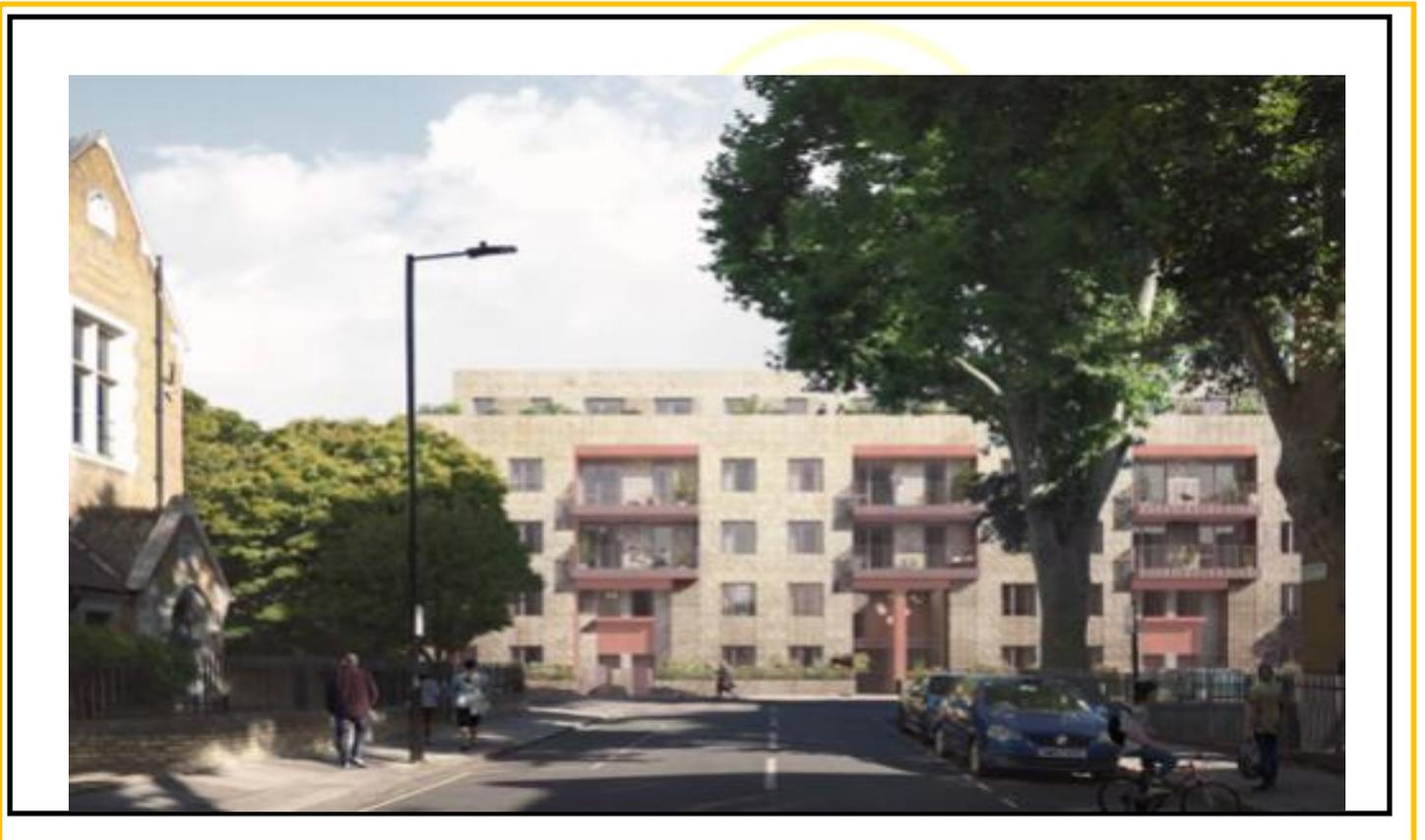


CONSTRUCTION MANAGEMENT PLAN

Westmead
January 2023 rev 2



H2204 Westmead, Tavistock Road, W11 1BA

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1.0 Introduction

This Construction Management Plan (CMP) has been developed for Westmead and will be subject to further development in response to changing constraints, methodologies, and variations.

The CMP sets out the methods and procedures that will be adopted with consideration to minimise the impact of the development on the local community and residents, businesses, the public and environment. It will address the potential environmental impact of the construction and the methods to mitigate the specific environmental disturbances such as noise, vibration, dust, and plant emissions.

1.1 Project Overview

The project consists of the Demolition of 42 bed-residential care home on Tavistock Road, located on the western edge of the City of Westminster, close to Westbourne Park tube station.

The project will consist of 64 new homes from 1-bed to 4-bed family homes, with green space improvements and to be mixed tenure. It will stage across 5 storeys (including a lower ground level and with a setback fifth floor) with 121 cycle spaces for residents and guests.

The site is bounded to North with Tavistock Crescent, approx 20m is Harford House and to the South approx. 20m with Tavistock Road is Leamington House. To the West is Fallodon House on St Lukes Road and to East approx. 10m is Anglican Communion Office and Consultative Council.

The development works will consist of the following:

- External Works – to include the formation of new footpaths, soft landscaping and enhanced hard finishes.
- Demolition of existing building sited on the footprint of the new development.
- Construction of new substructure foundations, piling and beams.
- Installation of drainage and provisions for utility services.
- Construction of new concrete framed residential building, complete with mainly brickwork façade, flat roofs, and composite windows.
- Construction and completion of all internal finishes and installation of new permanent services.
- Completions of remaining external landscaping once the project concludes full decant.

Westmead Location Map



2.0 Programme Milestone Date

The construction period is 80 calendar weeks, and a summary of the key milestone activities are listed below. There are many other critical activities but the items below are the dominant activities critical to the completion of the project.

2.1 Table 1 Key Milestone Dates

KEY MILESTONE DATES	
Demolition Contract Agreement	17th March 2023
Start on Site	31st March 2023
Phase 1 Demolition/Enabling	Week -1
Demolition Complete	Week -12
Sheet piled retaining wall complete	Week -15
Main Contract commences	October 2023
Foundations Complete	Week 30
Superstructure frame complete	Week 44
Envelope complete.	Week 63
Fit Out	Week 80
Landscaping complete	Week 80
Project Completion	April 2025

3.0 Site Logistics & Deliveries

3.1 Site Accommodation and Welfare Facilities

To ensure most personnel stay on site between the periods of their arrival and departure at the end of the working day, thereby minimising the impact of pedestrian traffic movement on and off the site, satisfactory site accommodation and welfare facilities will be provided on site. This will include the provision of main contractor offices, toilets, drying room, canteen, and storage units.

Initially an Elliot Eco Max double stacked cabins will be sited on project close to Tavistock Crescent. This will allow us to provide suitable welfare for the small team of SCPs to deliver the early phases of the demolition of the Westmead Care Home. Once the demolition and temporary works has been complete, then the permanent set up can be placed on Tavistock Road.

The site offices and welfare are currently to be located on Tavistock Road, with Pedestrian access to the site and its facilities to be controlled via a biometric turnstile system. A safe segregated route from Tavistock Road to the site will be provided.

It is our intention that all welfare facilities will be connected to the mains electric, (we will apply for a Temporary building supply for our electric supply and there will be no need to run diesel generators for the project), the water & drainage to minimise vehicle movements, noise, and odours.

3.2 Site Access and Security

Traffic will be controlled by trained persons who will be based at the vehicle access gates for the full duration of the site operating hours. Pedestrian access will be through a biometric turnstile located by the site accommodation.

Unloading/loading of larger vehicles will be via tower crane from a designated zone situated on Tavistock Road. A protective gantry will be erected over the public footpath to enable pedestrian foot traffic to continue as usual during lifting operations. Small deliveries will be received and contained within the site boundaries and not on the public highway to assist with minimising site traffic.

A traffic management plan will be circulated to all parties (including suppliers) and updated as the site progresses. The vehicle and pedestrian routes will have clear signage and always be segregated. Parking bay suspensions will be obtained from Westminster City Council to facilitate the construction works and the inherent logistics.

WDC will develop a security plan for the development and as a minimum; it will cover and allow for the following:

- Perimeter site security
- Accommodation and welfare facilities
- Materials storage and management
- Protection of completed works
- Protection of the site outside of normal hours
- Site rules and procedures
- Emergency call out numbers

3.3 Material Movement

WDC will designate space for supply chain partners' storage. Material stored outside of a lockable container will be in designated areas and monitored by site management for Health & Safety purposes.

A philosophy of 'just in time' deliveries will be adopted where materials will be given a delivery date/time and recorded and controlled by WDC site management via MSite. For example, kitchens will be loaded straight into the units, bricks will be stored for the shortest possible time, timber will be stored in a dry location - all material deliveries will be considered and well planned. Deliveries will be controlled by a gateman and delivered/loaded out direct to the appropriate workplace.

The gateman will also maintain the site entrance/exit so it will be always kept clean and tidy and control pedestrians crossing the sites vehicle access routes. Presentation of the site is of paramount importance to Willmott Dixon and daily checks will be made to ensure that dirt, dust, weeds, graffiti etc. are removed from site perimeters and the surrounding estate daily.

Principal storage areas will be displayed on a site layout and unloading will be supervised by a trained operative/manager who will have a clear understanding of our material control process.

Materials will be distributed vertically by Tower Cranes, Hoists, and a small Telehandler. A telehandler will be used at specific times of the works programme to ensure materials are dropped as close to the working areas as possible to avoid manual handling, generally to serve areas outside of the crane's parameters. All plant and machinery will be operated and manoeuvred by competent and always trained persons.

3.4 Access Arrangements for Vehicles

Smaller vehicles will enter the site via the main vehicle access entrance feeding from Tavistock Crescent to the East of the site and drive into the designated waiting zone for further instruction. All personnel responsible for delivering material to the site and/or transporting material away from the site will be advised in writing of the proposed / agreed vehicular access routes and advised that failure to comply with the agreed route (other than in exceptional circumstances, such as the temporary closure of a road) will result in appropriate action being taken against the driver and his employer.

The site team will liaise with Westminster City Council throughout the construction process and if, for any reason, the Council considers it necessary to modify the currently proposed access arrangements; WDC will work with the Council to ensure that all parties are satisfied.

3.5 Vehicle Delivery Requirements

All deliveries will be made to site via Tavistock Road or Tavistock Crescent. If practically possible all vehicles that drive into site via the vehicle gates will be turned around, so they drive back out of Tavistock Crescent to avoid the need for vehicles to be reversed out. Depending on the vehicle size, the vehicle may be able to proceed along Tavistock Street to A4207 Road where they can re-join the highway.

The traffic management plan will require all delivery drivers to contact the duty gateman/banksman before they approach site and to ensure that they are clear to proceed to site. Deliveries will be staggered so that, other than in unforeseen circumstances, drivers will be able to proceed directly to the site without the need to wait before proceeding to the site. The delivery times will be managed by the site team via MSite.

Where any vehicle is waiting to be unloaded, it is to remain stationary with the engine switched off. Deliveries will generally be between 08:00 and 17:00, with busy traffic times avoided, and the gatemen will be available from 07:30 onwards to deal with any drivers that ignore the restrictions discussed above.

The number of movements onto and off the public highway will vary depending on the nature of the activity. In this regard, it is anticipated that there may be circa 3-4 vehicle movements each way per hour during peak construction activity. However, there will be significantly fewer vehicle movements per hour for most of the construction process.

3.6 Vehicle Size

We foresee the likely range of delivery vehicles used during the construction process is as follows:

- 4-wheel Lorry/Van
- 6-wheel Lorry
- 8-wheel Lorry
- 14-wheel articulated lorry
- Low loaders

3.7 Hours of Operation

The construction site will operate between:

- Monday – Friday 08:00 – 18:00
- Saturday 08:00 – 13:00
- No Out of Hours, Sunday, or Bank Holiday working (unless approved by the Council).

Piling, Excavation and Demolition work only:

- Monday – Friday 08:00 – 18:00
- not at all on Saturdays, Sundays, bank holidays and public holidays

3.8 Vehicle Arrival and Loading Arrangements

Vehicle arrival timings will be staggered to reduce unnecessary congestion within the site and the need for vehicles to wait. Where possible, all vehicles will arrive and depart the site in forward gear. If it is necessary for a vehicle (or vehicles) to reverse into or out of the site (by virtue of its size), a banksman will always control this activity.

Banksmen will supervise all arrivals and departures of vehicles. All vehicles leaving the site will have their wheels cleaned as required to ensure that no deposits are left on the road and in extreme cases when there is a large volume of vehicles exiting the site and weather conditions prevail a road brush will be deployed. All vehicles leaving site will have their loads suitably sheeted and secured. All vehicles will also comply with any low emission zones.

3.9 Parking Strategy

Information relating to parking and public transport will form part of the site induction pack so every construction operative is clear on the restrictions and limitations relating to parking, and where parking can be found in the local area.

We shall encourage employment of local labour to limit the number of supply chain partner vehicles on site and shall also encourage shared driving and the use of public transport.

We do not envisage any major disruption during the construction works to surrounding properties and businesses, although the Construction Manager will make himself known to the

estate's resident liaisons manager, so that there can be a clear line of communication while the project is on-going.

3.10 Temporary Road Closure

It is envisaged we will need to apply and execute a road closure to facilitate the erection and removal of the tower crane. We believe that this does not impact TFL and all applications will be made in a timely manner.

The site team will liaise with the Westminster City Council if a road closure is required.

3.11 Pedestrian and Cyclist Safety

Construction traffic poses a potential risk to pedestrians and cyclist's safety, particularly when entering and exiting the site / loading zone. Vulnerable road users' will be carefully managed using banksmen during all periods of operation at the site that will supervise and escort all arrivals and departures of construction traffic. All operatives will be trained in this role and have a full understanding of the potential risks. We will also ensure that the gatemen are prepared to speak to the public –and have an approachable manor to ensure our commitment to the Considerate Constructors Scheme is reinforced.

All our supply chain partners will fully comply with CLOCS and FORS. Willmott Dixon will record all vehicle movements to ensure that all the fleet arriving on site is complying with CLOCS and they have a silver certificate for the FORS as a minimum.

Reference will be made to the Greater London Authority SPG, in relation to emissions from construction activities.

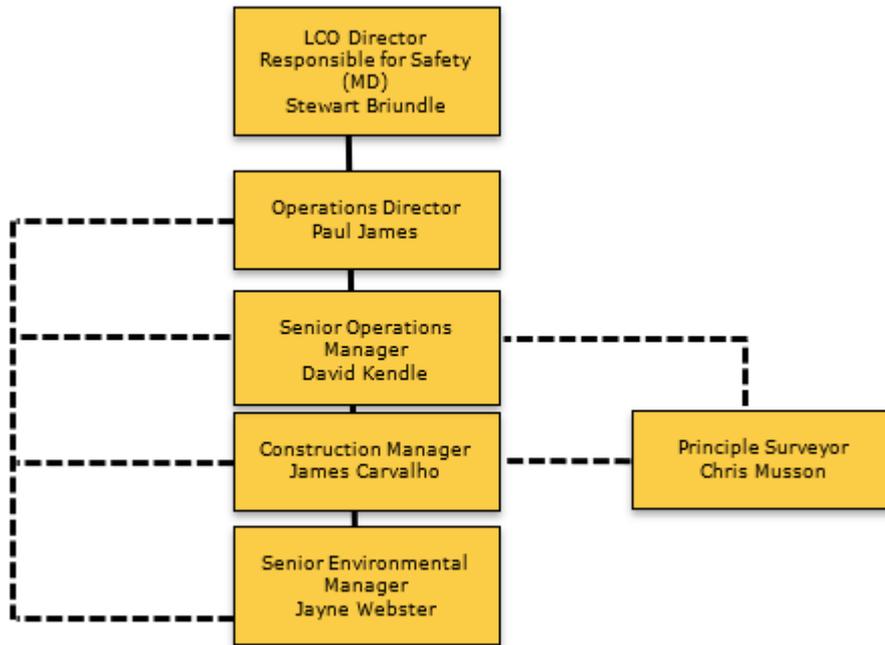
3.12 Site Logistics Plan

Building on
BETTER

Please refer to Appendix A
for the Site Logistics Plan.

4.0 Management Structure and Responsibilities

The project team will be structured from the outset and the team members will be carefully selected to give the project the best prospects for success. The composition of the project team may change thought the duration of the project, but the initial structure will be as shown below:



The roles, responsibilities and reporting mechanisms will be clearly defined and communicated to all members of the team and on a regular basis. In addition, where team members are responsible for delivering part of the project, they will be properly informed of their responsibilities with deliverable milestones agreed.

The project structure will follow the traditional format with a visiting Operations Director and a site-based team including a Construction Manager, Senior Building Manager and Build/Assistant Managers (staggered throughout build), with a site based commercial team.

The Operations Director and Construction Manager will direct and integrate resources whilst meeting performance standards, programme in dates, and cost objectives. They will also be responsible for the team’s guidance, motivation, output, and control and for successfully organising the project by carefully mixing financial and physical resources at the proper time.

A roles and responsibility matrix will be developed to provide clear guidance on the responsibility of the project including assigning priorities and tasks to individual and teams. The matrix will be added to the CMP as an appendix.

4.1 Management Meeting Overview

To ensure that the project is kept on programme and budget, Willmott Dixon Construction has set out procedures that require the following:

Weekly contractor consultation team meetings will be held on site with all the site team.

The meetings will look at, but not limited to:

- Site Health & Safety
- Contractor performance

- Short term programming
- Staffing/manning levels

These meetings will be followed by a monthly internal Contract Review Meeting (CRM). This will be held on site with all the Willmott Dixon team.

These will look at the project in the following, but not limited to.

- Current Contract Completion Date
- Current Progress Position
- % Planned and Actual Progress
- Project Milestones
- Anticipated Completion Date
- Areas of Future Concern or Opportunity
- Brief Description of Progress in the Period
- Brief Description of Key Activities in Next Period
- Inclement Weather Recorded in the Period
- Critical Information Outstanding
- Instructions Required
- Financial Report
- Safety – Accidents, Incidents and Safety Score
- Quality – Issues, Signoffs and Agreements
- Environmental – Issues
- Staffing requirements

These meetings are then followed up by an external Contract Review Meeting with the client team (This meeting will also be held on site or at a suitable agreed location local to site). Willmott Dixon will then issue the findings of the above CRM and discuss any project specific points agreed prior to the initial meeting.

5.0 Environmental Mitigation/Construction Control Measures

5.1 Noise Control

Regulatory Overview

The principal legislative controls on noise which includes vibration are contained within the Control of Pollution Act 1974. In addition, statutory nuisance provisions contained within the Environmental Protection Act 1990

Section 72 of the Control of Pollution Act 1974 requires that 'Best Practicable Means' (BPM) is always employed when controlling noise and vibration on construction sites. This means that the measures must be taken to control environmental impacts and the recommendations and good practice that is outlined in British Standard 52281&2:2009+2014 Code of practice for noise and vibration control on construction and open sites shall be followed and reference to Westminster City Council Code of Construction practice. It is the responsibility of the Principal Contractor that all activities adhere to current codes of practice and environmental law.

Detailed Provisions

The project will apply for prior consent under Section 61 application of the Control of Pollution Act 1974 to Westminster City Council Environmental Sciences, Regulatory Support, Environment and City Management.

For noise and vibration mitigation of the activities associated with the project, we have completed Site Noise Risk Assessment for state risk category and employ best practice measures

A noise and dust monitoring system will be implemented on the Westmead project to ensure all site activities are within the limits 76dB we will use online 24/7-hour real time monitoring system like Casella (see specification sheet), that will send email notifications; receive real time e-mail and text alerts to project team members based on the project, including James Carvalho (Construction Manager) and Jayne Webster (Senior Environmental Manager). There will be two monitors for dust and noise and one monitor for vibration for the duration of the works at Westmead project.

Trigger levels for noise will be permitted noise action level is 73dB measured as a one-hour LAeq

Background noise can be used in setting a working standard based on dB above the working daytime LA90. As the daytime background noise is 66dB then the site working limit at the boundary is 76dB plus 3 dB action limit

If these levels are ever exceeded, then current activities will be halted immediately, and the operations will be reviewed to ensure the noise levels are decreased before works continue.

Bi-monthly (every two weeks) summary reports will be issued to Westminster City Council Environmental Sciences Team. The reporting will be for noise will be hourly data and will be LAeq and LA90 and for dust it is PM10 and PM2.5 with hourly data reported, if there are dust incidents than the 15-minute data can be examined.

The site shall be surrounded by fencing or hoarding to the required height and density appropriate to the noise sensitivity of the location concerned.

All worksite gates will be controlled to give the minimum amount of time open for passage of vehicles, to minimise stray noise to the external surrounding area.

Vehicles and mechanical plant used for the purpose of the works shall be fitted with effective exhaust silencers, will be maintained in good and efficient working order, and operated in such a manner as to minimise noise emissions.

On site where environmental disturbance may arise, compressors will be 'sound reduced' models fitted with properly lined and sealed acoustic covers which must be kept closed whenever the machines are in use, and pneumatic percussive tools must be fitted with shrouding or silencers of the type recommended by the manufacturers.

Equipment that breaks concrete by munching or similar, rather than by percussion, shall be used as far as is practicable.

Noisy plant or equipment will be sited as far away as is practicable from noise sensitive buildings. The use of barriers, e.g., Soil mounds, site huts, acoustic sheds, or partitions to deflect noise away from noise sensitive areas will be employed wherever practicable. Care shall be taken when loading or unloading vehicles or dismantling scaffolding or moving materials, etc. to reduce impact noise.

Should a need ever arise to work past the specified site operating hours due to unforeseen circumstances, Willmott Dixon will inform the council immediately and the surrounding community by form of a letter drop.

Scaffold will be monoflexed and/or debris netting to all levels and all elevations.

General

All machinery is to comply with the current legislation of 80 dB (A).

Noise assessments will be carried out as per Control of Noise at Work Regulations 2205.

There will be careful selection of the plant to be used to reduce noise.

On site noise assessments will be carried out and recorded.

Anyone who has a daily or weekly exposure to noise exceeding 80dB(A) or a peak pressure reading of 135dB (A) will be warned of the dangers of working in a noisy environment advised of the systems being used by the company to reduce noise levels and issued with and trained in the use of ear protection.

Health surveillance and enforced ear protection is compulsory if weekly noise levels of 85 dB (A) or above or a peak sound pressure reading of 137 dB is reached.

All supply chain partners will provide full risk assessments and method statements.

Ready mixed mortar will be used reducing noise levels through preventing on site diesel cement mixers.

5.2 Vibration

General

We shall ensure that measures are taken to: -

- i. Protect the residents, users of buildings close by and passers-by from nuisance or harm and
- ii. Protect buildings from physical damage.

Upon determining appropriate vibration levels, we shall consider: -

- i. Human exposure
- ii. Protection of structures

Reference will be made to the WCC Code of Practice for Construction February 2022, BS 5228:2009_2014, where guidance is given in relation to vibration from construction activities.

Construction activities will be carried out in such a way that vibrations arising will not cause significant damage to adjacent structures.

We will use Casella monitoring system 24/7 online real time reporting for vibration.

As per WCC Code of Practice for Construction February 2022 we will have vibration trigger limits as per follows, Vibrations levels on site will be set as:

- 1mm/s for nearby occupied residential
- 3mm/s for occupied commercial premises
- 5mm/s for other unoccupied buildings

Bi-monthly (every two weeks) summary reports will be issued to Westminster City Council Environmental Sciences Team.

5.3 Dust & Air Quality

Regulatory Overview

The main regulatory controls over dust are the 'statutory nuisance' provisions contained in the Environmental Protection Act 1990. Dust can give rise to a statutory nuisance if it is 'prejudicial to health or a nuisance'.

Smoke, for example from burning waste on site, can also result in a statutory nuisance and is also controlled by the Clean Air Act 1993.

Reference will be made to the Greater London Authority SPG in relation to dust monitoring & control from construction activities and Mayor of London Special Policy Guidance (SPG) The Control of Dust and Emissions from Construction and Demolition Activities.

Dust - General

Dust is defined as particles up to 75 µm in diameter and is produced through the action of crushing and abrasive forces on materials. A wide range of activities, including traffic movement, construction/demolition, mineral workings, and general industry, generate nuisance dust.

Large dust particles can cause eye, nose, and throat irritation, whilst the smaller fraction of particles with an aerodynamic diameter of 10 µm or less (PM10 & PM2.5) is more of a health concern as the particles can enter the lungs causing breathing and respiratory problems.

Detailed Provisions

A noise and dust monitoring system will be implemented on the Westmead project to ensure all site activities are within the limits set out by DEFRA and 190 ug/m³ site action level set by Westminster City Council.

We will use online 24/7-hour real time monitoring system like Casella (see specification sheet), that will send email notifications; Receiving real time e-mail and text alerts to project team

members based on the project, including Guy Cutts (Construction Manager) and Jayne Webster (Environmental Manager). Activities giving rise to dust will be suspended until such time as effective control measures can be established.

Dust monitors will measure PM10 and PM2.5. PM10 will set as per the alert levels for Dust Monitors are set by Department of Environment Food and Rural Affairs (DEFRA) and the Environmental Agency (EA).

PM10

- 150ug/m³ as an early warning,
- 250ug/m³ as an action, and
- 500ug/m³ for a stop works.

PM 2.5

- Mean PM2.5 over a 15-minute 75ug/m³;
- Mean PM2.5 over 1hr 50ug/m³

Bi-monthly (every two weeks) summary reports will be issued to Westminster City Council Environmental Sciences Team.



Risk Assessment for Westmead Project

The assessment of construction activities has focused on demolition, earthworks, construction and track out activities at the site. Using the criteria provided in Table below the dust emission magnitude for each activity is as follows:

Construction Activity	Sensitivity of Area	Dust Emission Magnitude		
		Large	Medium	Small
Demolition	High	Red	Yellow	Green
	Medium	Red	Yellow	Green
	Low	Yellow	Green	N/A
Earthworks	High	Red	Yellow	Green
	Medium	Yellow	Yellow	Green
	Low	Green	Green	N/A
Construction	High	Red	Yellow	Green
	Medium	Yellow	Yellow	Green
	Low	Green	Green	N/A
Trackout	High	Red	Green	Green
	Medium	Yellow	Green	N/A
	Low	Green	Green	N/A

Activity	Dust Emission Magnitude
Demolition	Medium
Earthworks	Medium
Construction	Medium
Track out	Small

Based on the SPG guidance the sensitivity of the surrounding area is summarised in Table 10.

Table 10 – Sensitivity of the Surrounding Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High risk	High risk	High risk	High risk
Human Health	Medium risk	Medium risk	Medium risk	Medium risk
Ecological	N/A	N/A	N/A	N/A

The dust emission magnitudes and sensitivity of the surrounding area are combined to determine the risk of dust impacts with no mitigation applied. These are summarised in Table 11.

Table 11 – Summary of Dust Risk

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium risk	Medium risk	Medium risk	Low risk
Human Health	Low risk	Medium risk	Medium risk	Negligible
Ecological	N/A	N/A	N/A	N/A

It should also be noted that the likelihood of an adverse impact occurring is correlated to wind

speed and wind direction. As such, unfavourable wind speeds and wind directions must occur at the same time as a dust generating activity to generate an adverse impact. The overall impacts also assume that the dust generating activities are occurring over the entirety of the site meaning that as an activity moves further away from a potential receptor the magnitude and significance of the impact will be further reduced.

Mitigation of Potential Dust Nuisance

Guidance on the mitigation of potential dust nuisance has been published by the Greater London Authority in The Control of Dust and Emissions from Construction and Demolition (July 2014).

Impact from Construction Activities a qualitative assessment of dust levels associated with the proposed development has been carried out. The impact of dust soiling and PM10 and PM2.5 can be reduced to negligible through suggested appropriate mitigation measures, which are listed in Table 12 and are applicable to a medium risk site. Implementation of these Best Practice Measures will help reduce the impact of the construction activities.

Construction Activity	Mitigation Measures
Site Management	Develop and implement a stakeholder communications plan that included community engagement before work commences onsite
	Develop a Dust Management Plan.
	Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.
	Display the head or regional office contact information.
	Record and respond to all dust and air quality pollutant emissions complaints.
	Make a complaints log available to the local authority when asked.
	Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.
	Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.
Preparing and Maintaining the Site	Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.
	Plan site layout: machinery and dust causing activities should be located away from receptors.
	Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.
	Fully enclosure site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
	Avoid site runoff of water or mud.
	Keep site fencing, barriers and scaffolding clean using wet methods.
	Remove materials from site as soon as possible.
	Agree monitoring locations with the local authority
	Where possible, commence baseline monitoring at least three months before the phase begins
	Cover, seed or fence stockpiles to prevent wind whipping
Put in place real-time dust and air quality pollutant monitors across the site to ensure and ensure they are checked regularly	
Operating Vehicle/Machinery	Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.

and Sustainable Travel	Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.
	Ensure all vehicles switch off engines when stationary – no idling vehicles.
	Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where possible.
	Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
	Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
	Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).
	Use enclosed chutes, conveyors and covered skips.
	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
Waste Management	Reuse and recycle waste to reduce dust from waste materials
	Avoid bonfires and burning of waste materials.

Continuous visual assessment of the site will be undertaken, and a complaints log maintained to determine the origin of a particular dust nuisance. Keeping an accurate and up to date complaints log will isolate site activities to a nuisance dust episode and help prevent it from reoccurring in the future

Dust Movement

For a dust nuisance to arise, the following factors must be present:

- Finely divided, dry material is present on site as a dust source.
- Wind blowing from the site to the receptor.
- Wind speed sufficient to entrain the particles.

The prevailing wind direction is therefore important in establishing the areas that are most likely to experience any dust nuisance during the construction process.

Environmental Risk from Dust procedures include:

Good housekeeping and control of waste dusts and silt at source will prevent windblown debris accumulating and, with prevailing weather, create mud or dust carriage from site. Mud and Dust pollution risk and community nuisance can be avoided by employing the SSoW controls but also through:

- Hard landscaping / laying sub-base, base coat or stoning up access roads and parking facilities, preventing exposure of soil/stone to wind blown/runoff risk.
- Locating stockpiles away from site boundaries, use of wind-fences or seeding to limit dust and maintaining stockpile levels below hoarding levels to prevent lift. Risk of dust and silt from site may be managed by:
 - Covering dust generating loads and piles of materials, such as sand and topsoil. •
 - Providing wheel wash facilities on site.

- Employing a roadsweeper to remove mud / dust from the roads on and around site (remember to ensure that waste documentation is obtained).
- Address in pre-enrolment, site orientation and delivering trade specific TBTs.
- Keeping plant / vehicles on site to the site speed limit.
- Using dust capture / suppression equipment on tools and plant.
- Housekeeping, housekeeping, housekeeping. Removing dust risk at source and maintaining robust housekeeping. Sweep and pick-up dust (not to be left in piles to be kicked or blown by wind).
- The entire project will have hoarding erect and the scaffolding for the project will be enclosure with monoflex and debris netting, therefore localised dust will manage, Litter pick/maintain site housekeeping on all build levels (especially roof and upper floors) to prevent wind-blown dust and plastic insulation debris pollution across site and into community/surrounding areas.
- Control of cutting or grinding of materials on site. Dust-generating machinery e.g., Disk cutters must be fitted with vacuums and water suppressions will be adopted.

It is considered that given the adoption of the mitigation measures detailed above that any potential effects from dust from construction works would be minimised to such an extent as to be insignificant.

5.4 Air Quality

The burning of materials on the site will not be permitted. All necessary precautions shall be taken to prevent the occurrence of smoke emissions or fumes from the site plant or stored fuel oils for safety reasons and to prevent such emissions or fumes drifting into residential areas. Plant shall be well maintained and shut down in the intervening periods between work or throttled down to a minimum.

5.5 Emissions

New measures for plant and machinery on site were introduced from 1st September 2015 for Non-Road Mobile Machinery (NRMM) under EU directive 97/68/EC, specifically within the new Greater London Authority (GLA) area, though through consultation for air quality planning by urban councils, NRMM requirements are probable for cities nationally.

In the immediate term, individual London Borough councils are legally bound to comply and will inspect to ensure compliance towards meeting air quality standards, to reduce harmful Nitrogen Oxide (NOx) and dust/particulate matter (PM10) emissions, specifically from variable and constant speed engines, with net engine power between 37kW and 560kW. This includes plant such as generators, tele-handlers, and excavators. The NRMM standards will apply to Westmead project must achieve Stage IIB.

To reduce carbon emissions and fuel we will endeavour to procure all plant and equipment efficiently sized for the task in hand and which is no more than 18 months old.

An inventory of all NRMM for Westmead project will be registered and applicable plant on nrm. London website and maintain the online register of all site equipment for Local Authority review, there will also be records kept on site and all machinery will be regularly serviced and

service logs kept on site for inspection. Records should be kept on site which details proof of emission limits for all equipment. This documentation should be made available to local authority officers as required.

In addition, the following traffic management principles should be observed:

- I. In circumstances to reduce vehicular movements, deliveries will be made direct to the work zone to mitigate double handling and double vehicular movements.
- II. Delivery vehicles whenever practical will avoid 'peak public traffic hours' to reduce traffic congestion and nuisance to the existing road and highway network.
- III. To avoid construction traffic congestion and nuisance to the surrounding area all suppliers and contractors will be made aware of traffic routes.
- IV. Site entrances will be maintained and kept clean and clear. There will be a road sweeper in operation when required and in line with the works activities to ensure no mud is left on the live highway as a direct result of the works.
- V. All materials will be loaded within the site compound/boundary of the working zone to minimize congestion.
- VI. For environmental and road safety all materials containers leaving site will be appropriately covered to avoid soiling of the roads and highway. Engines of all vehicles, mobile and fixed plant on site are not left running unnecessarily.
- VII. Using low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices.
- VIII. Plant will be well maintained, with routine servicing of plant and vehicles to be completed in accordance with the manufacturer's recommendations and records maintained for the work undertaken.

Avoiding the use of diesel- or petrol-powered generators and using mains electricity or battery powered equipment where available

5.7 Waste Management

Waste is managed in the most efficient way by encouraging re-use and re-cycling on-site and maximising segregation. Rubbish will not be allowed to accumulate and cause a fire hazard; all waste will be collected from site in skips. These shall be emptied regularly.

Though site waste management plans are no longer a legislative requirement, we continue to use them to help us create resource efficiency action plans for our construction projects.

We also have a 10-Point Sustainable Project Criteria including targets for construction waste volumes which we upload our waste monitoring data onto our Environmental Data System (EDS), and we use the system to report the waste generated on the project, and the quantity diverted from landfill through recycling and recovery can be reported. We also upload our anonymised data to the WRAP Construction Portal.

The site team will include a waste champion, and there will be a visiting Environmental Manager to audit operations and ensure procedures to minimise the environmental impact of operations. They also review the site's energy and waste data.

Designing out waste

Waste is a consideration right at the very beginning of a project, so we use Building Information Modelling Management (BIMM) to avoid costly mistakes in time and resources. "Designing out Waste" workshops will be help with as the design progresses and we use an IMPACT tool which

helps us undertake whole life analysis and whole life costing on different materials, so we select the right ones for the job.

Recycled content

We are working towards a 100% landfill diversion rate, so we recognise the need to 'close the loop' by specifying materials with higher recycled content, since this will support markets for the materials we and others send for recycling. This also helps to reduce the quantities of materials we send to landfill, and the number of virgin materials we use.

Working with suppliers

We work with product suppliers to apply the waste hierarchy to the management of waste materials and encourage re-use ahead of recycling and recovery, for example making use of discarded furniture and the repair and repatriation of pallets. These initiatives are improving our management of waste and increasing diversion from landfill, as well as helping us reduce costs.

Where re-use is not possible, we work with suppliers to develop and identify take-back schemes, and we keep a comprehensive list of these for our site teams to use. The list and accompanying guidance help our design teams understand where 'closed loop' takeback schemes are available and gives our project teams an understanding of which products and materials they can send directly back to manufacturers. A suite of toolbox talks, posters and guidance notes are available within our Environmental Management System.

Our Environmental Data System allows us to identify waste streams that are still difficult to divert from landfill, and we work with manufacturers to trial alternatives and implement takeback schemes when no alternative has been identified.

Waste contractors

All our waste contractors must complete a pre-qualification questionnaire to assess that they meet our standards before they can become approved and listed within our Supply Chain System. This asks that they report their performance in accordance with PAS 402 (a specification for performance reporting for waste management organisations) in accordance with our Sustainable Procurement Policy. We carry out a detailed on-site audit on their premises, so we can be sure that they have the right segregation capabilities and can meet our data return requirements. We check their documentation for duty of care compliance and view working conditions for their employees.

Contaminated Land

A desk study will identify the history of the site and surrounding land and any potential contaminants of concern. A walkover survey will also identify any potential on-site or off-site sources of contamination. Further to this any intrusive site investigation works can be undertaken as deemed appropriate. Any intrusive site investigation works will be sufficient to determine as far as is reasonably practicable the ground conditions and the nature and extent of any contamination within the substrate. The results of any investigation will then form the basis of a Remediation Method Statement, which will outline the proposals for mitigating the risks posed by any contamination identified at the site. A validation report will be completed following any remediation works.

5.6 Pest Control

We will ensure that the risk of infestation by pest or vermin is minimised by adequate arrangements for disposal of food waste or other material attractive to pests. If infestation occurs, we will take such action to deal with it as required by the Environmental Health Officer.

5.7 Drainage

Site drainage, including surface runoff and dewatering effluents, will be discharged to sewers where reasonably practicable. Site drainage will meet the requirements for effluent and flood risk standards required by the sewerage undertaker.

During construction, protection measures to control the risk of pollution to surface water will be adopted. These will include:

- Any containers of contaminating substances on site will be leak proof and kept in a safe and secure building or compound from which they cannot leak, spill or be open to vandalism. The containers will be protected by temporary impermeable bunds with a capacity of 110% of the maximum stored volume.
- Areas for transfer of contaminating substances will be similarly protected.
- All refuelling, oiling, and greasing will take place above drip trays or on an impermeable surface which provides protection to underground strata and watercourses and away from drains as far as reasonably practicable. Vehicles will not be left unattended during refuelling.
- All wash down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses and will comply with EA's Pollution Prevention Guidance.

The Pollution Prevention Measures and good construction practices will ensure that any oils, hydrocarbons, or hazardous materials stored on site will not leak onto the ground surface and thereby ensure that there is no pathway for contaminants to affect the water course.

5.8 Emergency Plan

A set of standardised emergency response procedures will govern the management of environmental and emergency incidents. All WDC management will be required to adhere to and implement these procedures and ensure that site operatives are familiar with the emergency arrangements for the site. This will be generally communicated in the site induction but also at the weekly meetings and as the site progresses.

The emergency procedure will contain 24-hour emergency phone numbers and the method of notifying local authorities, statutory authorities and the emergency services should an incident occur.

Practice drills will be scheduled throughout the construction process for both environmental and emergency incidents.

6.0 Pre-Construction Programme

This programme has been developed along with the project team and represents our carefully considered delivery plan.

The pre-construction stage of the project has been carefully considered, and it is vital that that all preconstruction stages are completed according to plan to avoid any knock-on issues. A key consideration is the logistical requirements of the development as the project covers the footprint of the site so vehicle unloading/loading and storage must be very well planned.

During the early stages we will appoint the specialist contractors and commence design development of the packages with design responsibility. This will involve co-ordination and interfacing with the client and design team together with design approvals once information has been produced and submitted.

As an experienced Main Contractor, we recognise the role that we need to play in assisting the employer in terms of achieving value for money, cost certainty, a quality product and programme delivery.

From the very outset we will establish a highly motivated pre-construction team - all of them have already been working on the bid submission.

The final design and procurement programme will be compiled in consultation with the Design Team, as well as determining the level of design information to be issued and the approval of all Sub Contractor Design packages.

The Design will be monitored with fortnightly meetings with the design consultants and our preconstruction design team to monitor design milestones to enable that information is able to be passed to the procurement team. This will allow contractors with design responsibility time to carry out this work and aiding the smooth progress of the project into construction.

6.1 Procurement Strategy

To meet the construction activities within the WLP, our procurement team will strictly adhere to the subcontractor order schedule and the materials schedule. This has been developed by the Delivery Team into a schedule format to facilitate control and identifies the following activities:

- Tender analysis and recommendations for each package (based on tender stage enquiries.)
- Agreed dates for issue of construction issue status drawings and specifications
- Specialist design development and approval periods for the Sub Contractor Design packages
- Lead in and manufacture periods
- Start on site date

6.2 Programme Overview

Detailed programmes will be developed for the construction elements of the new homes. Detailed short-term programmes will be produced monthly by the site team.

Lead in times for key elements for the construction and fit out works have been identified within the Tender Programme; these will be developed during the design development period.

Milestones will also be incorporated into the procurement programme during the pre-construction period.

Key milestones have been considered and put into our Programme.

7.0 Community Engagement

As a member of the Considerate Contractors Scheme, we take the possible disruption to the surrounding stakeholders very seriously. Prior to us starting on site our Community Team along with our Project Manager, will develop a Community Liaison Plan within the plan will be a nominated liaison person to engage with residents and to handle complaints. These should be agreed with the local authority will formulate a newsletter that will be posted to all surrounding properties. This newsletter will introduce the team, discuss the proposed works with timescales and contain relevant contact details so that they can contact Willmott Dixon with any questions/complaints. These newsletters will then be published monthly and/or significant stages of works are about to start.

Once works start on site, there will be a notice board attached on our hoarding which will hold a copy of the site layout/contact details (both the site teams daytime telephone number & out of office number).

As the pedestrian access point is to the south of the site, there will be prominent signage so that the public may address the site team with any urgent queries.

We will also set up monthly consultation meetings in line with the councils Code of Construction Practice for businesses, landowners and residents that border the project, attendance will be optional and virtual meetings organised at this time . We will do a 'You Said, We Did' to respond to issues raised and report back to attendees. This will allow us to explain what is happening on the project and allaying any doubts or concerns that they may have as works progress.

Copy of each newsletter and letter drop area will be emailed to the WCC Comms team

8.0 Enabling Works

8.1 Hoarding

Hoarding will be erected around the perimeter of the site and will act as the site boundary. This will protect people (especially children) from site dangers and the site from vandalism and theft. This hoarding will be a standard 2.4m height hoarding, plywood faced, timber framed, of a surface density of not less than 7kg/m² for normal security and noise limitation requirements.

Other types of fencing that maybe utilised are a fast fence metal panel fencing system and sheeting or 1.8m high anti-climb heras fencing covered in debris netting or the re-use of existing boundary treatments which are suitable such as 1.8m minimum high brickwork walls. In some areas during the build, we may utilise heras type fencing that will be installed and clipped as per the manufacturer's recommendations. This may also be used towards the completion of the project as the main hoardings are dismantled to allow other works to proceed.

The provisions of the Health and Safety at Work Act 1974 will be followed in all cases.

Hoardings erected causing poorly lit walkways will have bulkhead lights fitted.

Gates in the hoarding will, as far as is practicable be positioned and constructed to minimise the noise transmitted to nearby noise sensitive buildings from the worksite or from plant entering or leaving the site.

Adequate security will be exercised to prevent unauthorised entry to or exit from the site. Site gates will be closed and locked when there is no site activity and site security provisions will be set in motion. Provision of alarms may follow subject to a risk assessment.

Notices will be displayed on all site boundaries to warn of hazards on site such as deep excavations, construction access, etc. Appropriate sight lines, visibility splays/mirrors and viewing windows will be maintained to ensure safety of both vehicles and pedestrians.

8.2 Surveys, Testing & Ecology

- i.) **Asbestos** – Westminster City Council have carried out a Refurbish and Demolition Asbestos survey. Asbestos Removal will be carried out by Westminster City Council unless instructed otherwise.
- ii.) **Ecological (Bats)** – A survey has been carried out and the findings are that there was no evidence of bats found within any of the loft voids. There is low potential for occasional roosting by bats, with features suitable for roosting noted within the external structure – this will be monitored throughout the project.
- iii.) **Underground Services** – A full underground services radar survey will be carried out of the site in its entirety prior to breaking ground. This will ensure Willmott Dixon and in turn our supply chain partners are aware of the location of any existing services in the area.

8.3 Site Welfare

During the early phases we will have an Elliot Eco Max double stacked cabins to provide welfare to the site team. This will be located to the North of the development close to Tavistock Crescent Once the early phases are complete and we take ownership of the main construction areas we will place our permanent welfare set up as listed in section 3.1. The welfare facilities will remain in the same location throughout the duration of the project.

8.4 Demolition

Demolition works are required for the completion of the Westmead project.

8.5 Temporary Works

Temporary works designs are to be established for the sheet piling and site welfare accommodation. These proposals will be progressed and approved following design consultation.

9.0 Substructure Works

Groundworks will commence with a site strip to the footprint of building and probing the ground to receive new piles to identify and remove any obstructions.

All plant and equipment will have the appropriate mufflers or silencers of the type recommended by the manufacturer. All plant and equipment will be used for tasks for which it has been designed for. Shut down all plant and equipment in intermittent use in the intervening periods between works or throttle it down to a minimum.

9.1 Contiguous Piled Retaining Walls and Sheet Piling

The basement is formed of a retaining wall constructed of piles. These piles are drilled using large machinery sized appropriately for the pile depths and sizes required.

9.2 Excavation

Excavation for the basement will commence once the sheet piling is complete. Major excavation works will only be done in normal working hours.

An area of 2250m³ at a depth of 6m will be excavated and removed from site and under strict Health, Safety and Environmental controls by Willmott Dixon. Muck away Lorries will be arranged by the site team and TFL will be kept up to date with any potential increase in vehicle movements.

If obstructions are encountered, we will stop works and review approach; adopt work methods that minimise noise and vibration.

9.3 Load Bearing Piling Works

Load bearing piles will commence once the bulk excavation is complete and the required piling mat is installed and certified. Piling will run in sequence and generally work out of the site.

Once the load bearing piles are complete in the first section, excavation for the pile cap construction will commence. Additional piles will be installed for the tower crane's as soon as practically possible to enable the use of the crane during the ground works.

9.4 Pile Caps & Beams

The pile caps and ground beams are created using reinforcement bars (rebar) to the structural engineer's design, shuttering and concrete. Once the rebar is in place, a shutter support is created before concrete is poured. The surrounding earth is then levelled around the pad/beam and these activities are repeated on the remaining sections until foundations are complete.

To prepare pile caps, we use hydraulic splitters to crack the top of the pile, which minimise the use of breakers.

9.5 Drainage

Sub slab drainage will be installed concurrently with the foundation and prior to blinding and construction of the lower ground floor slab. As areas of lower ground floor raft slab are completed the vertical elements can be constructed. Other vertical elements such as core walls and columns will be constructed using a proprietary formwork system.

9.6 Basement Slab and Ground Floor Slab

Once the first section of the drainage is complete, the lower basement floor slab can commence. The floor sections are created in the same sequence as the pile caps and ground beams with rebar and shuttering placed before concrete is poured. This sequence is followed for the remaining sections of the basement floor slab.

Once the first section of basement floor slab is complete, prefabricated vertical columns will be installed before support decking is erected to create a platform for the floor above. Reinforcement bars will then be positioned as per the structural engineer's details and concrete is then poured and smoothed to form the floor slab.

All sections are linked (stitched) together with rebar and concrete and this sequence will generally follow for the entire concrete frame. Propping will be progressively removed when the concrete has reached the required strength and as instructed by the Engineer.

Vibratory compaction equipment shall be used in a mode which minimises the incident vibration at nearby residential and other sensitive properties.

10 Tower Crane

10.1 Tower Crane Erection

The permanent tower cranes will have a luffing jib with SMIE technology to avoid the incidence of over sailing of neighbour's land or buildings and collision with each other.

The erection of the tower crane will require the mobile crane to be 'rigged' within the site boundary. The operation will be covered with stringent Health, Safety and Environmental papers and be heavily monitored by Willmott Dixon for the duration of the works.

Once the tower crane is erected, works will be suspended and the mobile crane 'de-rigged' that evening. During these works a temporary closure of the footpath will be required. This date is to be co-ordinated with the approval of Westminster Highways.

10.2 Tower Crane Dismantle

Once the structure and façade are complete, we will remove the tower crane. This will follow a similar procedure to that of the erecting process. Once the traffic management plan has been agreed with the local Highways Department, operations will be carried out on a date agreed with Westminster Highways.

Crane locations are shown on Logistics plans in Appendix A

11.0 Super-Structure

11.1 RC Frame

During the construction of the frame, there will be a high volume of deliveries i.e., formwork materials, re-enforcement steel, along with concrete and concrete pump Lorries.

The super-structure is split into pour sections and each pour section will include the following activities: 1) Concrete vertical columns are installed in place as per the structural engineer's details. 2) SFS prefabricated panels are installed between the columns. 3) The windows and materials are craned onto the slab for that area of works. 4) The decking can then be erected with the support of props to create a platform for the reinforcement bars to be positioned as per the structural engineer's details. 5) Concrete is then poured and smoothed to create the upper floor.

The sections are then linked (stitched) together with rebar and concrete before the next floor can commence. The upper floors will follow a very similar pattern and once the concrete has achieved the required strength, the propping can be struck on the floors below.

We will endeavour to the start of concrete pours as early as possible within normal working hours to avoid overruns, will confirm the site cut off time for latest possible pour start, we will

work with our concrete suppliers and RC Frame Supply chain partner to put protocol and measures in place to ensure that as far as practicable overruns on concrete pours do not occur.

If in the unlikely event of the over-run the project team will notify Westminster City Council Environmental Sciences Team and liaise with Estate Liaison members.

10.2 In-Situ Construction

To create the core areas, a rebar cage is created to the shape and sizing to the structural engineer's design. A shutter encasement is created around the rebar to enclose it. Once all in place, concrete is then poured into the encasement which creates the core area walls. Connection rebar is cast into the walls for the stairs. This sequence will continue at every level and until the core is complete.

10.3 Prefabricated Stair Construction

The stairs are precast and manufactured off site. These are delivered to site and lifted into place in line with the sequence of the RC frameworks. At this point scaffold handrail is introduced to allow the staircase to be used as vertical access / egress

10.4 Façade

The façade, roof coverings and window installations will commence upon progression of the concrete frame structure, allowing the masonry works to safely progress below. The scaffold will be adapted and utilised for access to fix each component and the crane and goods hoists will be utilised for the transportation of associated materials.

Installation of the windows, metsec, followed by EPDM. With the windows in place, breathable membrane is applied to the outer skin and is used to increase air and water resistance and provides better protection against water and moisture intrusion.

The façade finishes with brickwork façade. Generally, once the breathable membrane is applied externally, an insulation layer is applied to the building to insulate the external walls before the brick and cladding grids are installed.

The finishes of the balconies and terraced areas will be decking/paving with a glazed balustrade.

10.5 Roof

The roof is formed with insitu concrete with hot -felt membrane and brown or green vegetation. The flat roof areas will have areas fitted. PV Panels installed. MEP plant will be sited of the roof. The external scaffold will progress with the works, providing safe means of access to high level work.

11.0 Internal Works/Fit-Out Works

The commencement of the internal works will start once the building is watertight. Each element of the fit-out works will be inspected by the WDC site team, with QD checklists being completed prior to progressing on to the next stage. For example, partitioning will be inspected and signed off prior to fixing door linings and plasterboard. This discipline will ensure that a high-quality finish is achieved throughout the project.

Maintaining a clean and tidy site is essential during the project. Willmott Dixon will ensure that each work area is cleared of rubbish and waste materials both during and upon completion of each trades works.

11.1 First Fix

Plot duct work, internal walls boarded to one side, screeding, first fix plumbing, first fix electrics, plasterboard to walls including insulation, NHBC / Building Control sign off whilst ceiling is visible, close ceilings, plastering including drying time with mist coat finishing the first fix activities.

11.2 Second Fix

Second fix plumbing, second fix carpentry including any boxing and any wood flooring, the installation of the kitchen, tiling to the wet room, any pre-decoration snagging which is needed, painting and decorating can commence.

11.3 Final Fix

The installation of appliances to the kitchen and then can start with the final fix plumbing, final fix electrics, test and commissioning to finals, air and sound testing to the plots, floor finishes, builders clean, mastic, Willmott Dixon snag / de-snag, and the final activity will be plots complete and ready for bulk core handover.

11.4 Key Stage Sign Offs

Key stage sign offs will be used throughout the process to ensure the right quality is being achieved and controlled. Trades will not be allowed to move on to the next task if the sign off is incomplete and/or works are outstanding. Subcontractors' payments will also be generated when key stage sign offs are achieved, which also helps keep momentum. This will be carried out with use of Willmott Dixons Quality Delivery checklists.

A critical milestone is when heat and power are available as only then can the final decorations commence. We insist on this to ensure that decoration occurs in the correct environment to ensure a quality finish.

11.5 Testing & Commissioning

This is clearly an important phase of the scheme for Willmott Dixon, the Professional Team, and the Client. We have our in-house and external specialist consultant team who will manage and oversee the commissioning process of the scheme. The successful sign off and completion of all systems will be our focus, with a dedicated finishing manager assigned to ensure they are defect free when handed over.

Early engagement and programming of the stat companies will be a key factor in the completion of the project.

A commissioning and handover plan that begins in the earliest stages of a project leads to an orderly and effective succession of events. A complete plan identifies all equipment and systems requiring commissioning, with performance testing methods to be used for each

component, along with parameters for acceptable performance. The documentation will include these items: All equipment submittals required supporting the commissioning process; requirements for the training of operations and maintenance personnel; expected owner/user manuals; and sample formats for reports and other documentation. This will go a long way to ensure everyone is happy with the completed system and fully understands the principles and working ethos of the scheme.

This plan will be instigated with an initial eight-week (8) notice to the client that we are ready to hand them the project.

This is followed by a four-week (4) notice to the client that project will be handed to them on that date.

11.6 Externals

Upon completion of the external envelope and after the striking and removal of scaffolds, hoists and mast climbers, the remaining external works within close vicinity of the build will commence. Although these works will generally be undertaken with limited mechanical plant, measures will be implemented to ensure plant is well maintained and fitted with appropriate silencers or mufflers if required.

Final connections of all incoming utility services into each home are via underground ductwork. Reinstatement of any excavations for the services will be inspected and signed off prior to commencement of any finishes over the top.

Masonry material will be cut utilising wet cutting techniques and dusty roads etc. will be wetted down prior to street/ road cleaning.

Detailed sequencing of works in this period to be reviewed in advance to minimise any possible disruption.

11.7 Practical Completion & Handover

Willmott Dixon will inspect works at certain stages and rectify any defects to all homes prior to offering them for the clients' representative to inspect. Willmott Dixon will agree inspection and handover protocol with the client prior to these inspections starting. The Project Manager or his delegated assistant will accompany all visitors during inspections to agree any actions should any further defects be found. All areas will be lit for the inspections.

Due to the nature of the project, it is envisaged that there will be gradual inspections and lock up of homes. Once all areas are complete the project will be handed over in its entirety.

12.0 Application for Section 61 consent