoisting during the structural and envelope works. No unloading will be undertaken over the public highway/footpath.

7.4.6 Passenger/Goods materials hoists will be used to hoist materials to the floors. Fork lift trucks and other electric or hydraulically operated plant will be used to distribute and transport materials around the site. All of which will operate within the site hoardings only.

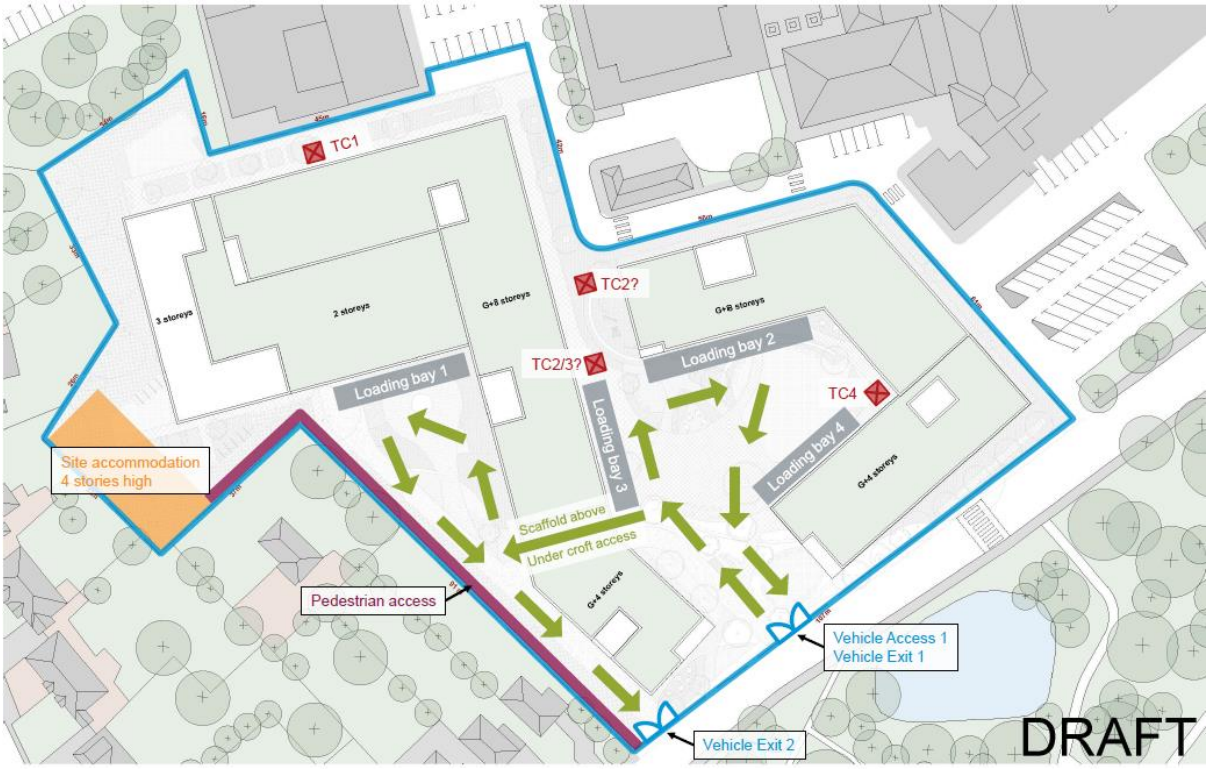
7.5 Craneage

7.5.1 Four tower cranes will be employed for the works across the project. The locations of the cranes are shown on the logistics drawings in Appendix B.

7.5.2 All the cranes will be fitted with zone protection systems to prevent oversailing of the load over adjacent properties. Following final selection of the crane model at each location, the crane will be assessed for oversailing of the counterweight and when in it’s out of service configuration (free slew).

7.5.3 All cranes will be fitted with the SMIE anti-collision system which assists the crane drivers against the collision risks between two or more interfering cranes.

Figure 16: Crane Locations



7.6 Hoisting

Passenger/goods hoists will be positioned on the outside of the buildings in various locations yet to be concluded, but within the site hoardings. The positions will be selected to provide the best operational performance whilst minimising potential noise disturbance to local residents. Unrestricted access to the base of the hoists is critical to maximise efficiency of this plant.

7.7 Site Accommodation

Morgan Sindall will provide a full working canteen and welfare facilities for our site operatives.

7.7.1 Site accommodation and welfare facilities will be within the site boundary, laid out in a regular manner, as shown in Figure 9. No overnight or living accommodation will be provided/located on site. Should the need arise local accommodation (external to site) would be used. Site accommodation and the demand for welfare facilities shall be monitored as the project progresses.

7.7.2 The principal site welfare accommodation will comprise mess rooms, locker rooms, toilets, canteens and showers.

7.7.3 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.

7.7.4 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.

7.8 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 required to attend a specific visitor's site induction before being allowed access on site.

7.9 Considerate Constructors

The project will be registered with the Considerate Constructors Scheme and will strive to exceed the requirements of the CCS scheme. We will implement a number of the Considerate Constructors scheme best practice items as listed below:

- Memorandum of Understanding for the Traffic Marshalls methodology - top provide absolute clarity on the role and the accountability for our Traffic Marshalls
- All of our Traffic Marshalls will undertake the Elite Marshalls presentations - https://ccsbestpractice.org.uk/entries/elite-marshal-presentations
- We will undertake an Assess walking and cycling interaction (impact walks) and monitoring strategy - https://ccsbestpractice.org.uk/entries/construction-impact-environmental-walks/
- We will undertake a CPTED crime audit
- All HGV's delivering to the project will follow the defined routes to avoid any external conflicts. These directions will be issued to anyone booking a delivery via our online delivery management system to ensure they are aware of and confirm they will stick to the planned delivery route before they are allocated a delivery slot to the project.

8.0 Traffic Management Plan

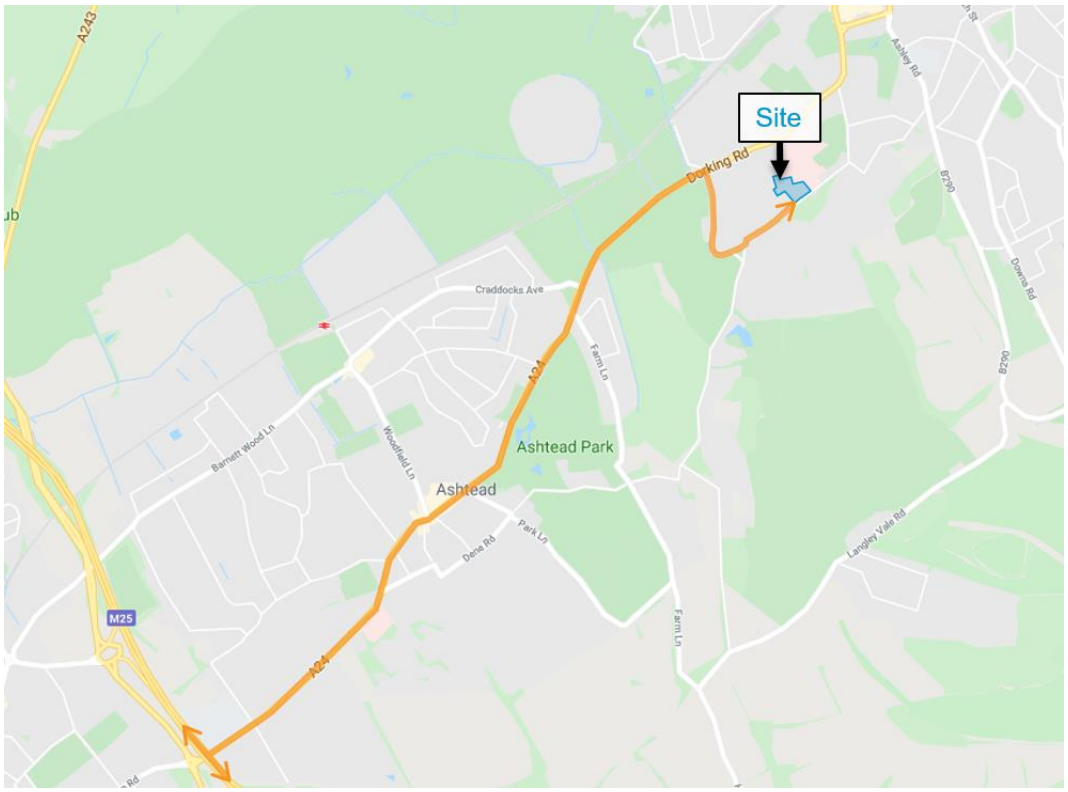
This section shall provide an overview of the Traffic Management strategy for the project.

It is essential that adequate and safe vehicle delivery routes are utilised and agreed with Epsom & Ewell Highways to ensure that the roads are capable of taking the additional road users, that additional HGV vehicles will not affect other road users that utilise the route and that the route can spatially take the size of the HGV vehicles. The access to and from site will depend upon the starting and end point of the vehicle, however we anticipate that most deliveries will travel via the M25, leaving on the A24 to Woodcote Green, leading onto Woodcote Green Road. This then avoids the need for construction vehicles to pass the main hospital A&E and car park access. This segregated access will avoid disruption to the Epsom General Hospital.

Below are figures showing the access routes into the site vicinity within London and then detailed access route around the site. The chosen routes are being utilised as it will ensure that the majority of each journey will be via the Strategic Road Network and therefore capable of dealing with larger, heavier and more frequent journeys. To minimise the likelihood of congestion on these roads during the works, strict monitoring and control of vehicles entering and egressing the sites will be implemented. Construction deliveries will be carefully planned with delivery times agreed with each contractor using a site wide booking system. Delivery schedules will be produced in order to look at the profiles of up and coming deliveries, and to regulate deliveries and eliminate bottle necks. This will ensure deliveries are restricted to allocated slots only time.

All vehicles approaching the Site will be via A24. They will then turn onto Woodcote Side and continue onto Woodcote Green Road. The site will then be on the driver's left-hand side. All vehicles will leave the project following the same route.

Figure 13: Traffic route



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 off Woodcote Green Road. The onsite traffic flow will change through the course of the Development 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 shall result in appropriate disciplinary measures being taken.

The works will be carried out in such a way that inconvenience to the public arising from increases in traffic flows and disruptive effects of construction traffic on local and main roads is limited wherever practical. All diverted or replaced rights of way will be notified in advance and where appropriate, temporary routes will be provided. 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.

There will be onsite parking available in a location to be confirmed. All construction operatives, managers & supervisors along with all of the Morgan Sindall team and visitors will be encouraged to use public transport where possible to and from site to avoid parking on site.

There are several key considerations to take into account that are primarily for the benefit of the local environment but that are also crucial to the efficient provision of materials, plant, tools and equipment to maintain the construction programme.

For local residents and the Borough of Epsom & Ewell, effective delivery management will provide the following benefits:

- Less congestion on local roads
- Reduced emissions from deliveries contributing towards CO2 reduction targets

- Fewer goods vehicle journeys lowering the risk of collisions
- Better quality of life for local residents through reduced noise and lower risk of accidents

For the Guild Living project, benefits include:

- Ensuring compliance with health and safety legislation.
- Efficient deliveries and improved security.
- More reliable deliveries resulting in less disruption to normal business practices.
- Timely deliveries.
- Better highway efficiency by reducing the effects of construction activity through better delivery management and access.
- More cost-effective construction logistics activity.

It should be noted that as the project progresses the types and frequency of deliveries will change and through the forward planning of bookings by the sub-contractors the system will provide us with sufficient information to accurately forward plan and maintain a steady flow of materials to meet the programme requirements.

Delivery Management System

Deliveries will be scheduled using the Delivery management system supplied by Synergy. This will allow the Logistics team to control the flow of vehicles that attend site at any one time.

- All Trade Contractors shall adhere to the agreed booking in system for all deliveries where they will confirm they will stick to the agreed site logistics plan before they are allocated a delivery slot on the project. At this time the vehicles CLOCS/FORS compliance will be checked before allocating a delivery slot.
- A pre-determined period of 48Hr notice in advance of the delivery is required. Wherever possible, a computerized delivery booking system will be used.
- This will allow the Traffic Management Team to be aware of and manage any delivery with sufficient planning and foresight.
- Upon arrival at the site entrance, all delivery vehicles will report to the Security/Banksman/Traffic Marshal at the delivery gate to sign in.
- All delivery drivers must have a contact name and number so that contact can be made and the load or off load done in a speedy manner so that delays will be avoided.
- If vehicles arrive outside of the booked slot, they may be held away from site until access can be given. In order to simplify this, all contractors are to ensure that a contact number is on the booking form.
- Under certain circumstances, it may be necessary to turn away certain deliveries.
- The provision for waiting vehicles is prohibited around the site; therefore, any deliveries that arrive unannounced **will** be refused entry to the site.
- Fully trained Traffic Management Operatives will be provided for the purpose of Traffic Control and Management. The Traffic Management Operatives will be required for the manoeuvring of vehicles into and out of site. They will also assist with the introduction of vehicles back onto the public road.
- Notices and details of traffic management proposals associated with works to the highway and footpaths will be given under the Highway Acts 1980 and Road Traffic Act 1998 and will be provided and maintained for the duration of the construction phase on approaches to the site access.

Fig 17: DMS Diagram

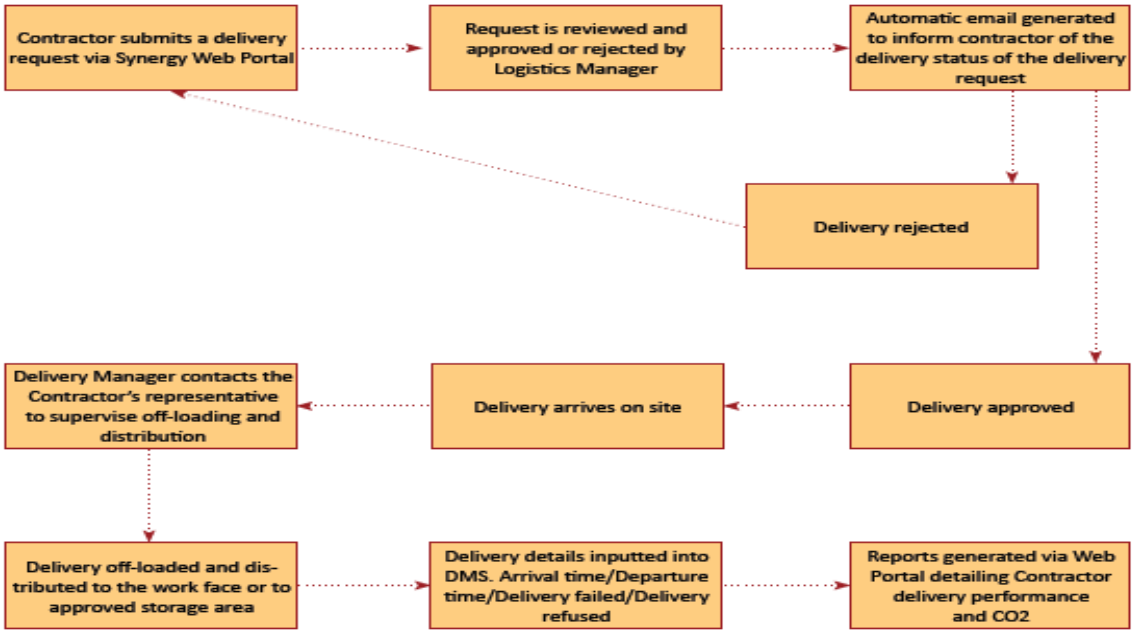


Fig 18: Synergy Delivery DMS Screenshot

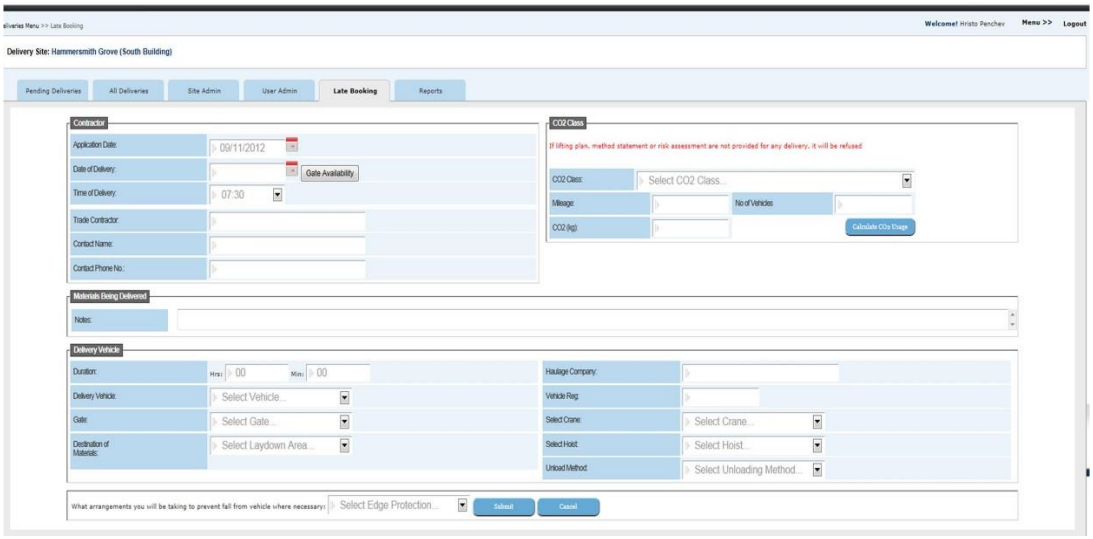


Fig 19: Traffic Profile Loads

Site Establishment

Purpose	Type	Frequency
Plant deliveries	Low loaders	Occasional
Cabin deliveries	Flat-bed lorries	High
Lifting	Mobile crane	Medium
Waste removal	Grab lorries	Medium
Hoarding materials	Flat-bed lorries	Medium

Demolition

Purpose	Type	Frequency
Plant deliveries	Low loaders	Occasional
Waste removal	8 Wheeler	Very high
Waste removal	Skips	Medium

Piling

Purpose	Type	Frequency
Plant deliveries	Low loaders	Occasional
Waste removal	8 Wheeler	High
Waste removal	Skips	Low
Reinforcement deliveries	Articulated lorries	Medium
Piling sundries deliveries	Articulated lorries	Medium
Concrete deliveries	Concrete mixer wagons	High

Substructure & Superstructure (concrete frame)

Purpose	Type	Frequency
Plant deliveries	Low loaders	Occasional
Waste removal	8 Wheeler	High
Waste removal	Skips	Low
Reinforcement deliveries	Articulated lorries	Medium/High
Concrete deliveries	Concrete mixer wagons	High
Muck away	8 Wheeler	High / Very high

Drainage

Purpose	Type	Frequency
Waste removal	8 Wheeler	High
Drainage component deliveries	Articulated lorries	Low / medium
Pipe bending deliveries	8 Wheeler	Low / medium
Concrete deliveries	Concrete mixer wagons	Medium / High

Tower Crane erection & dismantling

Purpose	Type	Frequency
Plant deliveries	Articulated lorries	High
Lifting	Mobile cranes	Medium

Tower Crane erection & dismantling

Purpose	Type	Frequency
Plant deliveries	Articulated lorries	High

Lifting	Mobile cranes	Medium

Façade

Purpose	Type	Frequency
Bricks / blocks deliveries	Articulated lorries	High
Metsec deliveries	Articulated lorries	Medium / high
Walling sundries deliveries	Flat-bed lorries	Medium
Insulation deliveries	Articulated lorries	High
Curtain walling deliveries	Articulated lorries	High
Window deliveries	Articulated lorries	High
Cladding panel deliveries	Articulated lorries	Medium

Roofing

Purpose	Type	Frequency
Roofing material deliveries	Articulated lorries	High
Insulation deliveries	Articulated lorries	High
Rainwater goods deliveries	Articulated lorries	Medium
Roofing sundries deliveries	Flat-bed lorries	Medium

Building Services

Purpose	Type	Frequency
Large items of plant deliveries	Articulated lorries	Medium
Small items of plant deliveries	Flat-bed lorries	Very high
Pipework deliveries	Articulated lorries	Medium
Ductwork deliveries	Articulated lorries	Medium
Switchgear deliveries	Flat-bed lorries	Low
Cabling deliveries	Flat-bed lorries	Low
Sundries deliveries	Flat-bed lorries	Medium

Residential Fit-out

Purpose	Type	Frequency
Partition & ceiling deliveries	Articulated lorries	Very high
Door deliveries	Flat-bed lorries	Low
Insulation deliveries	Articulated lorries	High
Screed deliveries	8 Wheeler	Very high
Kitchen deliveries	Articulated lorries	Medium
Bathroom deliveries	Articulated lorries	Medium
Flooring deliveries	Flat-bed lorries	Medium

Cat A fit-out

Purpose	Type	Frequency
Large item deliveries	Articulated lorries	Medium
Small item deliveries	Flat-bed lorries	High
Partition & ceiling deliveries	Articulated lorries	High
Door deliveries	Flat-bed lorries	Low
Insulation deliveries	Articulated lorries	High
Raised floor deliveries	Articulated lorries	Medium
Sundries deliveries	Flat-bed lorries	Medium

Cat B fit-out

Purpose	Type	Frequency
Large items of plant deliveries	Articulated lorries	Medium
Small items of plant deliveries	Flat-bed lorries	Very high
Flooring deliveries	Flat-bed lorries	Medium
Office furniture deliveries	Articulated lorries	High
Office equipment deliveries	Flat-bed lorries	Low
Sundries deliveries	Flat-bed lorries	Medium

External Works

Purpose	Type	Frequency
Plant deliveries	Low loaders	Occasional
Waste removal	8 Wheeler	High
Bulk material deliveries	8 Wheeler	High
Paving deliveries	Articulated lorries	Medium
Street furniture	Flat-bed lorries	Low
Sundries deliveries	Flat-bed lorries	Medium

Frequency Key:

Occasional	-	Monthly
Low	-	Weekly
Medium	-	Daily
High	-	Hourly
Very high	-	Greater than hourly

The Traffic Management Plan will continue to 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 changes that arise. This will take into account current legislation, Police, Fire Authority and HSE Guidance, Local Authority Transport Schemes and neighbourhood lorry restrictions.

Drivers Induction

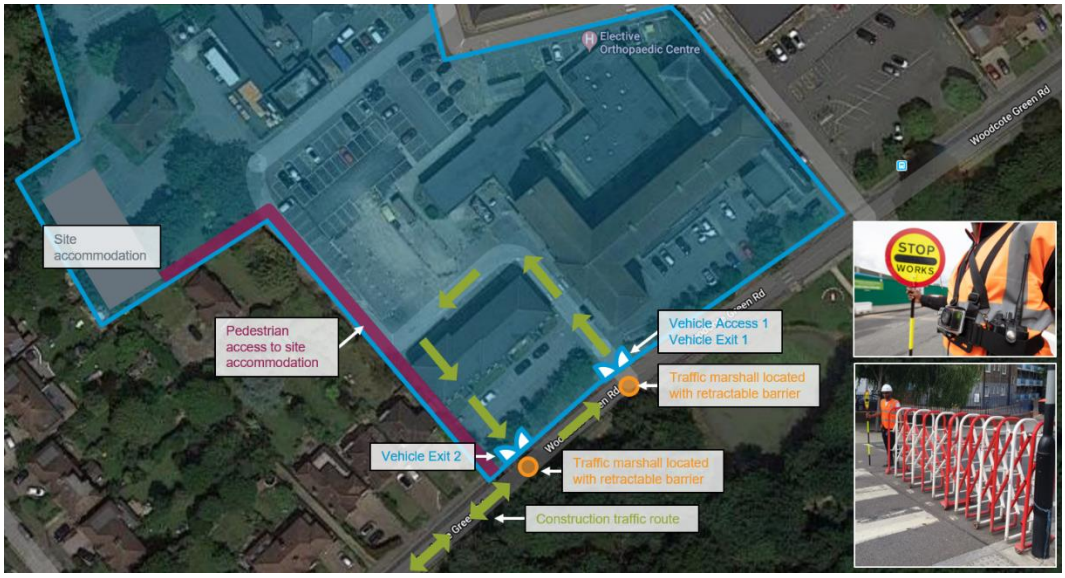
We will prepare a drivers induction guidance sheet which will be issued out to every company as they book a delivery slot. This will inform them of the planned delivery notice to site, any restrictions on the local road network (such as avoiding Epsom General Hospitals A&E entrances and hospital delivery entrance), any particular items to be aware of or site constraints but most importantly stress for all vehicles to be either CLOCS or FORS registered and ensure the driver is clear they can only arrive at the allocated arrival time. Anyone arriving early will be directed to a holding area, prior to being called to site by our traffic marshals.

Where possible, we will use vehicles filled with side bars, blind spot mirrors and detective equipment to reduce the risk and impact of collusions with cyclists and other road users.

Pedestrian Management

No pavement around the project will be closed. However, we will have deliveries cross the footpath on Woodcote Green Road. These will be marshalled by traffic marshalls to temporally stop pedestrians while vehicles enter and exit the site.

Fig 20: Traffic Marshall locations



Lights will be installed to our hoarding on the hospital grounds and Woodcote Lodge elevations. We will not have lights on the hoarding facing the residential properties.

Quality Operation

Fleet operators are required to ensure their transport operation meets the standard of an approved independent fleet management audit. This ensures a baseline level of compliance against all regulatory requirements relevant to the road transport operation.

This can be demonstrated through current certification from an approved independent audit body such as FORS, Van Excellence or any other equivalent standard.

On the Guild Living project will be using FORS as the benchmark with the Bronze award being the minimum standard of acceptance.

Fig 21: CLOCS and FORS logos

Traffic Routing - Fleet Operators

Fleet operators shall properly communicate any routing and access requirements provided by Morgan Sindall to all drivers accessing the site. The circumstances (if any) under which drivers may deviate from a specified route, such as a temporary road closure or road traffic accident shall be clearly specified and agreed.

Warning Signage

All vehicles over 3.5 tonnes gross vehicle weight shall display external pictorial stickers and marking to warn vulnerable road users not to get too close to the vehicle.

Blind Spot Minimisation

All vehicles over 3.5 tonnes GVW are to have front, side, and rear blind-spots completely eliminated or minimised as far as is practical and possible through a combination of fully operational direct and indirect vision aids and driver audible alerts. This will improve visibility for drivers and reduce the risk of close proximity blind-spot collisions.

A class VI mirror shall be fitted to all vehicles where they can be mounted, with no part of the mirror being less than 2 metres from the ground.

Needless to say all indirect vision systems shall be fully operational and fleet operators shall make regular checks and take all reasonable measures to ensure they remain operational.

It will be incumbent on the fleet operator to ensure that drivers recognise that use of indirect vision systems is an integral part of their job.

Vehicle manoeuvring warnings- All vehicles over 3.5 tonnes GVW are to be equipped with enhanced audible means to warn other road users of a vehicle's left turn manoeuvre. This is to reduce the risk of close proximity collisions by audibly alerting vulnerable road users to vehicle hazards.

Regular checks shall be undertaken by the fleet operator and random checks at the site by suitably trained operatives.

Fig 22: CLOCS Checklist

CLOCS vehicle check-list

For a visual reference please refer to the FORS silver vehicle poster displayed on your site entrance.

* If you answer 'no' to any of the questions below, please speak to your manager or supervisor.

1. Do you have proof of FORS certification? Yes/No
2. Is your vehicle equipped with Class V and/or VI mirrors? Yes/No
3. Is your vehicle equipped with a blind-spot minimisation system (Fresnel lens or cameras)? Yes/No
4. Is your vehicle equipped with an enhanced audible warning system? Yes/No
5. Are both sides of your vehicle equipped with side under-run protection? Yes/No
6. Does your vehicle have cycle warning signage on the rear of the vehicle? Yes/No
7. Have you been provided with a traffic routing plan to this site by your employer? Yes/No
8. Do you have a means of recording accidents? Yes/No

Date	
Project name	
Contractor	
Haulage company	
Vehicle registration number	
FORS accreditation (colour and number)	

Please now fill in this information on

Fig 23: FORS Bronze Requirements

Cyclist Management

Our Traffic Marshals will also be trained on how to deal with cyclists and also how to specifically manage cyclists in the site area. The most vulnerable manoeuvres for cycle and road traffic is entering and exiting the site entrance in Woodcote Green Road. A Traffic Marshal will be stationed at the entrance and exit to each pit lane to manage this high-risk area. As any construction vehicles enter or exit the site.

9.0 Health, Safety & Environmental Considerations during the works

9.1 General Health, Safety & Environmental Considerations

9.1.1 This section is a summary of the Safety, Health and Environmental Considerations during the works. This will be expanded further for site use in our Construction Phase Health and Safety Plan.

9.1.2 Construction and demolition works will be carried out in such a way as to limit, as far as is practicable, adverse environmental impacts. Adverse impacts including noise, vibration and dust will be measured using vibration, dust and noise monitors located across the sites. Thresholds, which have been agreed with the Epsom & Ewell Council, will be set by Morgan Sindall, and the administrators shall be notified by an automatic email if the noise, vibration or dust measures reach or peak their parameters. Morgan Sindall site management will then investigate the root cause that has effected this peaking, and introduce further control measures to prevent this happening again.

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

- Planning approvals from Epsom & Ewell Council.
- Considerate Constructors Scheme.
- Requirements of highways and utility authorities.

9.1.4 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.
- Use of local materials where possible.

9.1.5 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.

9.1.6 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.
- That suitable bi-lingual arrangements are in place to ensure that statutory related matters are complied with.

9.1.7 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.

9.1.8 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.

9.1.9 Compliance with the following mandatory provisions shall be enforced;

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

The environmental monitoring will be provided but not restricted to the following:

Electricity and Lighting

All lighting will be on automatic PIR and locally controlled switches to ensure lighting is only used when required. The lighting used will be energy efficient and lit to provide mid-range brightness. Any further lighting will be supplemented by further lighting to fit the task and provide illumination to a level which will provide adequate safety and quality to the task.

Electricity will be metered locally to the worksite as well as to the incoming mains. This will be recorded on monthly basis with a target for improvement demonstrated and shared with the site. All hand tools and small machinery will be battery powered. Any power machinery will have an option to provide a secondary source socket whilst working thus providing duel benefit of running supplementary equipment while operating plant such as MEWPS or Gen-packs. If generators are required, we will employ super silenced equipment. Lighting where physically possible will be faced away from neighbouring residents and traffic.

Environmental Inspections & Reviews

Environmental inspections will be undertaken weekly as a minimum although all works will be pre-planned to avoid Environmental impact from the works. All works will form part of a risk assessment and method statement. All plant and machinery will be of good quality well serviced and maintained whilst being logged and reviewed in the operators check sheet. Our site logistics team and site wardens will ensure plant and machinery is received in pristine order and fully serviced prior to entering the site at the security checkpoints. All operatives will be inducted and briefed prior to setting to work. The works will be reviewed daily or as often as the task requires.

Monitoring Stations will be positioned strategically around the site monitoring both dust and vibration parameters; the system will provide a double knock alert; which is a pre-warning then a full action alert. The correct plant and machinery will be chosen to limit any environmental impacts. We will also set up noise monitoring stations around the sites perimeter and monitor daily against the background noise to ensure works are managed correctly and that receptors are not affected by the natural reshaping of the site in its development from demolition to completion of new build.

Regularity of Inspections

The regularity of the inspections will be for daily review for localised works and a weekly safety and Environmental review for each project within the overall development. Following this we will have a visiting Safety Advisor on site that will aid with the upkeep of our procedures and provide an unbiased review of the project. All inspections will be recorded with an action time and are to be closed out by the responsible party.

9.2 Control Substances Hazardous to Health

9.2.1 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 practice guidance, such as that published by the Environment Agency.

9.2.2 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.
- Personal protective equipment (PPE) suitable to prevailing conditions will be used by all construction workers.

9.3 Outline Environmental, Emergency, Fire and Accident Procedures

9.3.1 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.

9.3.2 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:

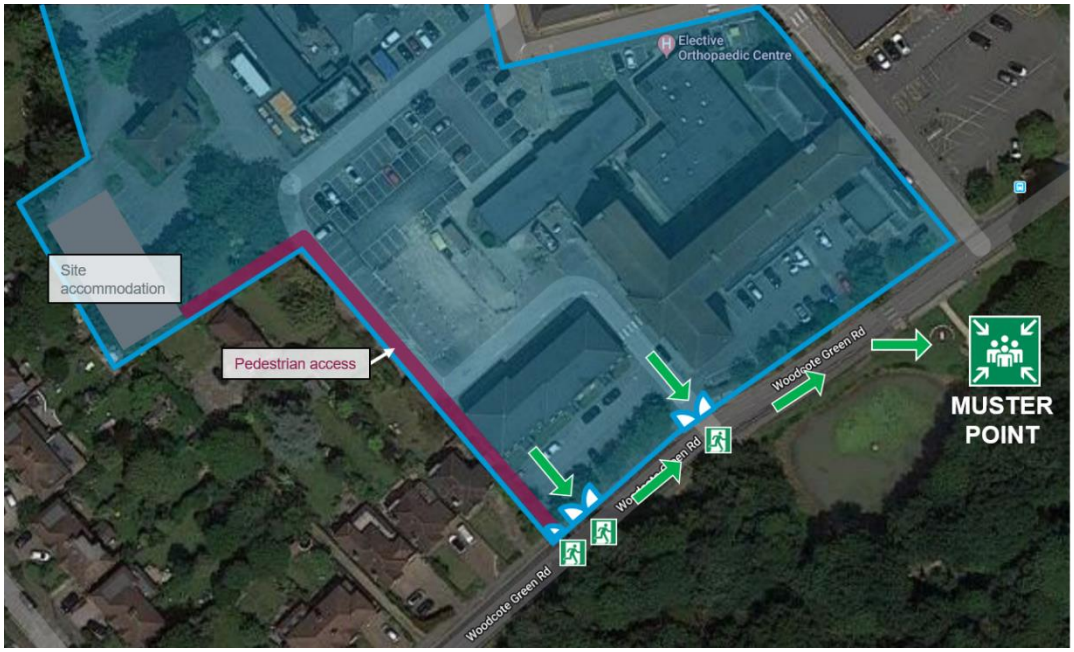
- Local authority or regulatory enforcement.
- Public complaint.

9.3.3 Emergency routes and procedures will be continuously reviewed and adapted to suit the construction sequence and stage of the Development. A draft emergency plan has been produced, as show in Figure 19 – with the Muster Point located in Woodcote Green. The route of evacuation is likely to develop as the project progresses. An Emergency Fire and Accident Plan will be prepared and shall generally follow the guidelines below;

- 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/firefighting 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.
- Continuous liaison with fire brigade/police/ambulance services and other emergency services, plus clients/occupants of adjacent buildings.

Figure 24: Fire Evacuation Plan



9.3.4 The Emergency Fire and Accident Plan as outlined above will be developed in consultation with the local Fire Brigade, the appointed fire consultant 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.

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

9.4 Environmental

9.4.1 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 (Epsom & Ewell Council, Environmental Agency (EA) and Nature England).

9.4.2 Archeological potential on the site is considered low due to the considerable disturbance and truncation in the area, not least from historic brick earth extraction, but also from the basements of Victorian buildings, and then post WWII redevelopment. However, it is considered that the proposed development has the potential to highly impact any buried archaeological deposits that may be present. Consequently, in accordance with national and local planning policies on heritage, prior to development, an archaeological investigation at the site will be undertaken. At present, the number of surveys is to be decided – but they are likely to be to a depth of 1m.

9.4.3 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.

9.4.4 Preliminary Roost Assessment of the buildings and trees was carried out on 4 December 2019.

The desk study returned records of at least 7 bat species as well as records of historic roosts and EPSM bat licences within 2km radius of the site.

Rowan House building was assessed as having moderate potential to support roosting bats. In line with best practice, a dusk emergence survey and a dawn re-entry survey will be completed to assess the presence/ likely absence of bats within these buildings. These will be carried out in the active bat season (May-August) and spaced throughout the season as much as possible to gain robust data.

Woodcote Lodge, York House and Boiler House were assessed as having low potential to support roosting bats. In line with best practice, one dusk emergence survey or one dawn re-entry survey will be completed to assess the presence/ likely absence of bats within these buildings. This will be carried out during the active bat season (May-August).

The presence of roosting bats was detected within one of the trees along the western boundary (T27).

If bats are found construction works will be adapted locally to avoid disturbance as required by National England.

9.4.5 Monitoring of bird breeding activity on site would 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.

9.5 Arboricultural Impact Assessment / Tree Protection Plan

9.5.1 Trees will be present at the boundary with the neighboring properties. We will appoint arboriculture and landscape consultants to undertake specific tree protection measures and procedures for the execution of their works to protect the trees.

9.5.2 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.

9.5.3 Retained trees will be adequately protected from damage throughout the demolition and construction works. An arboricultural consultant will be appointed to the project to oversee all tree pruning or removal and to regularly supervise crucial stages throughout the development process to ensure tasks in close proximity to the root protection zones are carried out as per the approved methodology. Our arboricultural consultant will also inspect the protective fencing erected around the protected trees at regular intervals, and ensure any remedial works are undertaken. Our arboriculturalist will liaise with the Local Authority arboriculturalist will to ensure all arboricultural objectives are met. The installation of sheet piling shall also be utilized when excavating in close proximity to the root protection zones to ensure an exclusion zone around all roots. The sheet piles will also support the soil around the roots, preventing the potential of any damage to the roots. Once all excavations are complete and backfilled, the sheet piles shall be removed. Other 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.

- Training (e.g. tool box talks) in how to avoid tree damage.
- Facilitation Pruning.
- Appropriate Ground Protection measures.
- Contingency planning.

9.6 Noise & Vibration

9.6.1 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. Vibration monitors will be placed around the site in sensitive locations. Monitoring positions to be agreed with the Environmental Health Officer.

9.6.2 Prior to the commencement of works, a condition survey will be offered free of charge to nearby properties, this survey will be repeated on completion of the works.

9.6.3 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, the levels generated would not be considered to be significant.

9.6.4 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.

9.6.5 During construction the measures summarised below are to be employed.

9.6.6 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 Epsom & Ewell Council will be an on-going activity throughout the construction period.

9.6.7 Where work outside of agreed hours or likely to exceed specified noise, limits is necessary then this shall only proceed subject to notification to Epsom & Ewell 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.

9.6.8 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.
- Selection of piling methods based on reducing noise and vibration impacts. CFA piling has been selected on this project to reduce the noise and vibration impacts on the local community.
- Preference will be given to electrically powered plant where possible.
- Design and use of site hoarding and screens/noise barriers, to provide acoustic screening at the earliest opportunity.
- Choice of routes and programming for the transport of construction materials.
- Use of pre-cast or off site fabricated materials where possible to reduce noise on site.

9.7 Air Quality

9.7.1 Construction and demolition works will be carried out in such a way as to limit the emissions to air of pollutants (particularly dust and fine particles (PM10)), employing Best Practicable Means. The site will be managed in accordance with the CMP to minimise the potential effects on air quality from construction.

9.7.2 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 Epsom & Ewell Council Environmental Officer regarding the construction control measures set in place.

9.8 Dust

9.8.1 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.

9.8.2 Dust levels will be controlled by dampening down works where there is a risk of dust, 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.

9.8.3 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 ensure that dust nuisance affecting neighboring properties is minimised.

9.8.4 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 of 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.
- Dust on tree foliage will be minimised where practical.

9.9 Material Storage & Handling

9.9.1 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.

9.9.2 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.

9.10 Construction Plant

9.10.1 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. Allowing for economic constraints, the plant will be selected on the basis of which has the least potential for dust and other emissions.

- 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.

9.11 Vehicle Movements

9.11.1 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.
- Appropriate dust site monitoring will be included within the site management practices to inform site management of the success of dust control measures used.

9.12 Soils & Contamination

Existing Conditions.

The site generally consists of Made Ground from various developments over the years through phases of demolition and redevelopment of the site.

Geology, Hydrogeology and Hydrology

The north western side of the site is underlain by the London Clay Formation, comprising Clay and Silt. The eastern part of the site is underlain by the Lambeth Group formerly known as the Reading Beds, comprising clay, silt and sand.

According to the geological cross section lines provided on the published BGS Map sheet of Reigate (Ref. 5) the bedrock (London Clay and Lambeth Group) appears to be dipping gently towards the north west. These strata (London Clay and Lambeth Group) that outcrop on the site are in turn underlain by Thanet Sands and then Chalk, at greater depth.

Superficial deposits directly underlie the majority of the site and cut across the solid geology. These are river Terrace Deposits, comprising sand and gravel which extend northwards from the site

Site History.

The historical map review indicates that prior to being developed into a hospital, the site comprised Epsom Union Workhouse and undeveloped land. The central part of the site was developed into Epsom Hospital by 1934 and has undergone several minor phases of demolition and redevelopment since then. Potential sources of contamination on site include asbestos fibres from various phases of demolition and redevelopment on the site.

There was a small pond on the central part of the site which appears to have been infilled circa 1913. The pond may have been infilled with Made Ground or waste although this is not expected to be significant given its size. There was an on-site historical tank and electricity substation which are potential sources of hydrocarbon and Polychlorinated Biphenyl (PCB) contamination. There is a current generator adjacent to the south of

Contaminants

Based on the Envirocheck Report obtained for the Phase 1 Desk Study (Ref. 3) there are 5no contemporary trade directory entries within 200m of the site (recorded onsite and up to 109m away), relating to hospital's (Epsom General Hospital), cleaning materials and equipment and lighting manufacturers. 2 of these entries are located onsite and relate to the MRI unit and the Orthopaedic centre. A potentially infilled former pond is located onsite and was infilled around 1913. Another infilled pond is located 11m northeast of the site, and dates back to 1945. One Part B Authorisation is located 240m northeast of the site and relates to the Woodcote BP Service Station.
There are no current or historic landfill sites within 250m of the subject site.

According to the Radon Atlas of the UK (Ref. 6) the site is located within a lower probability radon area (less than 1% of homes are estimated to be at or above the Radon Action Level).

No radon protective measures are necessary in the construction of new buildings.

Groundwater

The site is not located within a groundwater Source Protection Zone (SPZ). There are no recorded groundwater abstraction licences within 1km of the site. The nearest surface water feature is a pond approximately 30m south in Woodcote Green Park. Historical maps indicate the pond has been present sine pre-1871 and several surface 'drains' which appear to drain into the pond from the south east and south and appear to be man-made. It is not known whether the pond is man-made, but it does not appear to be connected to a wider stream or river network. The nearest (natural) stream is the Bonesgate Stream, approximately 2.7km north west which flows in a north easterly direction towards the Hogsmill River. The historical map review has indicated that a pond was present on site and several ponds were present within 250m of the site which have since been infilled. It is not known whether the ponds were natural or man-made. Based on the topography and the published geological maps, the direction of groundwater flow within the River Terrace Deposits is expected to be towards the north. Groundwater flow within the Lambeth Group is conceived to be more likely to be towards the north west, based on the inferred dip direction of the bedrock.

Ground gas

Potential for ground gas is unlikely. Made Ground containing putrescible material that would be capable of generating significant ground gas (methane and carbon dioxide) is not expected to be present.

Strategy

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 CEMP.

Operational Control

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.

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

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

9.12.3 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.

9.13 Water Resources

9.13.1 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 drainage system 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 Epsom & Ewell Council.
- Careful siting and bunding of fuel storage facilities and any areas used for the storage of potentially hazardous materials.

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

9.13.3 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.

9.13.4 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.

10.0 Waste

10.1 General Provision

10.1.1 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 favors waste minimisation, re-use of materials and recycling over disposal to landfill will be favored. Further details will be provided in the Site Waste Management Plant, a summary of this document is presented below.

10.2 Site Waste Management Plan

10.2.1 A Site Waste Management Plan (SWMP) will be produced for each phase using BRE's SMARTWaste tool. This includes a waste forecast identifying options for reuse, recycling and avoidance of landfill and to record actual waste arisings.

10.2.2 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 BREEAM and the Code for Sustainable Homes.

10.3 Construction & Demolition Waste

10.3.1 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 use as a piling platform and other purposes.

10.3.2 Buildings and materials containing asbestos will be assessed in advance of demolition works commencing, and all asbestos identified removed 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.

10.3.3 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 practice guidance and legislation.

10.3.4 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.

10.4 Control during Construction

10.4.1 The Contractor will ensure minimisation of waste 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.
- Ensuring no vehicle leaves the site empty, i.e. all return vehicles will take 'associated waste' off-site.

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

10.4.3 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.

10.4.4 When leaving site, vehicles will be sheeted/covered to prevent any escape of materials onto public highways.

10.4.5 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.

10.4.6 Materials stored on the 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.

10.5 Hazardous Waste

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

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

11.0 Workforce

11.1 Employment & Management Workforce

11.1.1 Site labour levels are expected to peak at 500-600 for the Guild Living project.

11.1.2 An employment strategy will be delivered through the Contractor in partnership with local skills and enterprise team, local agencies, training providers and the Contractor's supply chain to maximise opportunities for apprentices and work experience. The Contractor will draw on the local knowledge and expertise of Epsom & Ewell Council to encourage local residents to apply to fill vacancies on the Site.

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

11.1.4 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.

11.1.5 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.

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

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

11.2 Working Hours

11.2.1 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 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 outside these core hours in agreement with Epsom & Ewell Council.

Works will take place outside these hours but will be within noise limits agreed with Epsom & Ewell Council. Consultation with Epsom & Ewell 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.

11.3 Local Training & Employment Opportunities

11.3.1 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.

11.3.2 Morgan Sindall will support the Applicant in its delivery of any economic development and community investment commitments and targets the Applicant has set.

11.3.3 Morgan Sindall will provide employment and upskilling opportunities for local residents of Epsom and surrounding areas in line with the employment strategy. The employment strategy

will be developed in detail and delivered in partnership with Epsom & Ewell Council and training providers, and will include:

- The services of the Contractor's Strategic Inclusion and Community Manager.
- A consortium approach between local partners – including local authorities, Job Centre Plus and education and training providers.
- A CITB approved Employment and Skills Plan.
- A commitment from contractors and sub-contractors to use specified methods of recruitment.
- A contractual obligation for subcontractors to provide apprenticeships and employment for local labour.

11.3.4 Morgan Sindall will 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.

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

11.3.6 Morgan Sindall will 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.

11.3.7 Morgan Sindall 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 Contractor engages local labour and local sub-contractors whenever possible and that appropriate local employment clauses are included in the contract documentation.

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

11.3.9 The Applicant and/or contractor/contractors (and sub-contractors) will nominate a person to be responsible for training on the 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.

11.3.10 To evaluate the success of the local employment initiatives, Morgan Sindall will record local labour statistics. As a minimum, Morgan Sindall will shall monitor and record the number and proportion of local people and local businesses utilised from Epsom and Ewell. Reports are to be submitted on a quarterly basis throughout the development period to the Applicant.

12.0 Public Relations & Community Liaison

12.1 Considerate Constructors Scheme

12.1.1 Morgan Sindall will 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.
- Recognise and reward the constructor's commitment to raise standards of site management, safety and environmental awareness beyond statutory duties.

12.1.2 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 on-going awareness raising such as posters and tool box talks as appropriate.
- 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.

Figure 25: Considerate Constructors Gold Award from a previous Morgan Sindall site

12.2 Public Relations

12.2.1 During the works, there will be regular communication with neighbouring residents and businesses. A regular newsletter will be issued to the surrounding residents and businesses to keep all parties informed about progress to date and forthcoming works. Any particularly noisy, special or unusual activities to take place (such as piling, 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.

12.2.2 The Contractor will provide a dedicated Liaison Co-Ordinator, Hannah Cowell as a single point of contact to the neighbouring residents, businesses and relevant statutory/non-statutory bodies. An out of hours contact telephone number will also be provided.

12.2.3 A project website will be set up in advance of the works commencing on site, this will be updated with details of the project, the monthly project newsletter and contact details for the key members of the construction team. This will also provide a platform for local people to register interest in working on the project.

12.2.4 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.

12.2.5 Any complaints received by the Council will be passed on to the Contractor at their regular meetings. They will be recorded, actioned and any mitigation implemented on site in the same manner as complaints received directly by the Contractor.

12.2.6 A proposal to use the perimeter hoarding 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.

Appendix A – Schedule of Mitigation

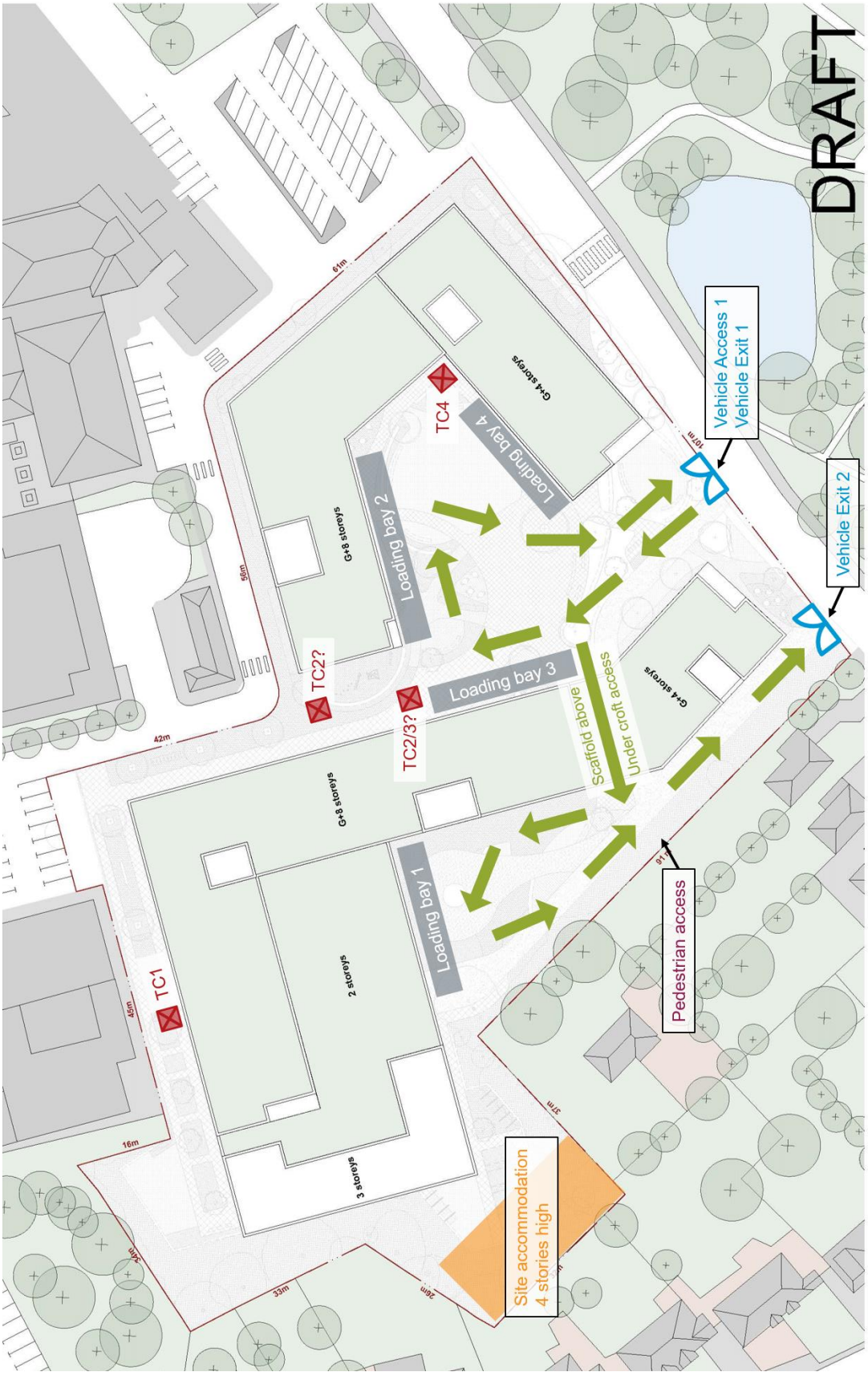
Topic	Mitigation During Construction
Traffic and Transport	In order to mitigate any minimal impacts that may occur, a number of measures will be implemented during the construction period. The following measures should be implemented: • Use of prescribed construction routes. • Implement a Traffic Management Group (TMG). • Restriction of HGV movements. • Banksmen/presence of personnel at access. • Dispersed timings of HGV movements on the LRN. • Banksmen vehicle movement monitoring. • Vehicle wheel cleaning. • Highway condition surveys. • Temporary Traffic Management Procedures (TTM) • Distribution of communication and promotional material to residence and businesses in the immediate vicinity of the site. Construction work will only take place during the following periods: • 8am to 6pm – Mondays to Fridays; and • 8am to 1pm – Saturdays
Socio Economic Effects	Hoarding to screen the site and minimise disturbance from construction activities. Implementation of the advice and best practice techniques listed in this CEMP.
Noise and Vibration	Potential for significant adverse noise and, possibly, vibration might be generated during demolition and construction works. The following mitigation measures should be implemented during construction: Use of 'best practicable means', as defined in the Control of Pollution Act 1974 should be implemented to minimise noise emissions throughout the works period. This would incorporate the use of measures to control noise that does not unreasonably inhibit the work, and the use of working methods that result in minimum noise effects compatible with normal working practices. The contractor will also be required to liaise with Epsom and Ewell Council's Environmental Health Department in order to agree the adopted controls to minimise impacts at all times. Measures routinely applied in this way include the following: • Community consultant prior to and during the works to update local stakeholders with regards to progress and any potentially intensive forthcoming works. • Careful selection of construction methods and plant to be used. • Switching off plant when not in use. • Regular maintenance and servicing of vehicles, equipment and plant. • Enforcement of restricted working hours for excessively noisy activities. • Implementation of an appropriate traffic management strategy. • The use of temporary acoustic barriers where appropriate and other noise containment measures such as screens and acoustic hoarding at the site boundary to minimise noise breakout and reduce noise levels at potentially affected receptors. • Adherence to relevant British and International Standards. • Utilisation of site access points which would minimise noise and vibration impacts. • Boundary monitoring of noise and vibration levels linked to an alarm system to warn site management of possible significant levels. • The possibility of carrying out of noisy works off-site (for example, concrete crushing).

	The hours of routine construction work will also limit the effects of construction noise. Options for mitigating construction traffic are limited and rely upon the contractor ensuring that construction vehicles are appropriately-sized for the loads carried and that the vehicles and their exhaust silencers are properly maintained in a good state of repair.
Air Quality	Communications - Implement a stakeholder communication plan. Display name and contact details of responsible person for dust issues on site boundary in addition to head office contact information. Implement the measures stated in the CEMP to reduce the effects of Dust. Site Management – record all complaints and incidents in a site log. Take appropriate measures to reduce emissions in a timely manner and record the measures taken within the log. Make the complaints log available to the Local Authority if requested. Record an exceptional dust incidents on or off site. Monitoring – undertake daily on and off site visual inspections where there are nearby receptors. Carry out regular inspections to ensure compliance with the CEMP. Increase the frequency of inspections during activities with a high potential to create dust or prolonged dry weather. Agree dust monitoring with the local authority where appropriate. Preparing and maintaining the site – plan site layout to locate dust generating activities as far as possible from receptors. Use solid screens around dusty site activities and around stockpiles. Avoid site run off water and mud. Fully enclose the site or specific operations where there is a high potential for dust production and the site is active for an extensive person. Keep site fencing barriers and scaffolding clean using wet methods. Operating Vehicle/Machinery and Sustainable Travel - Enforce an on-site speed limit of 15 mph on surfaced roads and 10 mph on unsurfaced areas. Ensure vehicles switch of engines when stationary. Avoid use of generators where possible. Produce a Construction Logistics Plan to manage the sustainable delivery of materials. Implement a sustainable travel plan for site workers. Operations - Cutting, grinding or sawing equipment only to be used with suitable dust suppression equipment or techniques. Ensure adequate water supply for effective dust and particulate matter suppression. Use enclosed chutes, conveyors and covered skips. Minimise drop heights of materials. Ensure suitable cleaning material is available at all times to clean up spills. Measures Specific to Demolition - Where practical, soft strip inside buildings before demolition of external walls and windows. Ensure effective water suppression is used, preferably through the use of hand held sprays. Avoid explosive blasting. Bag and remove biological debris or damp down material prior to demolition. Measures Specific to Earthworks - Re-vegetate earthworks and exposed areas/soil stockpiles as soon as practicable. Use hessian, mulch or trackifiers where it is not possible to re-vegetate or cover with topsoil. Only expose small areas of ground or stockpile when working. Measures Specific to Construction - Ensure aggregates are stored in bunded areas and are not allowed to dry out. Avoid concrete scabbling where possible. Ensure bulk cement and other fine powder is delivered in tankers and stored in silos with suitable emission control. Smaller supplies of fine powder material to be in sealed containers and stored appropriately. Measures Specific to Trackout Use water-assisted dust sweepers to clean access and local roads. Avoid dry sweeping of large areas. Ensure vehicles entering and leaving the site are appropriately covered. Inspect on-site haul roads for integrity and repair as necessary. Inspections of haul roads to be recorded in site log, including any remedial action taken. Implement a wheel washing system.
Daylighting, Sunlighting and Overshadowing	Demolition and Construction - The use of temporary lighting units may result in minor adverse effects in terms of light pollution. However, this can be easily mitigated through the positioning of lighting units to avoid light intrusion into the surrounding residential properties.

Wind Microclimate	No mitigation proposed
Biodiversity	Birds - The site contains buildings and vegetation that may support breeding birds, which will be demolished or refurbished during construction. It is advised that the clearance of buildings and vegetation within the site is undertaken outside of the bird nesting season (which is typically March to August inclusive). Where this is not possible, a search for nesting birds up to 48 hours prior to vegetation clearance taking place must be undertaken by an experienced ecologist. If nesting birds are found at any time during clearance works, work must stop immediately within the vicinity of the nest and an ecologist must be contacted immediately for advice. The nest will be protected. Bats – There is presently a low risk in relation to bats. In accordance with construction best practice, a suitably qualified ecologist will check for bats prior to the demolition of buildings. Roosting bats have been detected within one of the trees along the western boundary (T27) however no roosting bats have been detected in any of the buildings to be demolished. The development will have no impacts upon this species group and no further surveys would be required. If bats are present, a European Protected Species Mitigation (EPSM) licence would need to be obtained from Natural England before the works could commence. This licence would include, amongst other things, a detailed method statement outlining the mitigation measures required. Such measures often include appropriate timing of the works, supervision of the works by a licenced bat ecologist and provision of appropriate alternative roosting opportunities, and appropriate landscaping and lighting schemes. Other Species - If any unexpected discoveries of other protected species are made on-site during redevelopment works, then all activities in the immediate vicinity must be halted immediately and further advice must be sought from an ecologist immediately.
Cultural Heritage	Demolition - it is recommended that no archaeological mitigation is warranted during the demolition phase. Construction - It is considered that an appropriate and proportionate strategy to assess and evaluate the archaeological potential would be trial trenches prior to the commencement of any excavations/construction phase. The aim of this would be to establish the presence/absence of any archaeological and geoarchaeological /paleoenvironmental deposits within the footprint of the proposed development, assess the significance of any deposits if present and formulate an appropriate recording strategy, including preservation in situ or by record depending on the nature of the remains. Should significant archaeological deposits be encountered, a programme of public engagement and participation, health and safety issues permitting, should be designed to ensure both local and wider parties, schools and members of the public have the opportunity to derive benefit and enjoyment from expanding their knowledge and awareness of the local heritage.
Surface Water Drainage and Flooding	Precautions should be taken such as use of settlement tanks, spill kits and gully covers. This will ensure that the risk to and from the site from surface water flooding during construction phases is minimised.
Ground Conditions and Contamination	Appropriate measures to protect construction workers may include training in and enforcement of hygiene procedures, use of personnel protective equipment and the implementation of dust control measures, particularly in relation to asbestos containing material (ACM). Mitigation measures that will be used to counter the identified potential impacts of construction will be incorporated into the Contractors Method Statements and Health and Safety Plans and the CEMP. These will include: • Procedures and protocols to prevent construction workers, visitors and neighbours from being exposed to contaminated materials (including exposure to asbestos) • Monitoring of excavation works to identify unforeseen areas of contamination • Systems to record and monitor the movement and deposition of waste materials leaving or being transported to other parts of the site

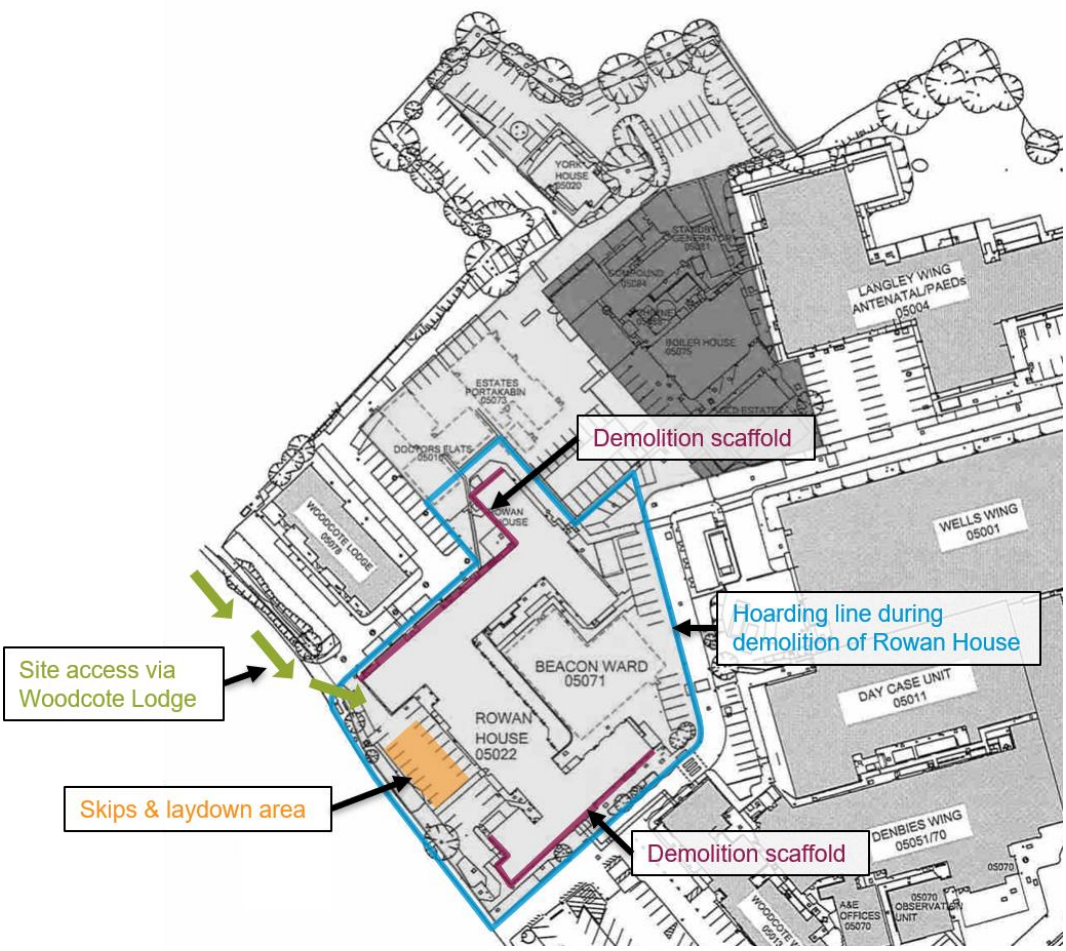
	• Preventing dust generation during excavation and handling of potentially contaminated materials If visual or olfactory evidence of contamination is observed during the construction phase the material should be segregated and tested. A suitably qualified person (such as a site chemist or environmental scientist) should be responsible for inspecting and testing any material which displays any visual and/or olfactory signs of contamination. Based on the results of testing, the soils will be re-used, treated or disposed off-site as required. Proposed criteria for the re-use of soils will be included in the earthwork's specification for the development
Broadcast and Communication	As the structure is constructed the effects will range from no impact to minor adverse at worst (the predicted effect for the completed Proposed Development). The minor adverse effect will primarily be due to the presence of construction cranes. The mitigation measures proposed for the completed development will, in some cases, be applicable during the construction period. For those dwellings with adversely affected terrestrial TV reception, mitigation will include upgrading the existing aerials by increasing their height and/or gain or providing a non-subscription satellite service which is available from either the BBC and ITV ('Freesat') or 'Sky' for a one-off cost. For the satellite dishes on Porden Road, mitigation will include re-siting the dishes outside of the shadow area or increasing their height.

Appendix B – Site Logistics

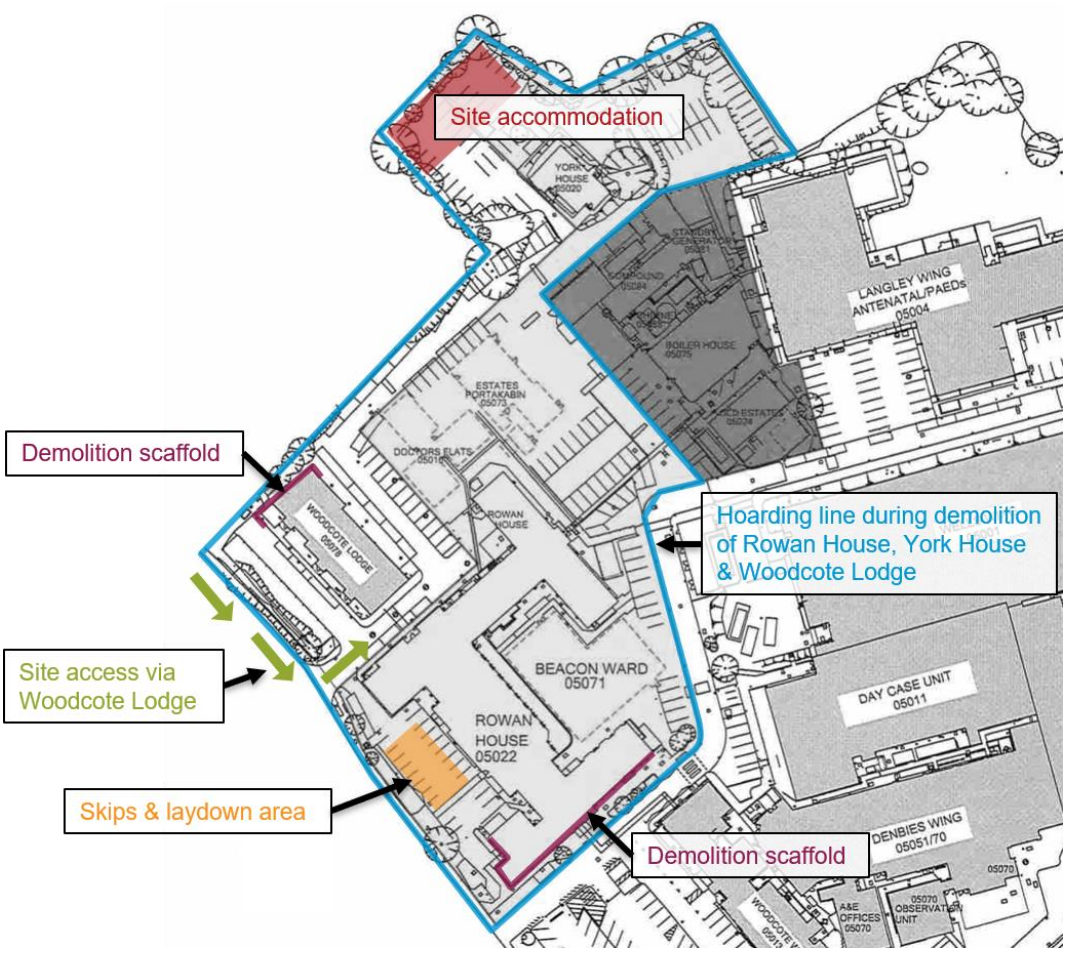


Appendix C – Hoarding Phasing Plan

May – June 2020



June 2020 – January 2021



Appendix D – Definitions & Abbreviations

CEMP – Construction Environmental Management Plan - Construction Environmental Management Plan outlines how environmental issues that arise will be handled to ensure compliance with relevant legislation. This Plan will be updated as necessary to reflect any more detailed requirements proposed as part of submissions of details of reserved matters.

Sqm – Square meters – measurement.

m – Meter length - measurement

TMP – Traffic Management Plan-

CDM –Construction (Design and Management) Regulations 2015 (CDM 2015) came into force on 6 April 2015

E&E – Epsom & Ewell Council

Section 61 – Control of Pollution Act Section 61 of the Control of Pollution Act 1974 allows developers and their contractors to apply for permission for noise generating activities during construction. It takes into account the methods of construction that will be used, the hours of work and what the levels of construction noise are likely to be at noise sensitive premises.

HSG 248 – Control of Asbestos Regulation. Guidance covering licensed asbestos removal and the sampling of asbestos-containing materials.

HSG 264 – Control of asbestos. The document is aimed at those conducting Surveys, those who commission surveys and those with specific responsibilities for managing asbestos in accordance with Control of Asbestos Regulations (CAR) 2006.

ARCA - The Asbestos Removal Contractors Association (ARCA) is the UK's leading asbestos removal association, representing the interests of asbestos removal contractors and associated businesses.

ETFE – ETFE stands for Ethylene Tetrafluoroethylene, a transparent polymer that is used instead of glass and plastic in some modern buildings.

Cat B –Category B completes the fit-out to the occupier's / users specific requirements.

UKPN – UK Power Networks the Electricity supplier for this area.

Section 106 – is an act of the United Kingdom Parliament regulating the development of land in England and Wales.

Environmental Policy – The environmental policy is a high-level statement of mission and principles in relation to environmental performance. It creates the framework for setting environmental objectives and targets and is often a public document.

Environmental Plan – The environmental plan is the key document in the environmental management system and sets out the detailed, targets, objectives and procedures that will be adopted in order to achieve the goals set out in the environmental policy

TFL –Transport for London.

Banksman – Banksmen are operatives trained to direct vehicle movement on or around site.

Free Slew – Is an angular movement of a crane boom or crane jib in a horizontal plane turning freely

SMIE - The **SMIE** anti-collision system is a device intended to assist the crane driver against the collision risks between two or more interfering cranes.

CCS – Considerate Contractors Scheme. The Considerate constructors seek to improve the image of the construction industry by striving to promote and achieve best practice under the Code. The Code is in five parts and contains a series of bullet points. Each section of the Code contains an aspirational supporting statement and four bullet points which represent the basic expectations of registration with the Scheme.

Care about Appearance, Respect the Community, **Protect the Environment, Secure everyone's Safety and** Value their Workforce

FORS - Fleet Operator Recognition Scheme (FORS) is an industry-led accreditation scheme that aims to promote road freight as a safe and sustainable mode of transportation in a way that supports economic growth and environmental targets whilst helping to improve our quality of life.

CLOCS - CLOCS brings the construction logistics industry together to revolutionize the management of work related road risk and ensure a road safety culture is embedded across the industry. CLOCS help protect pedestrians, cyclists, motorcyclists and other road users who share the roads with construction vehicles

ISO 17020 – Quality manual, procedures and quality records to aid in the implementation of the ISO 17020 accreditation requirements.

ISO 17025 - Quality Manual Template. The ISO 17025 Quality Kit includes manuals, templates and procedures.

ISO 14001- The ISO 14001 standard is the most important standard within the ISO 14000 series. ISO 14001 specifies the requirements of an environmental management system.

Appendix E – High Level Programme