Outline Methodology
For
The Demolition of Plot B & C To
2-6 St Pancras Way, London
EC2A 2EH

Demolition Contractor	Erith Contractors Ltd
Client	G&T

Rev	Ver	Detail	Prepared By – Date	Authorised By - Date
00	01	Issued at Tender stage	Mark Taylor 07/10/22	David Moylan 07/10/22

Contents

The purpose of this outline method statement is to demonstrate how Erith Contractors will safely carry out the demolition works of Plot B&C at 2-6 St Pancras Way.

2-6 St Pancras Way is situated within the London Borough of Camden. The area is surrounded by a mixture of retail, residential and commercial properties with a high level of pedestrian activity and an extremely busy London transport hub within the vicinity, Kings Cross Station. These works include the strip out and demolition of the Plot B & C structures down to and including the ground floor slab and pile caps.

Surrounding the site is St Pancras Way, Granary Street (with Moorfield Hospital, currently under development) and the Canal. Access and Egress to the site is understood to be made from St Pancras way, where 8-wheel tippers and other construction associated material and vehicles will be mobilised to deliver and remove construction associated material. In addition, parcel Force is operating opposite to our works and uses St Pancras Way for their logistics.

Erith will ensure throughout the works, that the local community is informed of the project activities and are treated with care and attention throughout the enabling works and demolition works. This will be done by Erith's dedicated community liaison personnel.

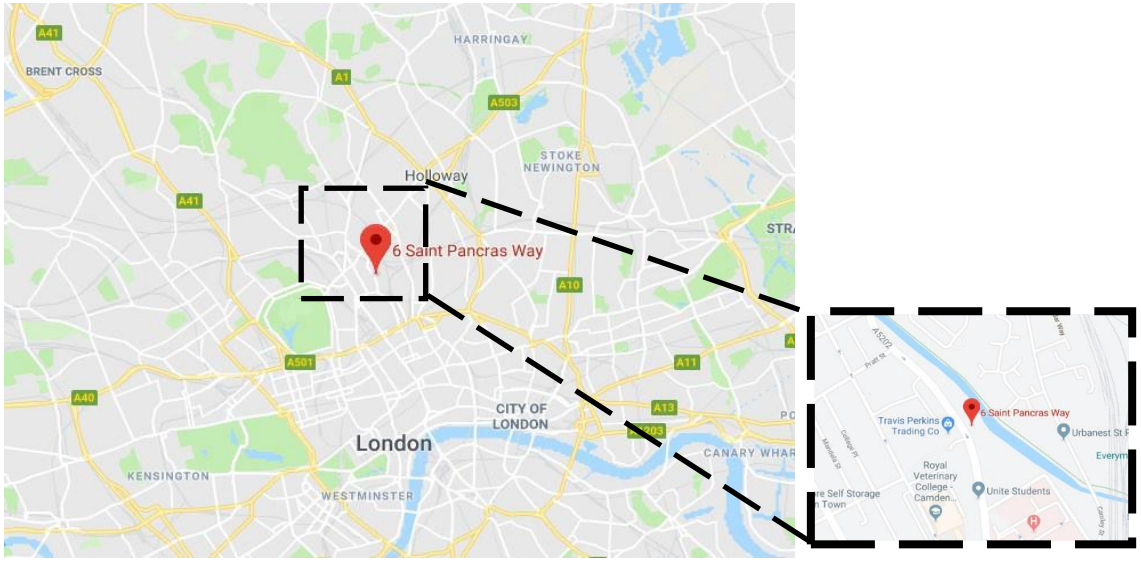

Figure 1 - Site location

The majority of constraints identified during the tender process relating to the proposed works on site are mainly due to its sensitive urban location and the proximity of nearby structures, residential properties, Hospital, the Canal and the King Cross station.

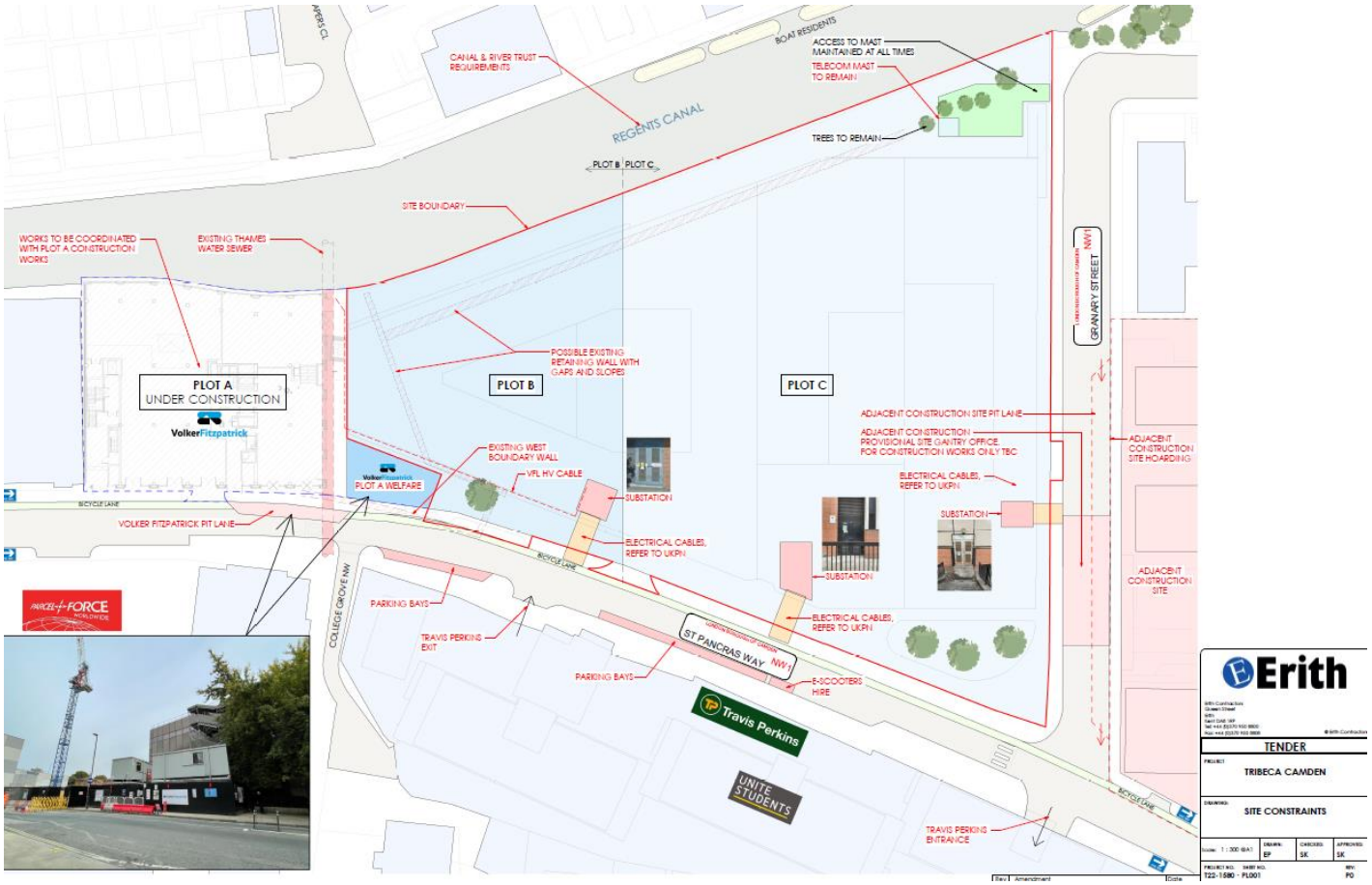

Figure 2 - Site constraints

The specific constraints that are identified are as follows:

- Traffic logistics, high pedestrian volumes.
- Adjacent residencies, offices, hospital, commercial premises and maintaining pedestrian access to the nearby pedestrian footpaths.
- Coordinating deliveries to site.
- Temporary works assessments for the demolition works.
- Site establishment.
- Noise, dust and vibration controls.
- Protection of the public.
- Neighbourhood Liaison.
- Access and egress from site.
- Works adjacent to the Canal, screen protection to be provided.
- Phasing of Works.

- Removal of material.
- Liaison with London Borough of Camden.
- Liaison with VFL site.
- Liaison with residents and businesses in the vicinity of our works.
- Liaison with Thames Water with respect to the existing Sewer.
- Liaison with the Canal and River Trust with respect to the waterway.
- BREEAM 'Outstanding'.
- Protection of telephone mast

In addition to the site being surrounded by Commercial properties it is also adjacent to the Kings Cross Station which is widely used for commuting. The site is well-located in terms of transport with a number of London Underground Stations being a short walking distance. The stations most notably within a 10-minute walk are as follows:

- Mornington Crescent Station (Northern Line).
- Camden Town Station (Northern Line).
- Kings Cross Station (Northern, Piccadilly, Victoria, Hammersmith and City, Circle, Metropolitan Lines, National Rail Services).

Erith recognise that there will be elevated volumes of vehicular, cyclist and pedestrian movements in the area at peak times and therefore deliveries and removal of demolition arisings for Erith's works will need to be planned and marshalled accordingly.

Due to the nature of the works some residents and businesses may be temporary disrupted during working hours. Erith will delegate a specific public liaison employee to keep relations with neighbouring parties.

All works outlined in this document will conform to the following documents:

- Construction (Design and Management) Regulations 2015.
- Management of Health and Safety at Work Regulations.
- Lifting Operations and Lifting Equipment Regulations [LOLER].
- Provision and Use of Work Equipment Regulations.
- Control of Asbestos Regulations.
- BS6187:2011 Code of Practice for Full and Partial Demolition.
- BS5975.2008 Code of Practice for Temporary Works Procedures and the permissible stress design of false work.
- NFDC Demolition guidance notes.
- ICE Demolition Protocol 2008.
- IStructE – Design and Construction of Deep Basements Including Cut and Cover Structures.
- Erith Standard Operating Procedures (SOP's) for;
  - Temporary works
  - Demolition Activities

2.0 Scope of Works

The main works to be undertaken for the Plot B & C Demolition Works are listed below;

- Preconstruction and Lead-In Period.
  - Developing methodologies.
  - Identifying services.
  - Developing temporary works designs.
  - Placing orders for plant and equipment.
  - Preparing and engaging with the local community through newsletters and workshops.
  - Liaising with Thames Water.
- Site establishment including welfare and hoarding.
- Services Investigation Works and Validations.
- Mechanical and Electrical Surveys.
- Installation of temporary electrics and services.
- Scaffold erection.
- Scaffold Screening Protection at the Canal Elevation.
- Temporary Works to facilitate the Demolition works.
- Weather Protection and Weatherproofing of exposed structures.
- Closure of Door openings at the second and third floor.
- Assessment and protection if required of Thames Water Sewer.
- Assessment and temporary works to Regents canal retaining wall to permit pile cap removal.
- Protection and retention of UKPN substations including waterproofing.
- Soft strip of all remaining non-structural items of Plot B & C.
- Services Disconnections.
- Hard Demolition Works.
- Probing to 2m depth.
- Piling matt installation and compaction.
- Clean and Clear site.

3.0 Protection of the Public

Access and Egress

Access and egress in the vicinity of the site presents its challenges, Erith are aware of these constraints and will adopt the logistics regime as per the tender documentation to cope with them in a manner that ensures that the effects on neighbouring parties and the general public is minimal as their safety is paramount. To ensure this, the site will require gates with key code, traffic marshals and a traffic management system to provide safe access and egress from the site.

Pedestrian access to the site will be through specific pedestrian access points set outside the hoarding and clearly demarcated with signage.

8-wheel rigid back HGVs and other delivery vehicles will gain access to the site location via the North from St Pancras Way, and they will gain access at 6 St Pancras Way within the structure. Access and Egress will be controlled by TFL trained and competent traffic Marshals.

The location of the site will require marshalling and Erith intend to utilise dedicated traffic / pedestrian marshals to ensure that all vehicle movements around the site will be completed in an orderly fashion. Erith will also have a Delivery management system to avoid excessive site traffic.

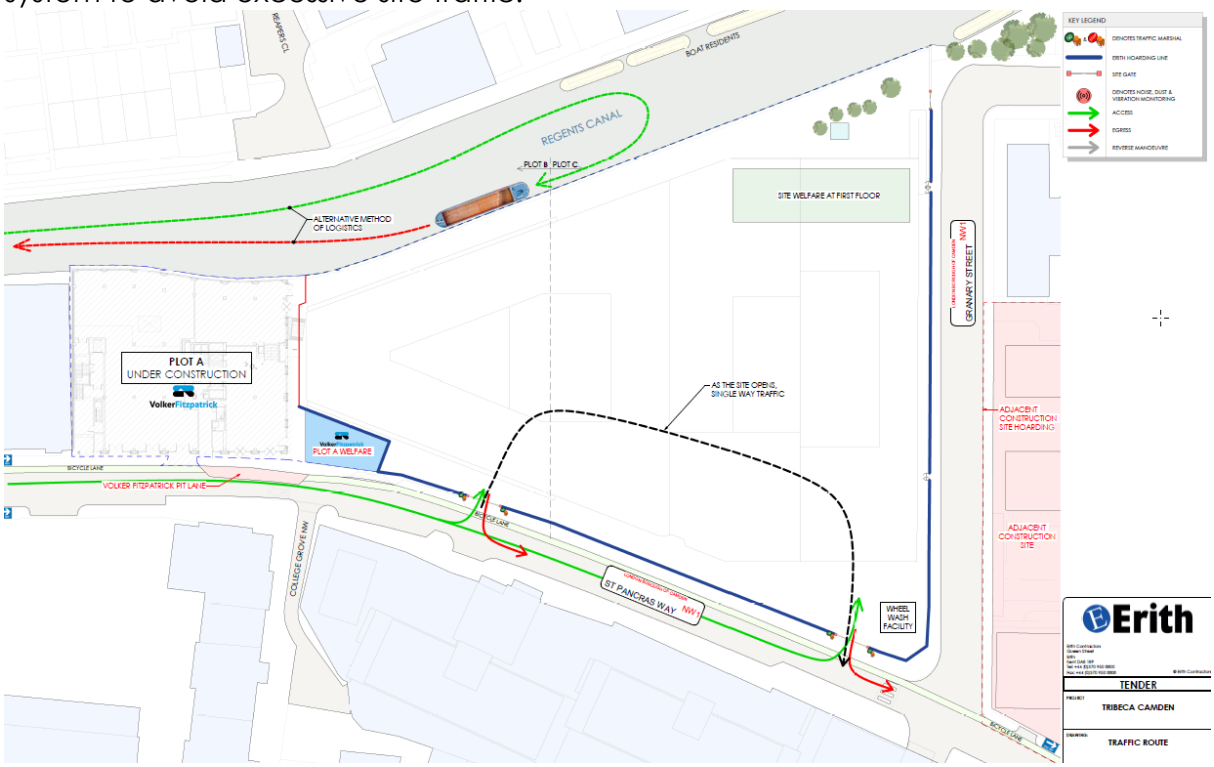

Figure 3 - *Access and Egress to site*

For the duration of the project there will be up to 40 vehicle movements per week if there is a higher quantity the relevant authorities will be notified. Traffic marshals will control vehicle movements on and off site and all vehicle movements will be performed outside peak traffic times.

- All vehicles shall use vehicle routes highlighted in the following logistics plans.
- All lorries will use a locally sourced tip facility for the duration of the works.
- All demolition operatives shall use the established site pedestrian routes shown in logistics plan.
- All lorries will be FORS and CLOCS registered.
- All people entering and leaving the site will be required to log in and out at the site security post.
- Exclusion zones will be erected with controlled access/ egress to the work zone.
- Erith will set up and operate a Delivery Management System (DMS) which will coordinate deliveries and ensure that they do not clash with other site activities. All deliveries will be briefed to the traffic marshals at the start of every shift and a delivery schedule will be produced and issued to every day for every shift.
- Erith will also encourage the use of public transport for site operatives. This will be carried out by providing no onsite parking for operatives and only works vehicles will be permitted onto the site.

Please Note – All Erith deliveries to and from site will conform with London Borough of Camden and the Erith Standard Operating Procedures for the deliveries to and from site.

Canal Interface

Erith have engaged with the Canal & River Trust and will develop a full Safe system of work (SSOW) and strategy to ensure the protection of the waterway and safe delivery of the works for all stakeholders.

By using barges with tug boats Erith intend on moving the majority of bulk material away from site by barge to specialist recycling point. Within section 9 the environmental benefits are listed.

The SSOW will review all risks associated with the canal and detail the strategy to manage these to acceptable levels. The following have been identified and mitigated so far:

- Risk of drowning: All canal works will be completed by competent contractors, those required to work near the canal side will complete additional rescue training and have life jackets as required.

- Heras fencing with debris netting and toe boards to prevent debris from entering waterway. Where works are required at the canal side full plastic sheeted bunding will be established.

- Full scaffold screen for hard and soft demo works to this elevation with monoflex from recycled materials.
- Canal retaining wall investigations have been completed and temporary works strategy development is planned with sheet piles installed around RC

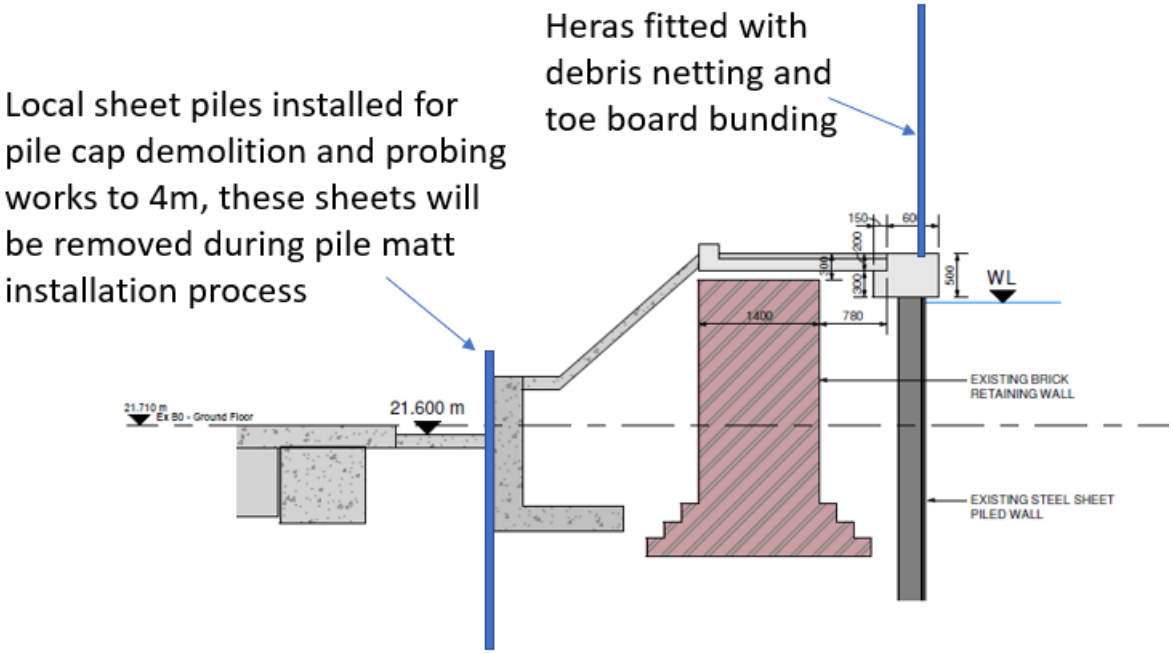

Figure 4 - Canal protection and control

Erith will ensure thorough continual engagement with the Canal and River Trust and residents onside that the canal is fully incorporated within our management systems and that sheet piles will be installed with low vibration means to protect the existing canal retaining structures. Pre & Post construction inspections will be completed.

Site Logistics

Erith will erect a secure site boundary hoarding compliant with the London Borough of Camden code of construction practice within which we intend to carry out the Plot B & C demolition works. All loading and unloading will be completed within the site confines and accessed from St Pancras Way.

Erith plan on reducing the environmental footprint and remove up to 80% of the vehicular movements from the project by utilizing the Regents Canal for removal of construction debris. This will reduce the risk of pedestrian and vehicular collision and improve relations within the local neighbourhood.

Any access and egress to and from the site compound will be controlled by dedicated traffic marshals, they shall control traffic and pedestrian movement on all boundaries of the site where necessary while 8-wheel rigid back HGVs enter and exit the loading zone. Site personnel will enter the site confines through pedestrian access doors secured on erected hoarding. This will provide access to a green routed area to the welfare located initially at the ground floor. During the soft strip

phases, materials will be processed at the work face where possible and transported through the lift shafts down to ground floor. ECL will mobilise skidsteers/bobcats for the transportation of the demolition arisings from the upper floors to the ground floor. Materials will then be loaded into the back of waiting 8-wheel rigid back HGVs and directed back into traffic onto St Pancras Way by the site banksmen/traffic marshals. The site Traffic Marshals will be using Stop and Go signs to assist with the access of the vehicles within the site. They will be using concertina barriers, to stop pedestrians from using the existing footpath adjacent to the works, when a site vehicle approaches the site. In addition, concertina barriers will be placed around the site vehicles during the loading/unloading phases. All traffic marshals will be communicating with 2-way radios.

Please Note - The loading area will be damped down with fine water sprays to contain any dust that may arise. Once HGVs have been loaded, qualified traffic marshals will then direct the loaded vehicles on to St Pancras Way, where the materials will be then taken to a licensed re-cycling facility.

Please Note - All vehicles will be jet washed before leaving site to ensure that no debris and mud are transferred to surrounding roads.

Traffic routes will be maintained as per the current condition for the duration of the works. Traffic marshals will stop traffic with stop/go barriers and this will be part of an agreed traffic management plan with the London Borough of Camden. There will be defined road closures at the start of the project to load out 21t excavator in the central atrium of building B & C. These will be coordinated with TFL with all permits being agreed and in place before proceeding with the works.

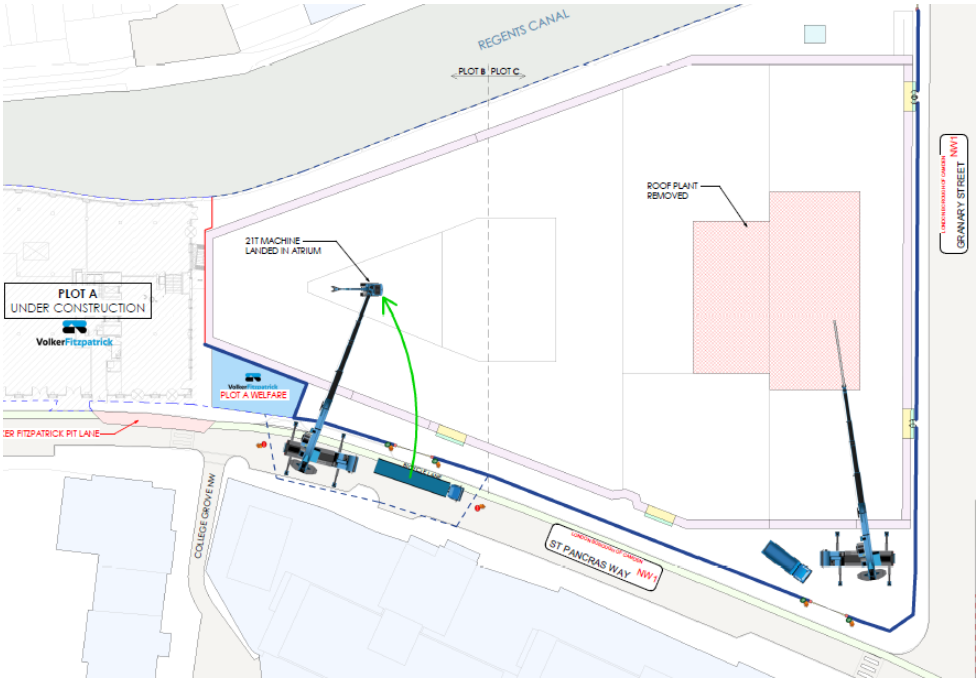

Figure 5 - *Lifting of 21t excavator via St Pancras Way*

Once inside the loading areas, concertina barriers will be placed around the vehicle to contain the tipper lorries while they are loaded via excavator machine with the specific segregated waste stream.

All leading edges will have suitable edge protection to suit the demolition works and operatives at upper levels will be in constant radio contact with those directing the works at ground floor. There will also be various pedestrian gates for access and emergency, the positions of which will be determined by fire and emergency plans on possession of the site.

Traffic routes, throughout the duration of the works, will be amended to suit the construction activities. The Traffic Marshalls will be placed at the St Pancras Way elevation and internal to site traffic marshals. All ECL traffic marshals will be fully briefed on the Traffic Management Plan.

Delivery and removal of materials

- Materials will enter site via St Pancras Way elevation. Any scaffold lorries and other construction vehicles will enter the site via the traffic marshalled gates and will be unloaded by competent personnel and scaffolders where required.
- All deliveries of scaffold material will be coordinated with the Erith Delivery Management System (DMS) to ensure there are no clashes with other deliveries.
- Waterway specialists will be utilized as part of our established supply chain to reduce the number of deliveries by road and reduce risk to the public.

Neighbourhood Liaison

Due to the project's exclusive location within London we consider it of the upmost importance to foster good relations with the surrounding businesses and residents. We intend to do this by;

• Liaising with local residents / business group representatives.
• Publishing regular newsletters giving information on the progress of the works, future planned activities and notice of any likely disruption to roads and pedestrian access.
• Erith will register the project with the Considerate Constructors Scheme, and make all personnel working on site fully aware of its recommendations for behavior.

• Operating hours and breaking times will be strictly observed in accordance with the voluntary section 61 notice which will be applied for by Erith prior to the commencement of noisy works.

• 24 hr manned hotline will be on the hoarding. The majority of constraints

relating to the works on site are mainly due to its sensitive urban location and the proximity of nearby structures, residential properties and established urban spaces and parks / communal spaces.

Due to the nature of the works some residents and businesses may be disrupted during working hours. Erith will delegate a specific public liaison employee to keep relations with neighbouring parties as per figure 2 below.

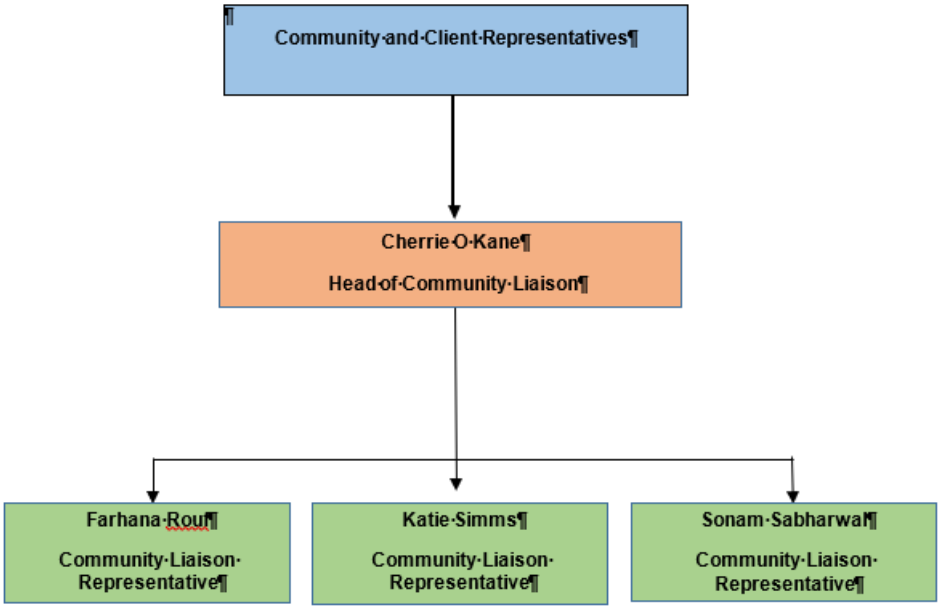

Figure 6 - Community Liaison Structure

A Neighbourhood Management and Communication Strategy has set out the arrangements that are to be implemented to manage project-specific communication and engagement with the local community and businesses that surround the development site.

The primary purpose of this document to ensure all stakeholders are aware and adhere to agreed methods, mediums and timescales for issue of periodic circulars, newsletters and information notices, together with regular agreed consultation meetings to be held throughout the life of the project.

Prominent site signage will be placed at regular intervals fixed to the external hoarding of the site which will warn potential intruders of the dangers within the site (asbestos, voids, deep excavations etc.) in accordance with current UK law and Local Authority directives.

Special consideration will be given to the residents that boarder the site occupying, Erith will ensure that all noise restrictions are adhered to, and any loading and unloading on follows the strictest site rules and code of practices.

The site will be registered with the Considerate Constructors, CLOC's and Crane Safe

Schemes. Promotion and information about these schemes will be displayed using official banners and or notices to convey our (and the Clients') responsibilities and attitudes to the environment, neighbours and the wider community throughout the project in accordance with London Borough of Camden code of construction practice.

Residents and neighbours will be able to contact the scheme directly. Manned 24-hour Contact details will be displayed on noticeboards close to access points and included in all newsletters and information notices.

4.0 Outline Methodology

Pre Start

Prior to mobilisation Erith would look utilise the Preconstruction and Lead In period to ensure that the following licenses and agreements are in place; In addition, ECL will look to establish robust relationships with the businesses around the site area. These statutory applications include:

- Section 80 / 81.
- Section 60 / 61.
- Hoarding License.
- Services Investigation Works.
- Structural Investigation Works.
- Temporary Works Design.
- Developing methodologies.
- Placing orders for plant and equipment.
- Preparing and engaging with the local community through newsletters and workshops.
- Register site for Considerate Constructors Scheme.
- Liaison with the London Borough of Camden.
- Liaison with Thames Water.
- Liaison with the Police.
- Liaison with the residents.

Site Establishment

Site Accommodation

Upon instruction to proceed with the works Erith will look to set up the site offices within the on the ground floor of Plot B. The welfare should comprise of office space, a meeting room, drying room, canteen facilities, decontamination unit and male and female toilets. Once the demolition progresses the welfare and site offices will be relocated to portable cabins.

Temporary lighting and emergency lighting shall be provided to the welfare area and main access/egress routes both initially and when relocated.

The welfare set up will be established to accommodate up to 30 people during the demolition and enabling phases.

During the early stages of the programme ECL will establish a robust Fire and Emergency evacuation plan for the site works and for the welfare. In addition, this plan will be often amended to suit the demolition sequence.

Hoarding and Gates

As part of the site establishment Erith will install a 2.4m solid painted hoarding around the perimeter of the works. All hoardings will be designed and set upon concrete TVB blocks as per London Borough of Camden Code of Construction Practice.

All concrete blocks will come to site with the timber post set within the concrete. A Hi-ab will then be used to offload the blocks and place them along the site confines to establish the line of the hoarding.

Erith have pre painted the 2.4m PVC sheets that will be used for the hoarding. The sheets will then be man handled from the preparation area to the location of the hoarding and nailed into position.

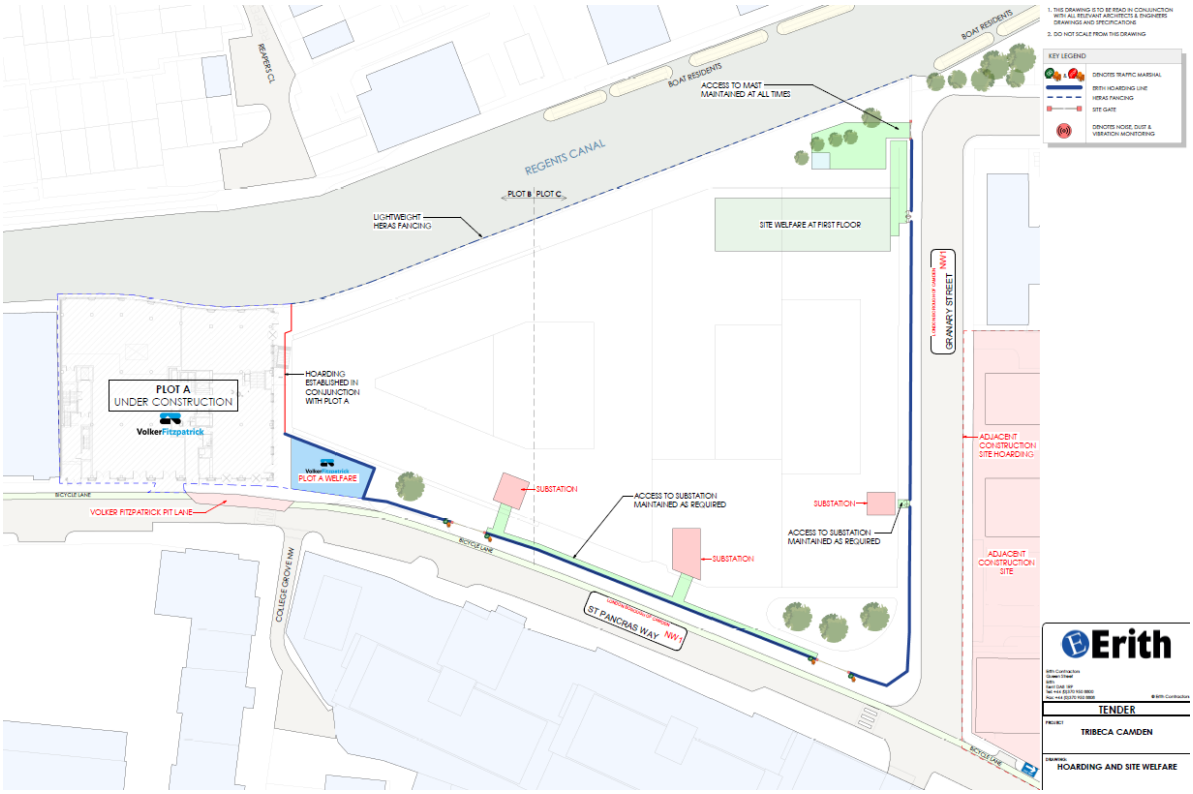

Figure 6 – *Site Hoarding*

The hoarding we will use is the first fully accredited net zero hoarding, manufactured from recycled plastic pellets. This is both lighter (reducing manual handling risk as

well as transport cost) and stronger then traditional timber hoarding. Our TVB block is manufactured from 50% GGBS further reducing the carbon content of the hoarding system over traditional hoarding systems.

Access gates for construction associated vehicles will be installed along St Pancras Way and therefore HGVs and site vehicles will enter the loading area. Pedestrian gates will be installed along the same elevation as well, to allow site personnel to enter the site area and welfare. All gates will be proprietary and will use precast concrete blocks as kentledge. This will remove the requirement to open up the ground and potentially have a service strike.
Furthermore, all gates will be protected with key codes the password of which will be often subject of change. ECL will provide the route with emergency lighting and all the appropriate signage as required.

Please Note – The hoarding and access gates will be designed and issued with a design certificate by Erith's in-house temporary works engineers.

Please Note – The hoarding layout, as per figure 1 on page 8, may be amended during the works stages to suit the demolition requirements.

F ***Figure 6 –*** *Standard Erith Hoarding*

Scaffolding

A full height access and protection scaffold will be designed to BS EN12811-1. It will be prepared and checked in accordance with the engineering design brief prepared for the required temporary works installation supplied by the TWC.

The scaffold will be erected in strict accordance with the current codes of practice and TG20:13 and will be erected to the latest NASC guidance and will operate the Scaff tag system. The scaffold operatives who will erect the scaffolding to TG20 and in accordance with industry scaffold techniques will have received recognised training (e.g., Part 1, Part 2, Advanced).

The scaffold erection as shown in Figure 4 will be completed to all elevations of Plot B & C from the existing street level up to the roof. At the elevation adjacent to the Canal scaffold screening will be erected to protect the canal from any demolition activity. At the St Pancras Way the scaffold will be based off ground level. At the elevations where cantilevers are found the scaffold structure will be set in line with the outside elevation to ensure both stability and safety of demolition is maintained.

At the North end of site, the scaffold will be coordinated with VFP site to ensure both sites have adequate protection and stabilized structures throughout. ECL will provide Trained Traffic Marshals who will be directing the logistics of the site and the significant interface with pedestrians. In addition, the core overrun that is to be demolished will be also encapsulated with scaffolding as per the below figure.

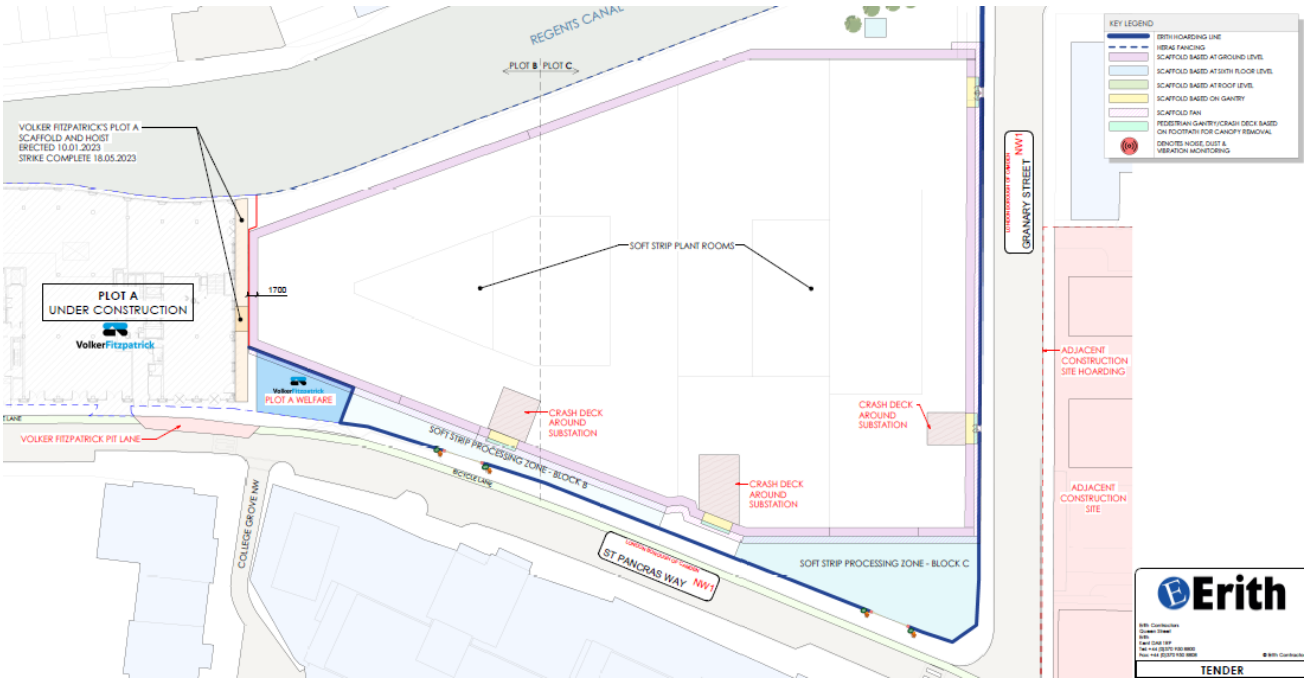

Figure 8 - Scaffold Erection Plan

The scaffold will include diagonal and face bracing for stability. Prior to boarding out the base lift, an advance guardrail off podium steps will be erected and once complete the boards may be placed from ground level. The same methodology

will be used for the following lift and all tubes will be laced and braced as per the scaffold design. This will be carried out by operatives using double lanyards and always clipped on.

The scaffold will generally be constructed in 2.0m lifts and tied to the structures by a system of wrap around box ties to the internal structure or structural ties in accordance with the design. The box ties will incorporate check fittings for additional safety.

The scaffold will be fully sheeted with flame retardant reinforced plastic sheeting (monoflexed or similar). Acoustic sheeting/blankets will be available and moved to the work area to further reduce the noise impact of our works for critical interfaces.

The top lifts will be boarded and remain boarded with the progressive dismantling to provide a fully decked condition over two-storey height at all times.

The scaffold will be maintained 2m above the operational level at all times.

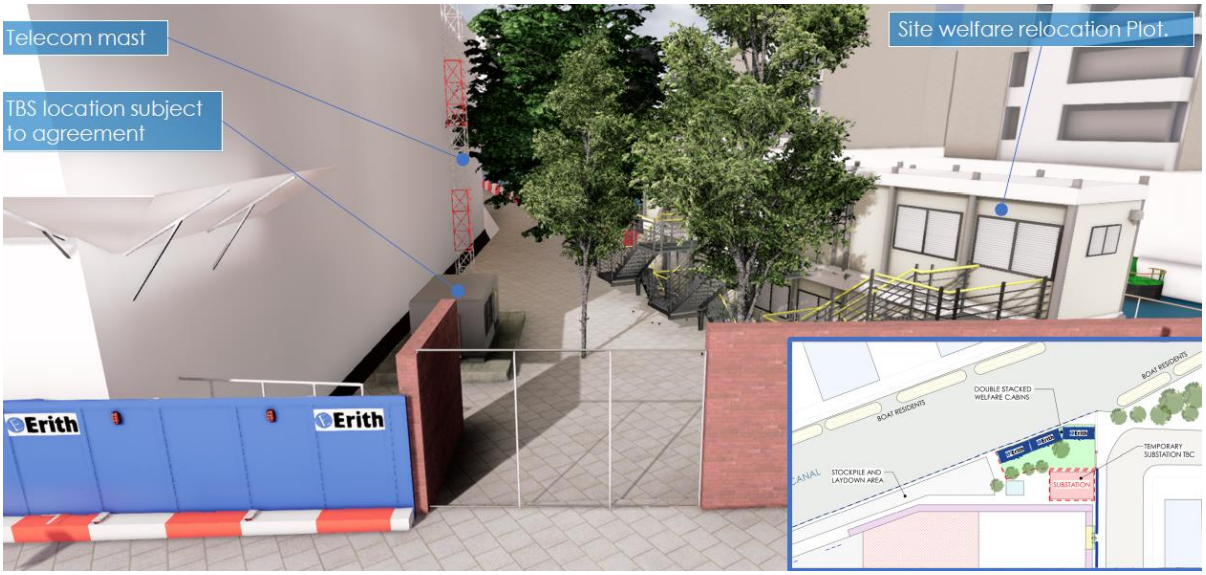

Figure 9 – Telecom mast segregation and protection

A telephone mast has been identified within the South Eastern corner of the worksite, this area has been identified as an area we can use for future welfare. This will act as additional protection and segregation to the area, keeping machines and high level activities away from the mast. Access will be maintained throughout and there will be a full height scaffold installed between the mast and Block C demolition works.

Please Note - Erith will have a designated scaffold coordinator who will inspect and sign off the scaffold before it comes into use.

All scaffolding shall be supplied, erected, and dismantled in accordance with the following British Standards/legislation: BS 1139, 2482, 5973 and HSWA 74, MHSWR 1999, CHSWR 1996, CAR 2016, WAHR 2005 and NASC Guidance note SG4:05. Erith propose to Scaffold the site as per the plan in the below figures.

Temporary Works Installation

The works/activities in summary include demolition and associated temporary works as follows:

- Hoarding around the site premises.
- Floor load tests to confirm the loading capacity of the floors.
- General Scaffolding.
- Back propping of floors during the top-down demolition.
- Screen Protection at the interface between the structure and the canal.
- Temporary works / sheet piling around pile caps being removed at the canal.
- UKPN protective scaffolds and crash decks.

Detailed analysis for all the associated Temporary Works for the works will be produced by Swanton Consulting, our in-house Engineering Consultants, should ECL be successful. A full schedule and tracker will be issued at the early stages of the contract and reported against at the regular progress meetings. The full Swanton's preliminary engineering report can be found in the Appendix B.

Mechanical and Electrical (M&E)

works

Mechanical and electrical works will be removed before hard demolitions and soft strip can be carried out; temporary lighting will be installed before the works team can enter. When all plant has been isolated and decommissioned as per the following, the plant will be removed by the use of cranes, setup towards St Pancras way. Approved temporary road closures and temporary works designs will be completed before this can commence.

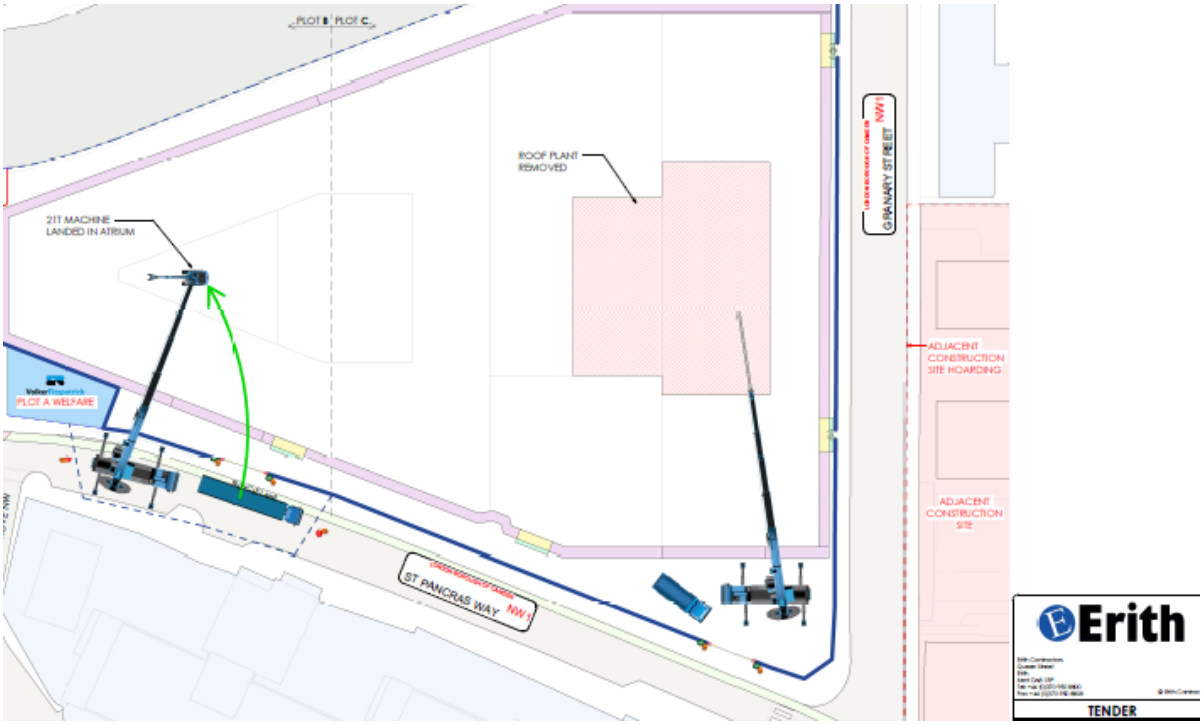

Figure 9 - Removal of decommissioned roof plant

ECL have completed an assessment of the services within the site confines and established a service strategy for which services are to be protected or isolated as per project requirements.

Protection of services

Before the demolition commences, ECL will set out the location of the UKPN substation power supply cable on the ground floor area. ECL will establish a reduced-loading zone and will protect the asset by means of fixed barrier demarking the area large machines cannot break up ground. Bearing slabs which must be removed by smaller controlled units in this area. The reduced-loading zone will be briefed to all the personnel associated with the site works. Where required probing next to existing service is required, vac ex or other non-mechanical digging technique will be used to expose and protect the service.

Isolation of Services

Please Note – All Statutory relocations and risk associated with the performance of statutory undertakers are to be taken by others.

Working closely with our service isolation contractor, Erith will coordinate works to ensure services are disconnected, should there be any within the demolition zones, and made safe to enable the soft strip and hard demolition works.

A service tracker will be set up in the site set up phase and will log all the incoming services, meters / meter numbers and services providers. The importance of the safe

isolation of incoming and shared high-risk utilities will be an absolute priority during this phase of the works. In conjunction with the isolation, any necessary temporary supplies will be installed to ensure an adequate supply of water for damping down at all loading and demolition faces and adequate provision for the welfare and site accommodation.

Please Note - All live services will be clearly demarcated and briefed to operatives working in the area. A disconnection folder will be held and maintained in the site office with all the certificates for disconnections.

Prior to the draining and dismantling of the mechanical and public health services, any stagnant water present will be tested for Legionnaire's disease. A specialist Sub-contractor will be appointed to test the water quality in the water tanks, cooling tower and water distribution systems. The preliminary test shall be completed before any further works commence. Should the test prove positive, chemicals shall be administered to clean the water and a new sample will be taken. When the plant is declared safe a certificate shall be produced to confirm that works may continue.

Please Note - Erith will employ a competently trained and accredited services contractor to undertake all disconnections, draining down works and installation of temporary services.

Gas and Electrical Supplies

A specialist M&E contractor will be employed to isolate all services back to the incoming heads. Gas pipes within the building will be purged and removed to allow the safe and timely progress of the soft strip. All assistance and access will be provided to assist in the execution of the decommissioning. Gas Pipes within the site confines will be located and clearly demarcated on the ground. A trial hole will be completed to located them. Once located, a 3m exclusion zone will be established around it, to make sure that access will be prohibited at all times, until it is isolated.

We anticipate that all separation works will have been completed prior to commencement on site.

Drainage

All existing drainage outfall will be CCTV surveyed prior to works commencing in full and at post the diversion. Redundant outfalls will be plugged in accordance with the contract administrator as well as the Building Control requirements. Whilst those that are utilised for temporary accommodation will remain live to be terminated later.

Existing sewers in the vicinity will be investigated and abandonment license obtained from Thames Water. Only a sufficient number of existing drainage outlets will be retained to serve the site accommodation, again these will be plugged on completion of our works.

Highway drainage will be subject to condition survey at the start of the works and a

periodical monthly inspection to ensure that infrastructure is working efficiently and not silted up from the Erith site operation.

Installation of Temporary Services

A temporary electrical and water builder's supply will be established that are sufficient for the construction phase of the project that is independent of the retained site accommodation supplies.

Prior to installation of any of the proposed temporary lighting and power electrics a survey of the site will be carried out and the preferred route for all cables will be determined. Particular consideration should be given to routing and fixing of site cabling and lighting (including emergency) to minimise trailing cables across the floors.

Our competent electrical services contractor is to install temporary electrical services for our needs, this will include the following:

- The installation of an MDU to distribute all of our supplies.
- Low voltage distribution for power tools and equipment.
- Temporary and emergency lighting within the site.
- Lighting, power and water for the proposed office and welfare arrangements will be provided by others.
- Hoarding lights to be fitted on the public highways (in the External Loading alternative).

Electrics, temporary lighting and power supplies shall comply with the following regulations:

- Electricity at work Regulations.
- HSE HS(G) No 141 Electrical safety on sites.
- HSE guidance notes PM(32).
- Safe use of portable electrical apparatus.
- Current edition of Electrical Installations Regulation as published by IEE.
- HSG (38) lighting at work.
- Test inspections & certificates as defined in QUENSH.

Please Note – The temporary services will be inspected on a monthly basis and any required maintenance will be carried out. When Erith hand the site over to the client for the superstructure phase a handover file with containing maintenance records, schedules of equipment and a location plan drawing.

Asbestos Removal

A R&D survey will be conducted once we have been awarded with contract, to ensure that either there is no Asbestos present or the extent of asbestos present.

If asbestos is found then Erith Contractors asbestos division will remove the asbestos as per the Control of Asbestos Regulations 2016. We will also transport the asbestos to a registered landfill site using our own haulage and skips. Prior to any work commencing a 14 day notification will be issued to the HSE complete with the mandatory ASB5 and Work Plan for all notifiable works.

This will show positions of de-contamination units, transits routes for the Asbestos operatives that will segregate them from the other demolition operatives. It will also show layouts of any enclosures that are to be erected for the notifiable asbestos.

Prior to any asbestos removal, control measures will be put in place.

Semi Controlled (Respirator Zone) works

Fully Controlled (Isolated Enclosure Zone) works.

Within both the Semi-controlled and Fully controlled works zones operatives will be expected to wear respiratory protective equipment suitable to the works they are carrying out as defined by the Asbestos Management Plan.

In the Semi controlled zone this may be suitable for half mask and overalls depending on the risks associated.

In the Semi controlled zone there will not require the same level of decontamination required with negative pressure air locks to prevent the escape of material, however within the Fully Controlled Asbestos areas this will be required.

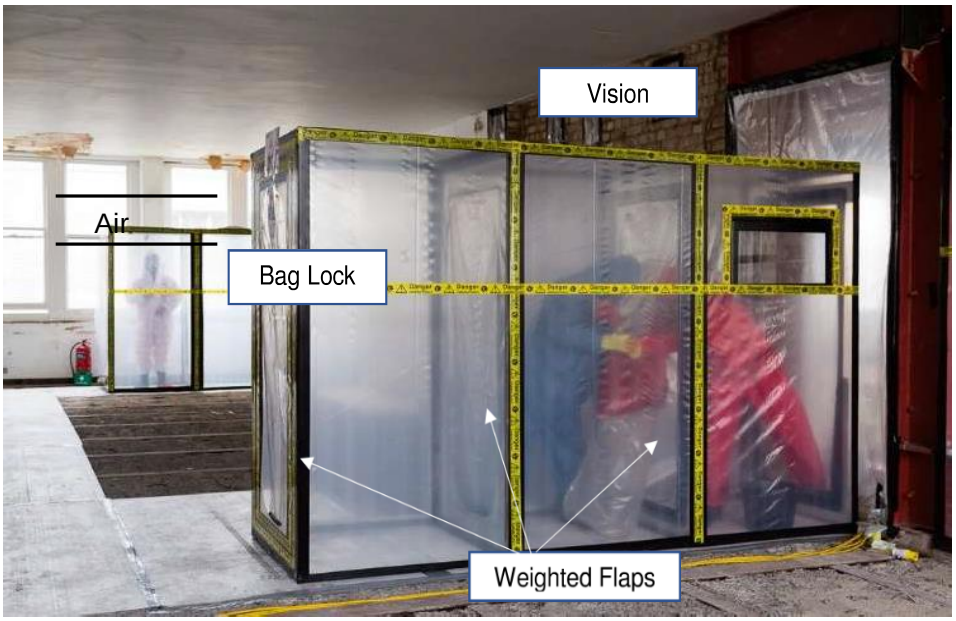

Figure 10 - Air lock construction for fully controlled zone

Soft landscaping removal - Site Wide

Trees as well as any lamp posts and street furniture will be removed from the development as per approved plans. These works must be completed prior to March when the bird nesting season commences. There are no Tree protection orders on any of the trees within the confines of the site. Special care will be taken when pulling the roots to ensure they have no interface with underground services.

Where there is a potential for services to be within the root zone (same zone as the canopy of the tree) safe digging practices will be completed by means of vacuum excavator or hand digging to cut the roots before removal.

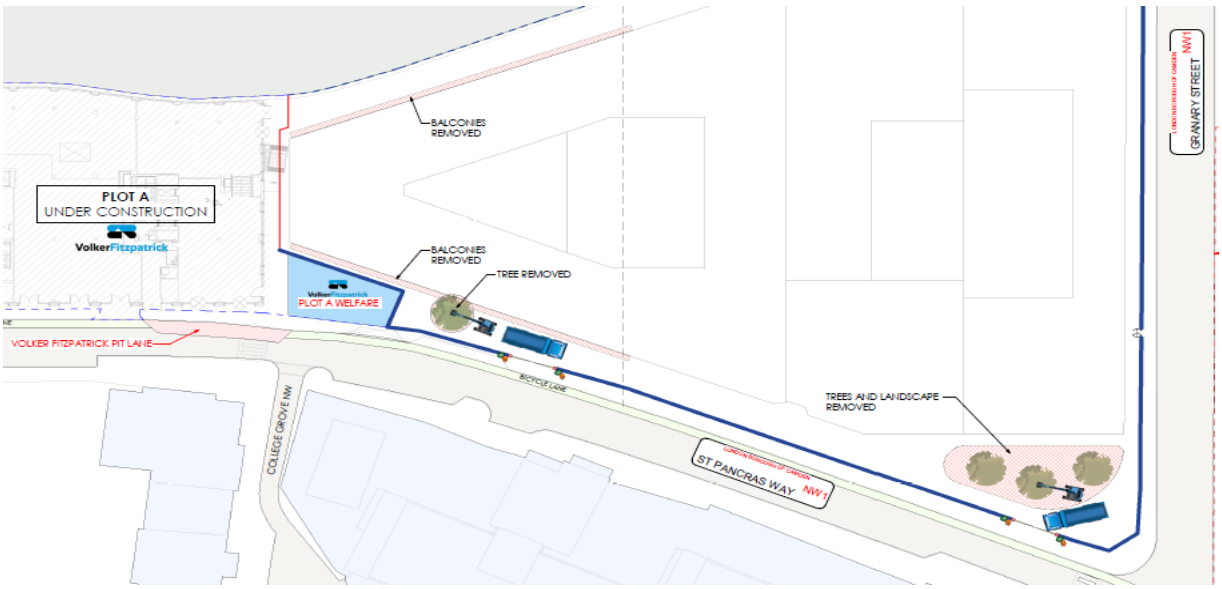

Figure 11 - Trees and external landscaping cleared

Soft Strip Works – Site Wide

Before commencing the soft strip works within the structure, the Trees as well as any lamp posts and street furniture will be removed from site to match the final project works plan.

A small element of pre strip will be required to facilitate any asbestos removal.

Once complete and the asbestos materials have been removed releasing critical zones or complete floors the soft strip removal will progress.

Please Note - A permit to proceed will be issued once Asbestos removal is complete.

Soft strip will comprise the removal of carpets, ceilings, fixtures, fittings, tenants rubbish, non -load bearing partitions and mechanical and electrical installation. All works will be done in conjunction with the clients team to ensure compliance with the specification.

The soft strip will be carried out in two phases by operatives skilled in works of this type. Phase One will comprise the removal of all combustible materials. The

materials will be segregated into their waste streams and will be completely removed prior to the commencement of Phase Two.

Phase Two will be predominantly the mechanical and electrical installation, which will involve the use of 'hot works'. Phase Two will be carried out under a strict 'Hot Works Permit Regime'.

The works will be predominantly carried out by hand with the use of mechanical aids such as trollies, wheelie bins etc. where possible to reduce exposure to manual handling.

All waste will be segregated and put into the relevant skip for removal for recycling where possible or landfill.

Figure 12 - Soft stripped completed on recent ECL scheme

Materials generated from the soft strip will be segregated into the following for recycling:

- Joinery, doors, architraves, skirtings, etc. will have nails, screws and ironmongery removed and sent to the Particle Board Industry.
- Plasterboard will be sent for recycling by British Gypsum.
- Ferrous and non-ferrous materials will be sent to scrap metal merchants for recycling.

Any loose furnishings such as chairs, desks, filing cabinets will be transferred whole to the drop zone area by operatives wearing full PPE including hard hat, rigger gloves, high visibility vest and safety boots. Operatives will use team lifting to carry any potentially bulky or heavy items and ensure they assess each individual load as per their training.

Please Note – Operatives will undergo manual handling training prior to work's taking place and wherever possible material will be mechanically lifted.

Where items are too large to be transferred whole, they should be carefully dismantled within individual rooms and placed by hand into suitable wheeled container. Care should be taken to ensure any nails or fixings are picked up immediately and placed into a separate bucket. Any jagged edges should be carefully protected using layers of duct tape. Once full the wheeled bin or similar should be transferred to the drop zone.

Other loose items such as papers or files should be carefully placed in the bins for transfer to the drop zone.

Once all loose items are removed, the removal of carpets and carpet tiles to the rooms and corridors will commence. The building has not been dormant for very long, however carpets may be dusty therefore in addition to the full PPE, FFP2 dust masks must be worn at all times.

Commencing from the room junctions, the corner of the carpet will be carefully lifted using a demolition mattock. The carpet will be lifted by hand until one end is exposed and the carpet will be rolled up.

From here the carpet will be carried whole by operatives to the drop zone ensuring that each load is assessed, and team lifts are conducted where necessary.

Where carpet tiles are in place they will be lifted and removed with mattock or similar, placed into suitable wheeled container and transferred to the drop zone.

When removing sanitary ware and fittings, operatives will ensure that due regard is paid to maintaining an acceptable level of hygiene.

Operatives working in bathrooms will wear disposable coveralls and overshoes in addition to the full PPE of hard hat, eye protection, rigger gloves, high visibility vest, and safety boots.

Prior to early strip out works within the toilets being undertaken, the bathrooms will be disinfected with disinfectant / water and the area thoroughly cleaned. Once complete, items of bathroom fixtures including toilets, sinks and showers will be carefully removed whole and placed in a wheeled container and transferred to the drop zone area.

Any mirrors or glass screens will be removed whole and transferred to the ground floor loading area whole and placed carefully within a skip.

Existing internal doors will be removed whole by two operatives per door.

Once ready for removal, one operative will hold the upright door in a steady open position whilst the second operative removes the screw from the hinges.

Once loose, all screws will be picked up and placed in a bucket.

The external door frame will be removed by an operative using a mattock. Ensuring a clear working area, the operative will place the flat edge of the mattock behind the timber frame and lever the frame away from the partition. Care should be taken to ensure the frame is removed whole to minimise the risk injury from splintered timber. Any sharp jagged edges or exposed fittings should be carefully taped using duct tape prior to removal from the area.
Suspended ceiling tiles will be removed by operatives working off tower scaffold or podiums.

The tiles will be lifted out of the ceiling framework and lowered to a second operative and stacked for removal.

The wires holding the framework to the joists will be cut with nips and the framework lowered to the ground. Where necessary the bolts to the joist will then be ground flush with the joist or concrete panel allowing clearance of all other items such as plasterboard and stud partitions.

Due to the health risks associated with gypsum plaster, a strict regime of damping down will be adhered to by operatives and sheets will be removed whole to eradicate the risk of particle release.

Full PPE including gloves, disposable coveralls, eye protection and FFP3 masks will be mandatory for this element of works. Self- erect scaffold or Podium steps will be used for access to high level. All soft strip operatives to be asbestos awareness trained.

Where door frames have been removed, the edge of the plasterboard partition will be dampened and carefully levered away from the studwork using a mattock. Once the fittings have 'blown' through the plaster the board will be removed whole and stacked on one side of the corridor. Any fixings or jagged edges will be removed immediately and placed in a separate bucket. Any broken sections will be damped down prior to moving and stacking. A clear access route will be maintained through all areas.

Figure 13- Damping down during soft strip works

Rockwool insulation will be carefully removed and placed in rubble sacks/plastic sheeting. These will be sealed using duct tape and carried to the ground floor loading area.

Timber studs will be de-nailed immediately once plasterboard is removed and fixings placed in a bucket. Timber noggins will be knocked out from between the stubs and placed immediately in a wheeled bin for transfer to the drop zone. The studs will then be pulled horizontally and stacked carefully in a pile on the opposing side of the corridor from the plasterboard.

Generally, all materials will be deposited vertically down the existing lift shafts or internal well holes before being loaded out on to skips located in the site compound.

Limited soft strip material will be stockpiled on site for short durations until such time as the full works access has been formed from which point it can be loaded directly onto vehicles within the confines of the site.

Designated access points will be maintained throughout the soft strip works to allow for the safe transporting of materials through the site and away from other access routes. All soft stripped waste will be brought to a central processing area where the material will be loaded into skips and taken off site to a waste processing center.

UKPN Protection

Within the site across both buildings B & C there are 3 UKPN substations constructed as standalone structures. The structural form based on information made available is assumed to be as per standard UKPN specifications with masonry brick walls. These will require scaffold protection throughout the hard demolition works

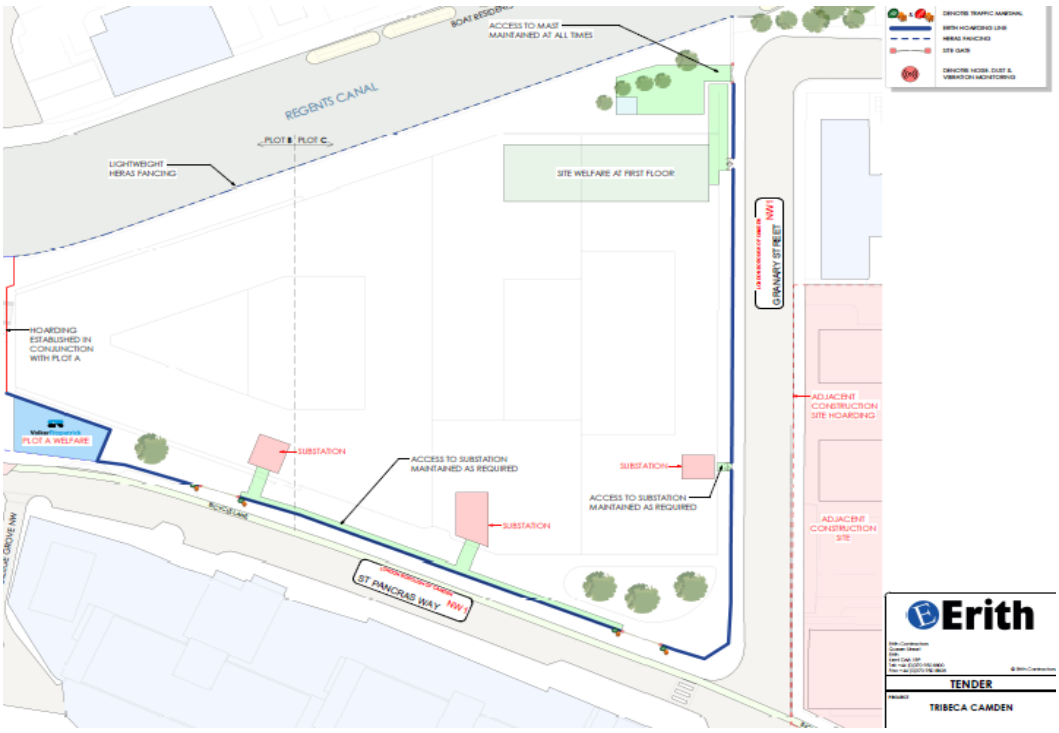

Figure 14 - Location of UKPN Substations and protection

An access route to the substations will be maintained throughout the demolition works. Protection in the form of a scaffold crash deck solution bridging the box will be installed and inspected regularly to ensure there is no damage to the substation structure. Prior to works commencing, a design assessment will be conducted to determine the allowable surcharge on the substation structure with all exclusion zone provisions employed to ensure this structure does not become overloaded.

Figure 15 – A typical detail for UKPN substation crash deck

Hard Demolition Methodology
Demolition works for enabling High Reach plant

Once the soft strip has been completed and scaffold installed, ECL hard demolitions team will enter each building as available.by initially removing a section of the atrium roof by hand using scissor lifts and hand tools. All hot works permits will be in place. These scissor lifts will be brought to the area from the goods and passenger lifts within the structure. All working at height will cover specific working at height safe systems of work with secondary operatives (outside of the fall zone) able to operate and lower scissor lifts from the floor level. An assessment of structural roof members will be completed and these will be temporarily supported before being cut away by hot works and lifted out of the works area. ECL intention is to re-use all steels possible in the first instance before recycling is investigated.

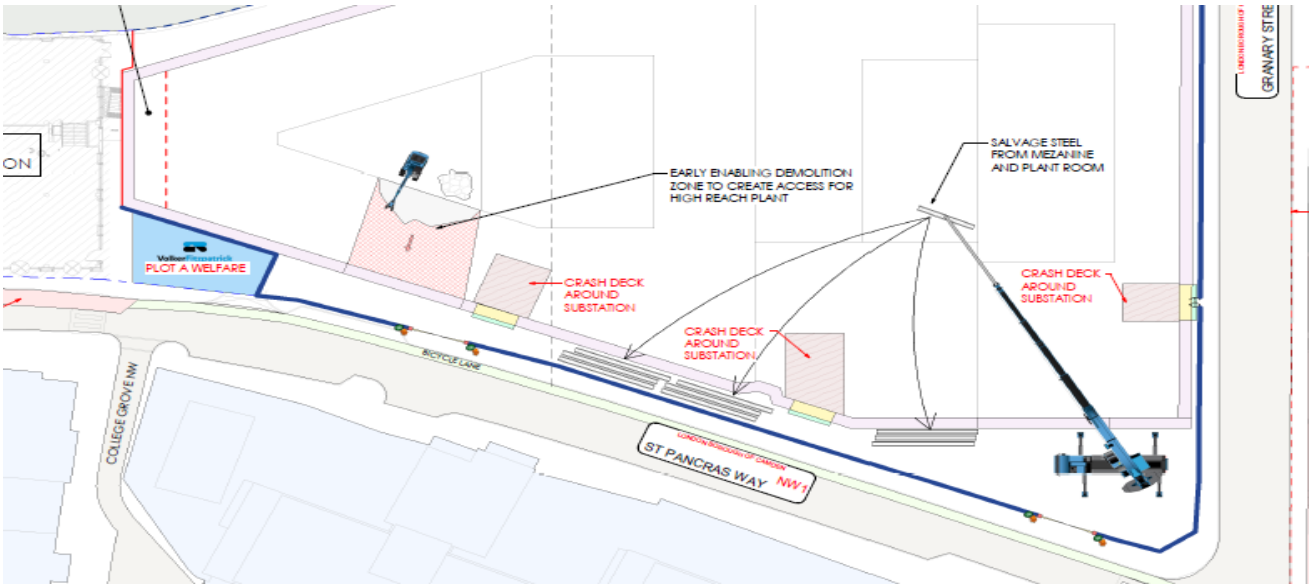

Figure 16 - Early enabling demolition zone to create access for High Reach plant

During the atrium removal is ongoing back propping will be installed as/if required within the lower floors as per Swanton's Engineering report (appended to the end of this document). Back propping will be carried to the works area by trolly using lifts to move props around. Propping will be installed by hand and screwed out to floor heights, no working at height will be required for this works. Trained and competent temporary works supervisors will inspect and approve propping has been completed as per the temporary works designs before permit to load is signed off. When permit to load is signed loading of the floors above by 21t machine can commence.

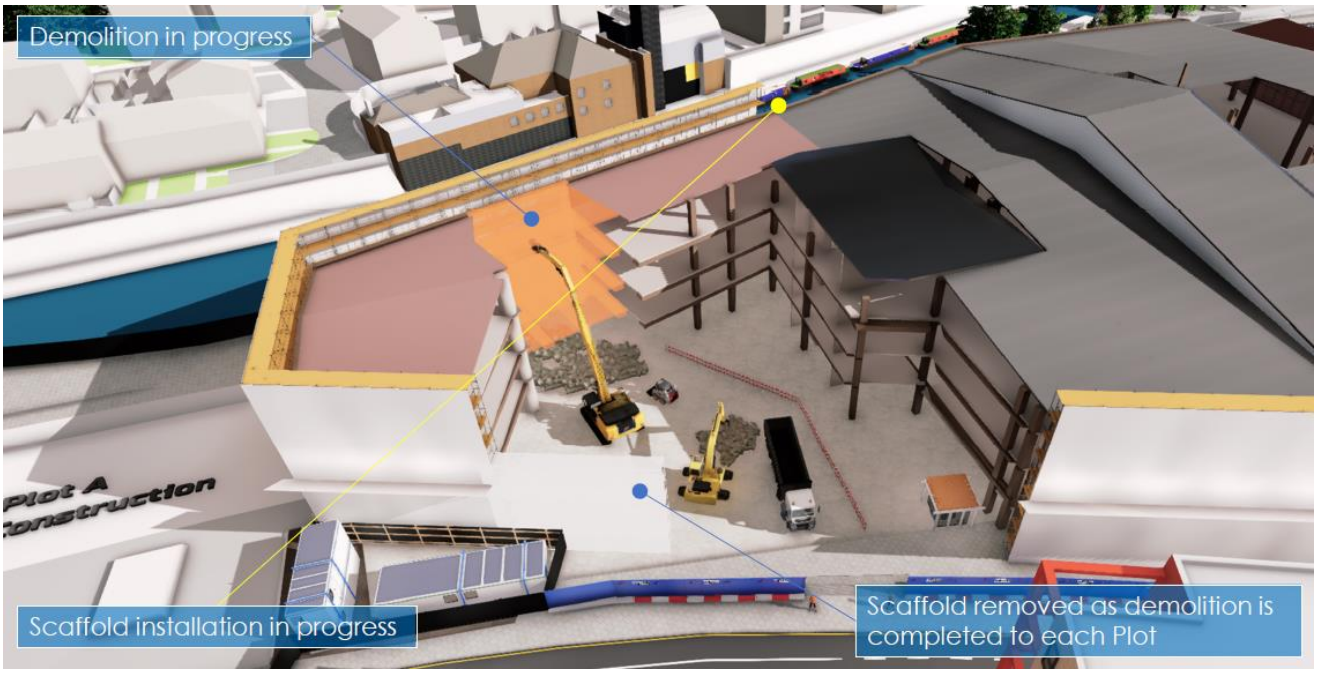

Figure ? – High Reach demolition in progress

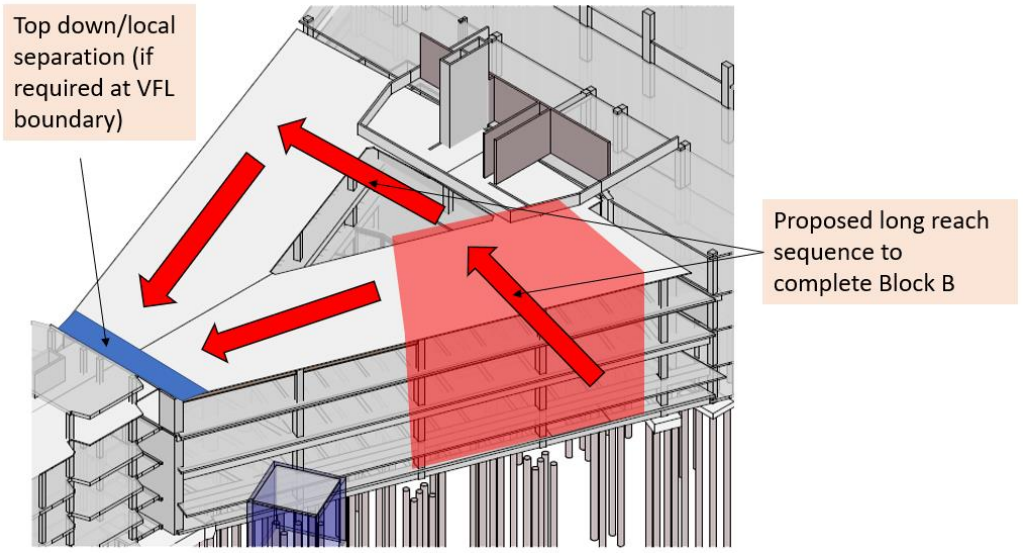

Figure 17 Direction of demolition works to allow High Reach entry

Roof removal will then allow a 21T excavator to be lifted into position as per Figure XX and be able to process the first 1 to 2 structural bays of the building for hard demolition. This will start from the existing small vehicles entrance of the building to St Pancras Way. As per figure above. This 21 ton machine will work through the high levels of the structure allowing for larger 45t high reach excavators to be loaded out onsite and follow the 21 ton machine processing the remaining 3 RC slabs.

The excavator will also use a loading attachment to load any demolition material to the back of attendant HGVs with the aid of banksman keeping loading out areas

segregated by means of chapter 8 barriers. The demolition will occur within ECL site confines and an exclusion zone will be established around the excavator to ensure that access in only granted to authorised personnel.

The following graphic shows the first 4 stages of hard demolition works required for the High Reach to be able to start works including general propping installation under 21t excavator.

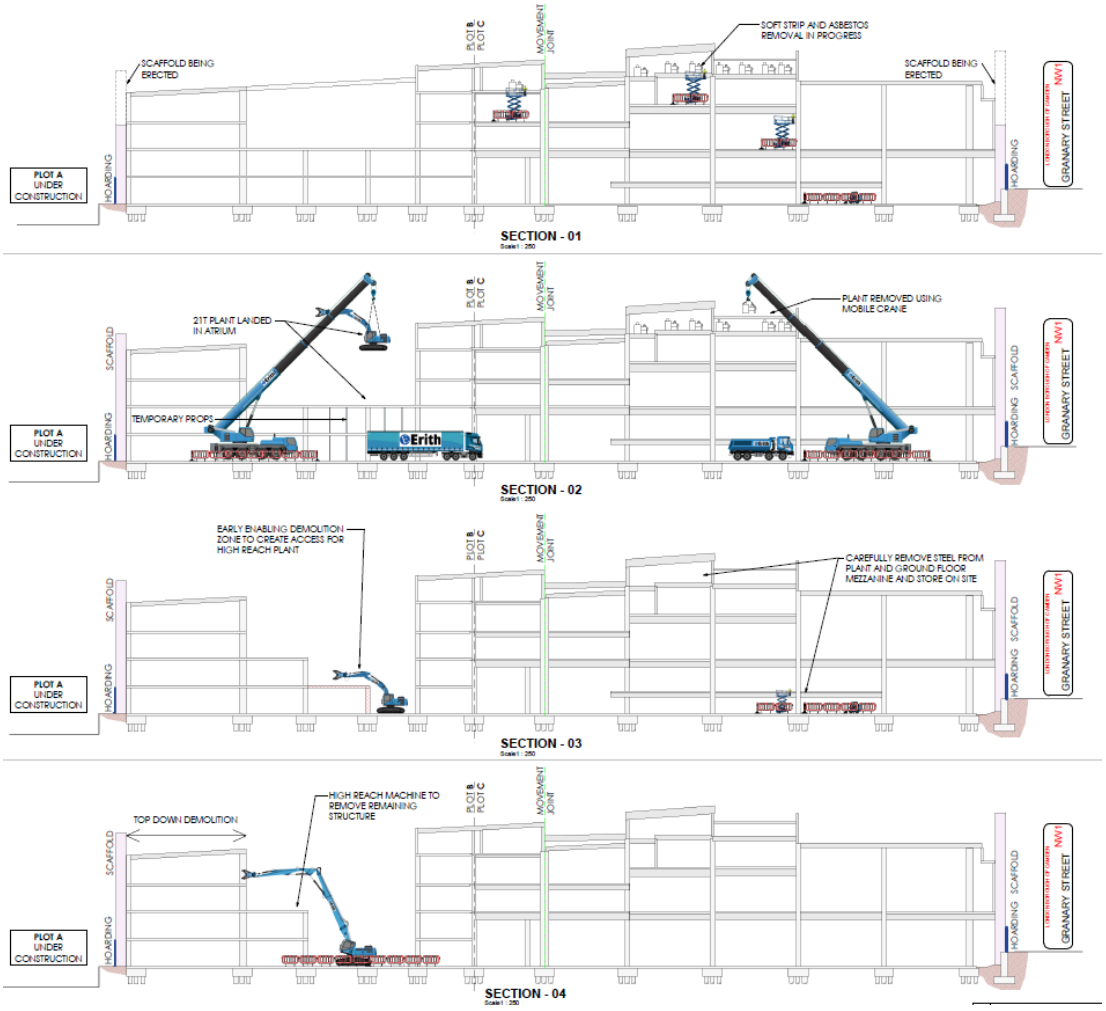

Figure 18 sequence of works for high reach enabling

The figure above shows the high reach processing of the building from central atrium and then working South (towards Building C) collating and separating out the materials sufficiently for segregated waste removal from site.

The high reach demolition area will be segregated from all non-essential operatives with banksman on radio contacting high reach and damping down team from outside the exclusion.

Top Down Demolition Methodology

The method chosen by Erith for the demolition of the Plot B & C Structure is a top down methodology with elements of long reach work for quick and ease of demolition.

Please Note – To minimise the noise and vibration disturbance from the demolition activities, Erith will use Pulverisers and Cracker attachments fitted to the end of the demolition spec excavators sat upon the floor plate.

Breaking will only be required for folding over column sections by breaking off concrete and exposing the steelwork. Use of the breaker attachment will be within strict accordance with the London Borough of Camden Code of Construction Practice.

Early site investigation works will be carried out to ensure the assumptions made by the Erith at the tender stage and assumed temporary works requirements are correct. However, based upon the assumption and the site investigation that the structure is made of 350mm thick beam and pot floors, Erith have decided that it is best to progress with a top down methodology in areas where the cantilever could destabilise the structure or where ground bearing slab cannot support 45t high reach machine.

Please Note - All elements of the structure will be demolished with scaffold screens erected along. Particular attention for noise suppression and water loss will be along the Canal Side elevation to screen the works and minimise the risk of noise and airborne dust travelling beyond the site boundary towards the Canal residents.

Prior to any demolition taking place the associated temporary works, such as back propping of the floors, temporary works will be signed off by the Erith Temporary Works Coordinator.
When the temporary works have been signed off, an Erith permit to demolish will be issued and the works will commence.

As stated, Erith plan to demolish with a top down mechanical demolition method with the works being serviced by a mobile crane to lift machinery at the roof. It is assessed that ECL will need 1 crane attendance for that purpose with up to 2 more for plant and roof elements disassembly. The crane will lift 1 no 21T excavators on the atrium to commence demolition down to the Ground Floor. The crane attendance will occur on specific hours likely on the weekend to allow TFL signoff. This would require an agreement with the Client as well as with London Borough of Camden.

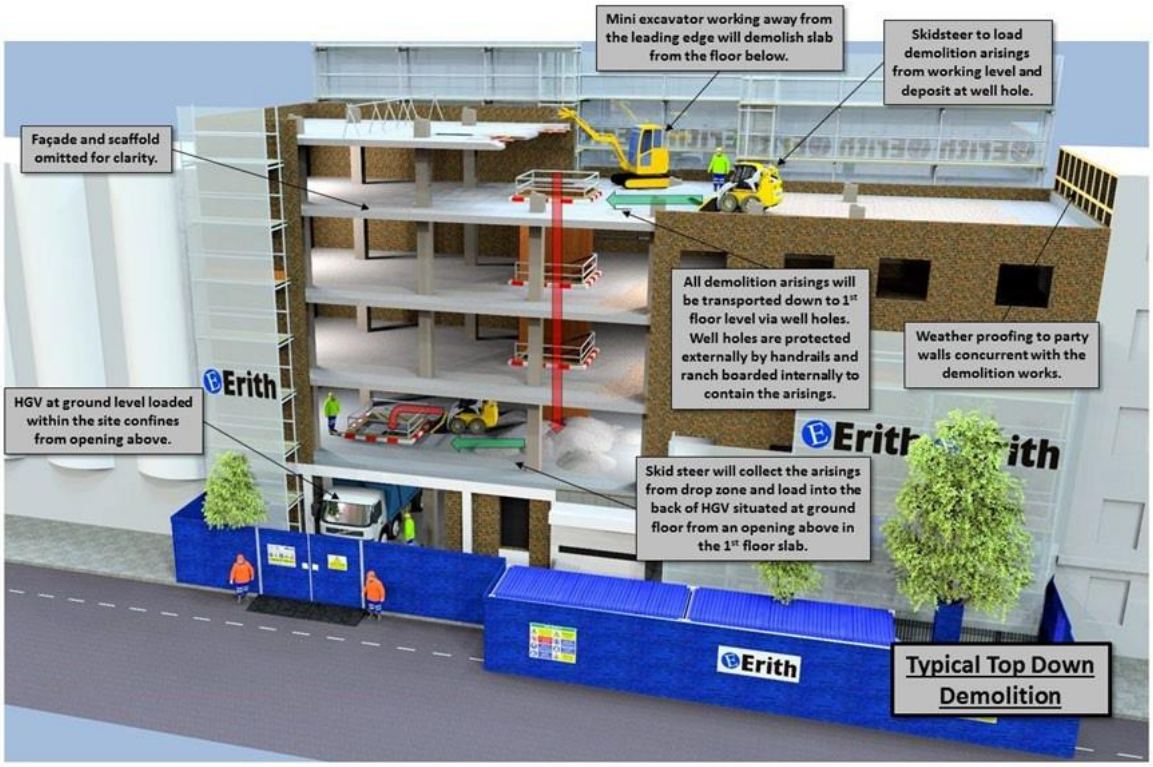

Figure 19 – Indicative only top down demolition

Upon the roof slab a section will be identified and sprayed out by the onsite temporary works engineer and the section will then be demolished with the 21Te excavator equipped with muncher and hydraulic breakers subject to back propping temporary works.

The machines will then continue on a floor by floor basis across the full footprint of the site and until the Ground floor or such point that the high reach machine can enter the building. Materials will be disposed of via the stair core formed throughout the structure to the loading area located at the ground floor of the structure. During the demolition the machine will be lowered to each floor via a ramp which will be constructed during the demolition of each floor. Additional back propping will be required on each floor just below the ramp as per Swanton's Engineering Report

Material will then be transferred through the existing stair core down to the ground slab for disposal off site. As the demolition progresses down the building operatives with hand tools will clean the scaffold of demolition debris that has built up on the

boarded lifts. The demolition arisings will be cleared at regular intervals as the works progress.

One complete floor plate of structure will be removed at a time, where possible all work at that level should be complete before moving to the next. This is not required where movement/separation joints divide the structure

Please Note - there may be occasions when the floor removal will need to be stepped to aid demolition and progress demolition works.

All hard demolition materials from the structural demolition of the building will be removed off site for recycling. All arisings will be processed and segregated at each demolition floor level with the reinforcement segregated and removed from site.

To limit any potential damage during the demolition phase Erith will utilise the pulveriser attachment to break off the concrete around the beams. Once exposed the attendant excavators will slew over under the instruction of a banksman and will have its lifting equipment attached around the beam.

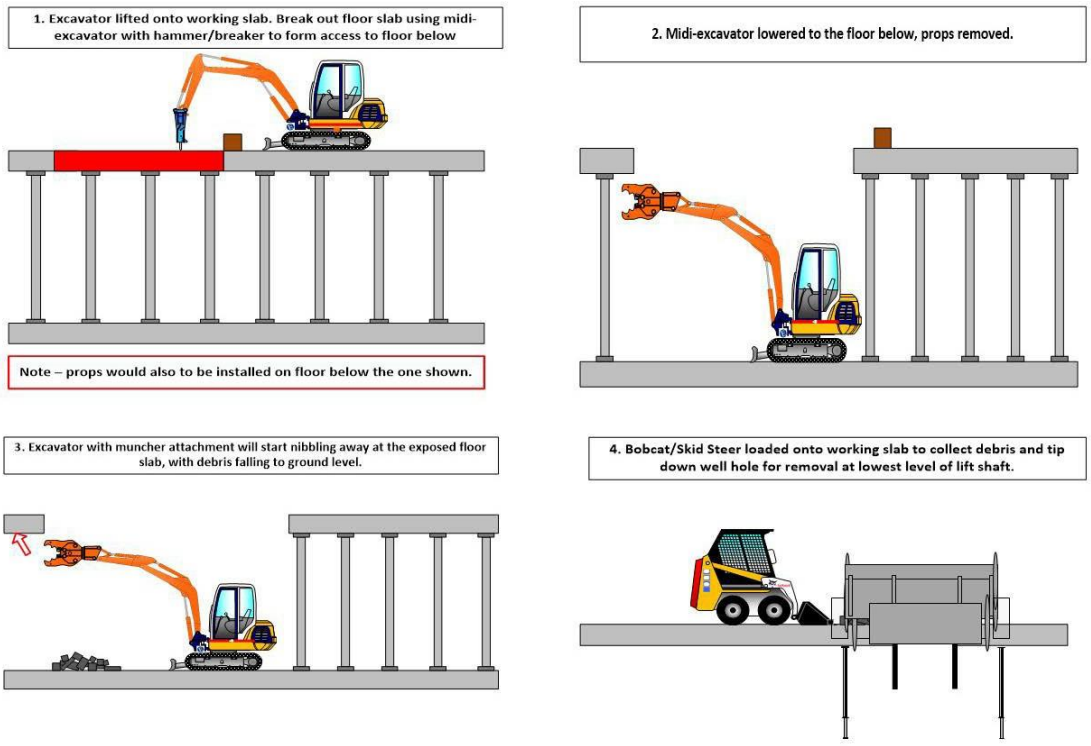

Figure 20 – Top down demolition techniques

The process outlined in figure above will be repeated as the demolition progresses down the building to the ground floor.

Dust emissions will be controlled at the working face, openings and loading away area by a fine water spray. The quantity of water emitted by the sprays will be regulated and controlled to prevent any flooding at basement level.

The site manager will call upon a road sweeper as necessary, to keep the surrounding streets clean. This will provide a safe environment for the public and a visually pleasing site. Upon completion of the works, ECL will leave a clear and safe site.

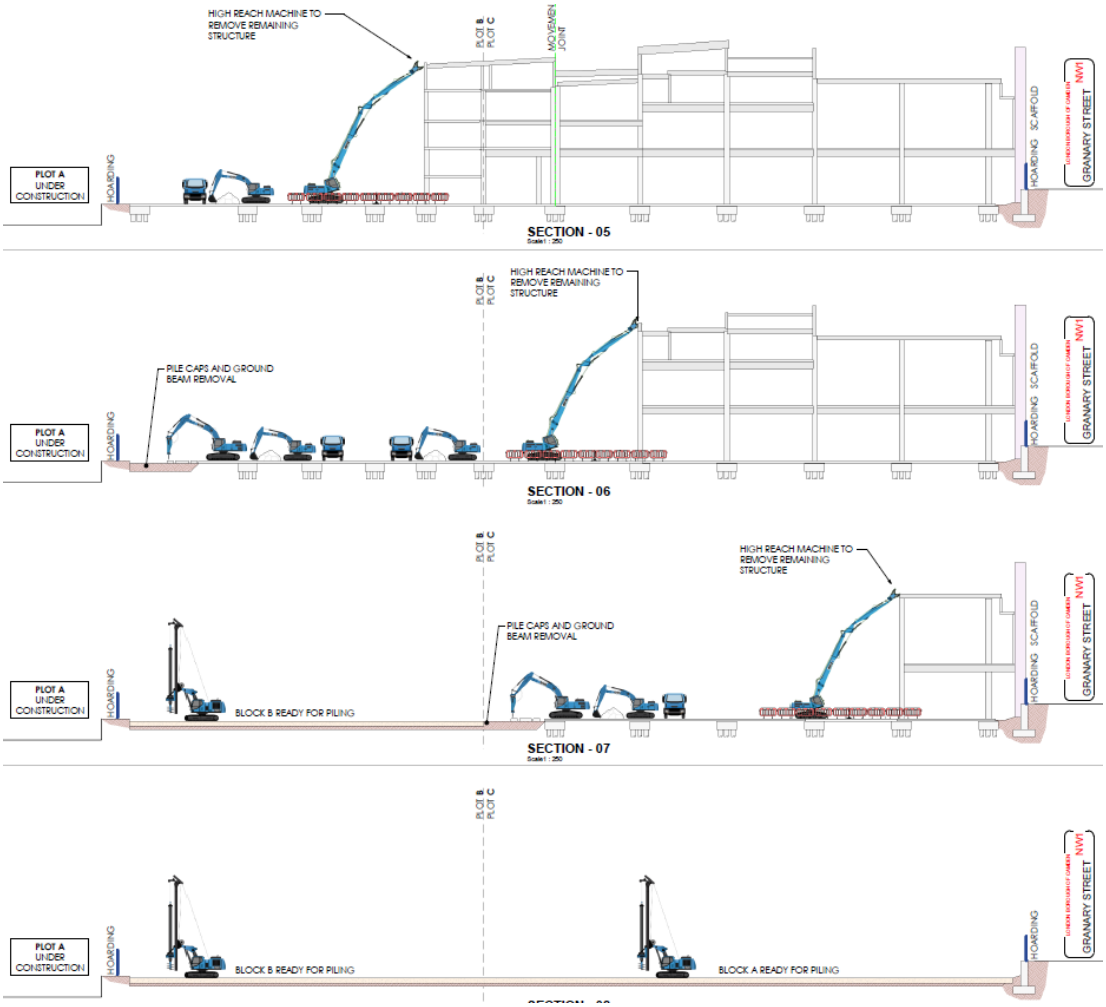

Figure 21 – Sequential works for high reach and pile mat works

General control measures during the demolition operations

Throughout the works Erith will operate to strict demolition guidance and its demolition standard operating procedures. The demolition procedures and guidance are listed below:

- The demolition will be under the control of the Erith demolition top man supervisor. He will be in direct contact with the operator of the demolition excavator via 2-way radio. In attendance will be a second excavator fitted with either bucket / grapple to sort or load the materials generated by demolition.
- During the damping down of the dust, operatives will be positioned in a manner as not to put them at risk. The excavator banks man will carry out this

activity and he will stand to the side of the excavator within the view of the operator and at a safe distance from the excavator.

- During this phase of works only authorized Erith Operatives/ staff will have access to the site. Any access required by others requires to be escorted by a member of the Erith site project team.
- The excavator will remove any lose debris before operatives enter the demolition zone.
- In the event that significant contamination is found at any times it will be reported to the client to be communicated to the Local Planning Authority as per planning permission notice. An investigation and risk assessment will be undertaken to the Environment Agency's Model Procedures for the Management of Contamination (CLR11), and mitigation implemented to resolve to the satisfaction of local planning authority.

Figure ? – Block C demolition progressing

All of the above demolition works will be carried out in accordance with the following publications/documents:

- B.S. 6187: Code of Practice for Demolition 2011.
- Health and Safety at Work etc. Act 1974.
- Personal Protective Equipment Regulations 2002
- Provision and Use of Work Equipment Regulations 1998
- RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
- Construction (Design & Management) Regulations 2015
- Control of Substances Hazardous to Health 2002.
- Controlling of Noise at Work Regulations 2005.

- Controlling of Vibration at Work Regulations 2005.
- Control of Asbestos Regulations 2012
- TG20:13 Good Practice Guidance for Tube and Fitting Scaffolding
- SG4:10 Preventing Falls in Scaffolding
- Environmental Protection Act 1990

Fire Safety

Erith Contractors will produce a fire plan which will be displayed on site notice boards and included in the site induction. Any Fire Safety duties performed by personnel will be undertaken in accordance with the Fire Plan.

Fire marshalling duties will be undertaken by appropriately trained and certified operatives.

Additionally, Erith will carry out regular reviews / updates of the Fire Plan to ensure it remains current.

We will provide fire points, which will be strategically located throughout the work areas. Fire points will include, as a minimum, fire point stand, fire extinguishers (1No Co_2 and 2No foam), sand bucket, rotary hand bell and back panel for fixing appropriate signage (evacuation route, emergency procedures, etc.).

Servicing and maintenance of fire points and extinguishers is included in our bid, based on statutory requirements and additional maintenance necessitated by proper use of the equipment.

Appropriate signage will be positioned strategically around the demolition area to effectively communicate the plan to the operatives. Emergency escape routes and exits will also be prominently signed and established fire escape routes will be kept clear and maintained at all times. These will be indicated on the fire plan and briefed to all operatives during the induction.

Furthermore, Erith will also appoint an emergency coordinator and deputy coordinator who in the unlikely event of an incident will be tasked with calling the emergency services and liaising with them.

Environmental Monitoring

We are fully aware of the sensitive nature of the environment and necessity to ensure that our operations do not adversely affect neighboring canal/businesses or local residents and the landmarks around the site premises. As such, a regime of constant 'real-time' monitoring shall be undertaken to ensure that nuisance, guideline or statutory levels are not breached, and ensure our response is pro-active not reactive. We will monitor noise, vibration and dust release to the atmosphere. Vibration limits are set by the Camden County Council and will be monitored throughout.

Regular reports will be issued with results to the project team to ensure that we are working with statutory guidelines. In addition, Erith will utilise noise predictive software as shown in Figure 12 to develop a 3D model of the site and surrounding areas. By adding point sources of noise, we can predict the decibel level received at any given point on that model. This way, we can ensure that noise is kept as low as practicable with control measures such as acoustic screening.

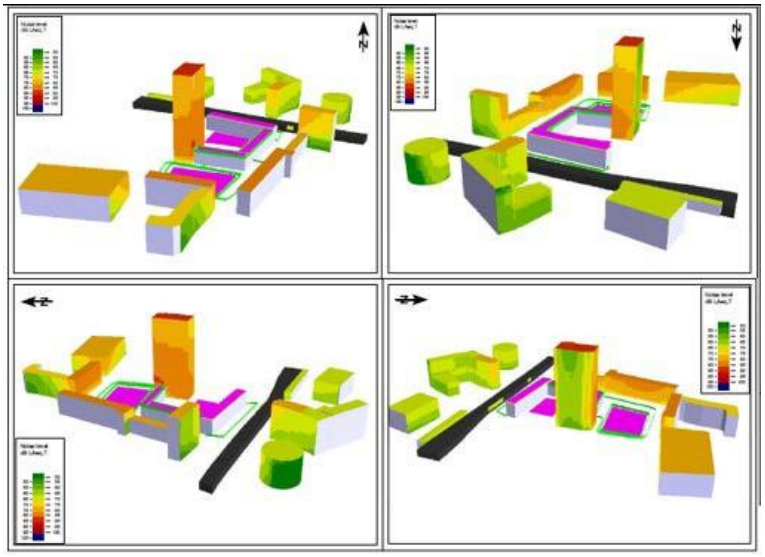

Figure 22 – Indicative only Noise Mapping Plan

The location of monitoring stations will be agreed with the project team and London Borough of Camden, to whom any breach of predetermined levels will be notified. If such breaches occur immediate reviews will be undertaken to ensure every measure is taken to prevent reoccurrence. Due to the number of adjacent businesses and residencies being in close vicinity, we will ensure that every control measure is put in place to minimise disruption by way of vibration, noise and dust nuisance.

All monitoring works will be executed in accordance with the project brief (and as agreed with the adjoining property owners). A detailed Environmental Management Plan and Environmental Monitoring Plan will be issued in advance of the works.

The exact location of the monitoring equipment are to be agreed, but will be selected to allow for the routine calibration of monitoring equipment, easy access to power and to ensure that, as far as possible, the location is representative of those locations that are most affected by the noise from the demolition works. The chosen location would also need to be in an area where a mobile signal can be obtained or, where it is not possible there is access to a fixed telephone line.

The monitoring station would be set up to allow for any action levels to be monitored and trigger audio recording (if required) of any noise events that exceed the set action levels. The meters can be configured to send text and/or email alerts to relevant personnel when action levels are triggered, thus enabling an instant

response. A visual traffic light system will be erected in the site accommodation to alert operatives and management as the noise levels approach the threshold.

Non quiet times are employed for particularly noisy works and works during the quiet periods are generally less noisy. Noisy works will be executed as per the London Borough of Camden Code of Construction practice.

At all times the works will be carried out in accordance with London Borough of Camden and approval will be sought through a Section 61 with the Environmental Health Officer.

5.0 Plant/Materials and Resources

- 360 degree 45T Ton Excavator + Hydraulic Pulverisers
- 360 degree 21T Excavator + Hydraulic Pulveriser
- Low tonnage Brokk's
- Skid-steer/ Bobcat
- Oxy Propane Burning plants complete with flashback arrestors.
- Bottle cage and trollies.
- Genie scissor lifts

- Oxygen and Propane gas cylinders.
- 1 No 3000L Fully Bunded Bowser complete with lockable compound constructed from Heras Fence panels.
- 2no Haki Staircase
- Back Propping
- Scaffold
- Compressor and hand tools.
- 110v transformers, lighting and cables
- Geni Hoist

Personal Protective Equipment

- Hard Hat -BSEN 397
- Safety boots- BSEN 345
- High visibility vest-BSEN 471
- Eye protection – impact glasses for general works and movement on site; see below for tasks requiring specific eye protection. BSEN 166B
- Gloves- BSEN 388
- Torches
- Head lamps
- Overalls

Additional P.P.E must be worn where deemed necessary by the works supervisor.

- Dust Mask/ half mask- BSEN 143
- Ear protection- BSEN 352
- Goggles- BSEN 166 A/B

Adequate supplies of ear defenders, eye protection, dust masks and other safety equipment will be available on site at all times. A personal protective equipment register will be completed and signed by each operative on receipt of the above.

Resources

Personnel:

- 1 x Project Manager
- 1 x Quantity Surveyor (Visiting)
- 1 x Demolition Foreman
- 1 x Management Support Staff
- 1 x Site Engineer / Temporary Works Engineer
- 20 No Operatives
- Setting out engineer
- 4 x Traffic marshals
- Administration assistant
- Visiting safety officer

6.0 Risks and Controls

- Interface with the public: access and egress to be controlled by full time nominated Traffic Marshals.
- Cyclists in the vicinity of the area. Traffic Marshals to manage vehicle Movements
- All work to be controlled by a competent Demolition/ Construction, Manager/Supervisor.
- All plant operatives to be competent and trained and will hold CPCS/CITB/CSCS certification. Qualifications to be checked by ERITH prior to works and copies will be held in the site file for reference.
- All operatives to be competent trained and CSCS/CDCO accredited.
- All operatives to use appropriate personal protective equipment.
- Any hot works to be carried out under an ERITH Hot Works Permit.
- Finding unidentified services- Stop all works and report it to the supervisors. Establish an exclusion zone around the finding.
- Falling debris: Scaffold Screen Protection to be installed, Dust suppression to be utilised.
- Manual Handling- All operatives to go through a Manual Handling training. All operatives to assess any weights before manual lifting.
- Falls from Height. Adequate protection to be placed where required.
- COSHH material. COSHH Assessments to be produced and briefed to all site personnel
- Failure/Displacement of Platforms
- Areas below the works will have fixed interlocking barriers and signage

to prevent access.
    - Operatives will be in contact via 2-way radios.
- Gas bottles to be chained to a proprietary trolley and placed in a cage after use. Location of gas storage cage to be marked on the site plan and the plan located where the fire brigade can see it in the event of a site fire. Fire extinguishers to be located nearby and the area kept clear of combustible materials.
- Exclusion zones with appropriate signage will be erected.
- Incorrect Operations. All site Personnel to be sufficiently briefed on their tasks
- Being Struck by machinery and Plant
- Canal site boundary establishment with bunded toe board and VCB barriers with netted heras.
- All operatives working near water to be trained and have water rescue plan, life vest fitted.
- Leading edge protection with toe boards and appropriate signage will be established, maintained and relocated as necessary to suit the phasing and progress works.
- Dust will be suppressed by fine water spray as necessary.
- Pedestrian routing to be established and maintained in accordance with Site Establishment Plan. An exclusion zone will be demarcated around these works.
- Dedicated Gateman to control vehicular access/egress to and from site. He will also take charge of a sign in book. All people entering and leaving the site will have sign the book regardless of personal credentials.
- Dedicated appointed banksmen to control all plant movements within site confines.
- Works on open and leading edges to be avoided whenever possible. Harnesses and inertia reels to be worn for all works at open and leading edges. Equipment to be checked prior to each use and any frayed or damaged straps and fittings to be replaced for new. All new equipment must have a manufacturers/ suppliers safety certificate.

7.0 Training and Certification

- All demolition operatives will have suitable training and associated certification.
- Plant operators will hold CPCS/CITB/CDCO certification.
- All operatives to attend an ERITH induction prior commencement of work on site.
- All operatives to attend a method statement briefing prior to commencement of works.
- All plant to be inspected and recorded as per LOLER.
- All material to inspected and recorded as per PUWER.

7.1 Training and Certification

Security

Erith will ensure that the site remains secure 24/7 during the works. We intend to do this with a hoarded boundary around the site, thus ensuring no unauthorised access will be gained during working and non-working times, this will also include lit hoarding and CCTV coverage of the area for the upkeep of public safety.

Our security reception guard will enroll all site safety inducted personnel onto the unique system. Once they are enrolled they are free to come and go through the turnstiles as they please at the touch of a finger.

All security guards will be:

- SIA trained.
- Hold CSCS cards.
- Site inducted relevant to their role.

CCTV

To further enhance the physical security of the site we will install a CCTV system. Coverage will be provided by high resolution colour/monochrome day/night static and PTZ cameras, installed and relocated as necessary through the various phases of the project. The Cameras will be programmed to cover the site (programming and views to be agreed). The cameras may also be manually controlled by way of a 'joy stick' and will have the added advantage of being alarmed by remote wireless PIR detectors which will bring the cameras into focus on incidents detected by the PIR's. All camera signals will be fed back to the local manned security office and into a 16 channel Digital Video Recorder that will allow approximately 28 days storage before being automatically overwritten. Should an incident occur, images may be downloaded to CD/DVD for permanent storage.

8.0 Environmental Control and Waste

Environmental Control

To meet the planning obligations set out and increase the positive profile of the project Erith will develop a full Environmental Management Plan (EMP) to discharge all consents and provide higher wellbeing to the area, within the EMP the following monitoring and reporting will be incorporated to ensure targets are achieved:

- Boundary static dust monitoring across various strategic locations of the site.
- Background monitoring before work commencement and once weekly thereafter.
- Live dust monitoring across the site boundary.
- Downloads taken each week and graphs issued to the client.
- Noise monitoring at all four elevations weekly, with base levels established before the works start.
- Movement monitoring at selected locations of the site.

Results will be continually reviewed and should elevated levels occur work will cease whilst consultations are undertaken with the relevant parties and if necessary alternative methods will be developed.

Waste

The proposed demolition activities will result in waste production. The following section outlines the key waste streams produced and the proposed waste management and disposal methods. In addition, Erith Contractors will implement a site waste management plan per the site waste management plan regulations 2008.

As per the BREEAM New Construction 2018 methodology, five credits can be obtained for the Wst 01 (category) Construction Waste Management criteria.

One Credit – Complete a Pre-Refurbishment Audit.
Three Credits - Construction resource efficiency: preparing a compliant Resource Management Plan (RMP) to minimise and monitor waste.
One Credit – Diversion from landfill.

To obtain the exemplary credit for waste diversion, a volume of 85% or tonnage of 95% must be diverted from landfill. This is achievable through the advanced segregation of materials into individual waste streams as per the table below. Timber will be sent off for reuse or pulping. Metal products will be taken off site to be recycled or reused.

Erith contractors are licensed to produce, transport and dispose of waste materials. Copies of duty of care waste transfer notes etc., detailing description, producer and carrier of waste, will be kept on site and available for inspection.

European Waste Catalogue	Key group
170102	Bricks
170101	Concrete
170604	Insulation
1501	Packaging
170201	Timber
1602	Electrical and electronic equipment
1301	Oils
1703	Asphalt and tar
170103	Tiles and ceramics
1701	Inert
1704	Metals
170802	Gypsum
170101	Binders
170203	Plastics
1705	Soils
Most relevant EWC	Liquids
Most relevant EWC	Hazardous
Most relevant EWC	Floor coverings (soft)
Most relevant EWC	Architectural features
170904 (Mixed)	Mixed or other

Figure 23: Construction Waste Groups (BREEAM UK New Construction 2018).

Waste arising during demolition works will be continually monitored through SmartWaste to provide a thorough understanding of the quantities and the destination of material. This will be tied in with our Resource Management Plan (RMP) for effective management of waste.

Wood Hall and Heward offer a range of services that contribute sustainable alternative solutions to problems. They can provide Hopper barges that can carry up to 60 tons or 10,000 cubic metres of compacted waste on the water. This mode of transport emits roughly 5 times less CO2 than removal of waste on the road.

CO2 emissions by mode of transport:

Water	**40-66g (per tonne/km)**
Road	**207-280g (per tonne/km)**

The hopper barge will arrive and moor alongside Block B, an excavator will then load the barge evenly distributing the waste. All operatives working alongside the water will be trained and have read all the necessary RAMS associated with the works. If they are to work without solid fencing between necessary lifejackets and training will be completed.

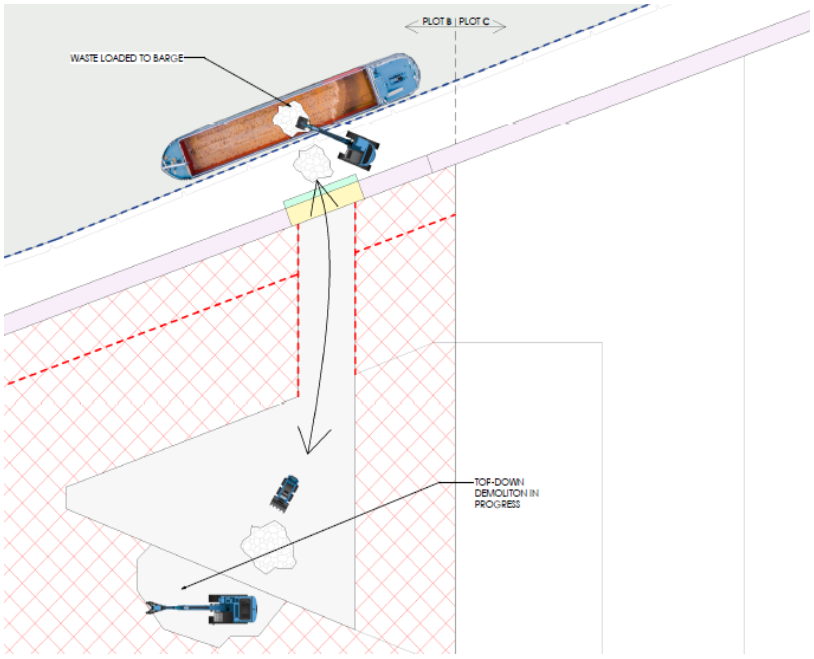

Figure 24 Waste removal via Regents Canal

Powerday has a canal wharf at their Old Oak Sidings site in Willesden Junction, this unique facility enables us to transport our demolition waste by water. Transportation of waste by water can greatly reduce the carbon emissions of construction waste transportation, helping meet ambitious environmental targets and planning obligations

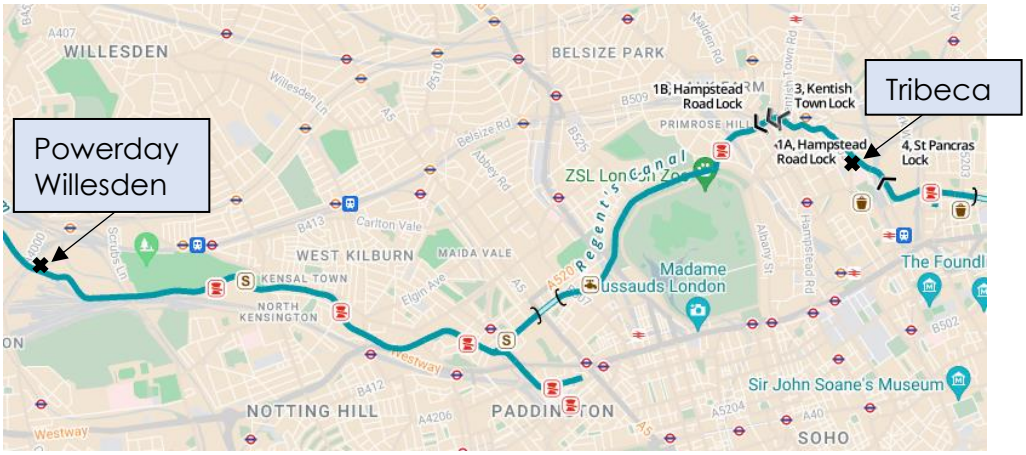

Figure 25 Route from Tribeca to Powerday

FORS (Freight Operators Recognition) Gold Accredited Vehicles

At a minimum, Erith ensures that all HGV Tipper Lorries are FORS gold accredited. FORS is an accredited scheme aiming to improve freight delivery in London and the UK. The purpose of FORS is to improve safety and reduce the environmental impact. Due to the site's exclusive location, it is fundamental to the scheme that all HGV Tipper Lorries are accredited.

Figure 26: FORS Gold accredited vehicles#

11.0 Appendices

Appendix A – 3D Model Time Slices

Appendix B – Swanton Consulting Engineering Report

Appendix C – Logistics plans & swept path analysis