Chapter 5 Demolition and Construction

INTRODUCTION

5.1 This chapter of the ES is an informative chapter setting out the demolition and construction information that has informed the demolition and construction impact assessments of this EIA. The demolition and construction impact assessments for each technical topic area are set out in the relevant technical chapters of this ES (Volume 1 and Volume 2).

5.2 Planning for enabling works, demolition and construction is broad at this stage and maybe subject to modification during the detailed planning of these works, on site conditions following commencement of the works and lettings. The information presented within this chapter is based on reasonable assumptions made by professionals and is suited to this stage of planning. It is anticipated that further information and details would be submitted to the LBS pursuant to planning conditions attached to the planning permission.

5.3 This chapter also sets out the management and control measures, and any specific mitigation measures required to reduce environmental impacts as far as reasonably practicable.

5.4 This chapter has been prepared in association with Bouygues, the Applicant and Trium Environmental Consulting LLP, who collectively have vast experience of working on projects such as this.

PROGRAMME OF WORKS

5.5 Figure 5.1 presents a summary demolition and construction programme. It is currently envisaged that the demolition and construction works will take approximately three years to complete and, whilst divided into two phases, 'Phase 1' and 'Phase 2', the works will be undertaken concurrently across both Phases.

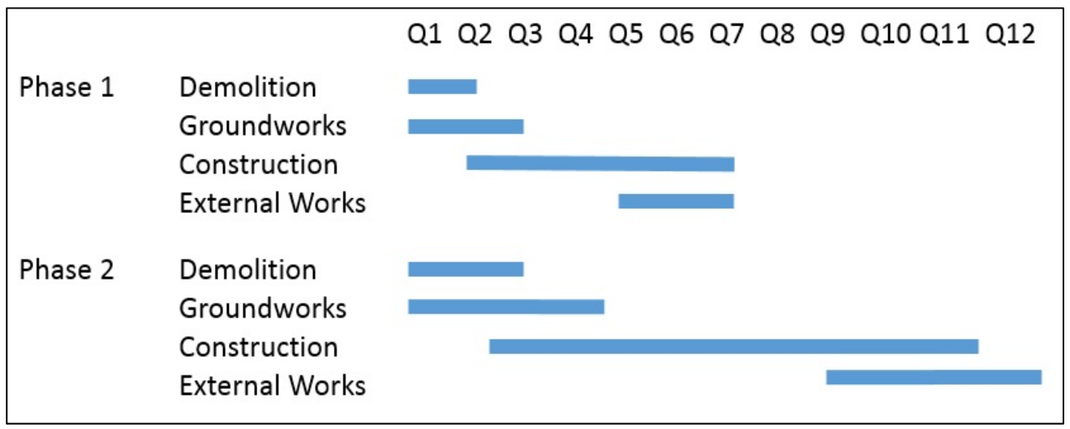
5.6 The initial enabling work and subsequent demolition of the existing buildings and structures across the site are anticipated to take approximately 9 months.

5.7 Following on from demolition, the required excavation and substructure construction works ('groundworks') are anticipated to take approximately 12 months. This works will overlap with the demolition works.

5.8 Construction of the above ground elements of the Proposed Development will commence whilst substructure construction works are ongoing and in total are anticipated to take circa 27 months.

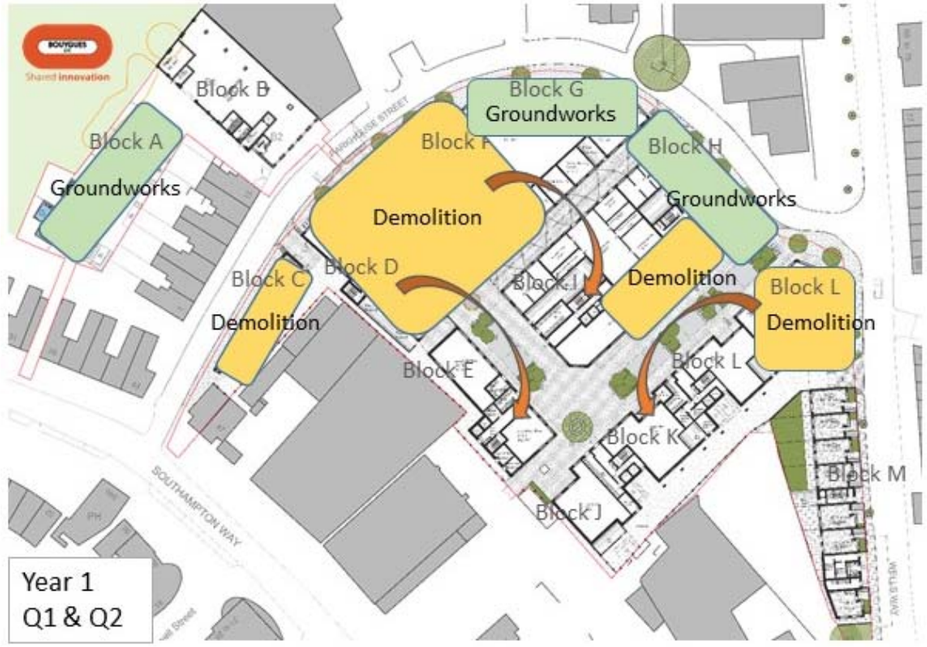
5.9 Phase 1 comprises of Blocks A and B and is expected to be completed and occupied in mid-2020. Phase 2 comprises of Blocks C to M and is expected to be completed and occupied in mid-2021.

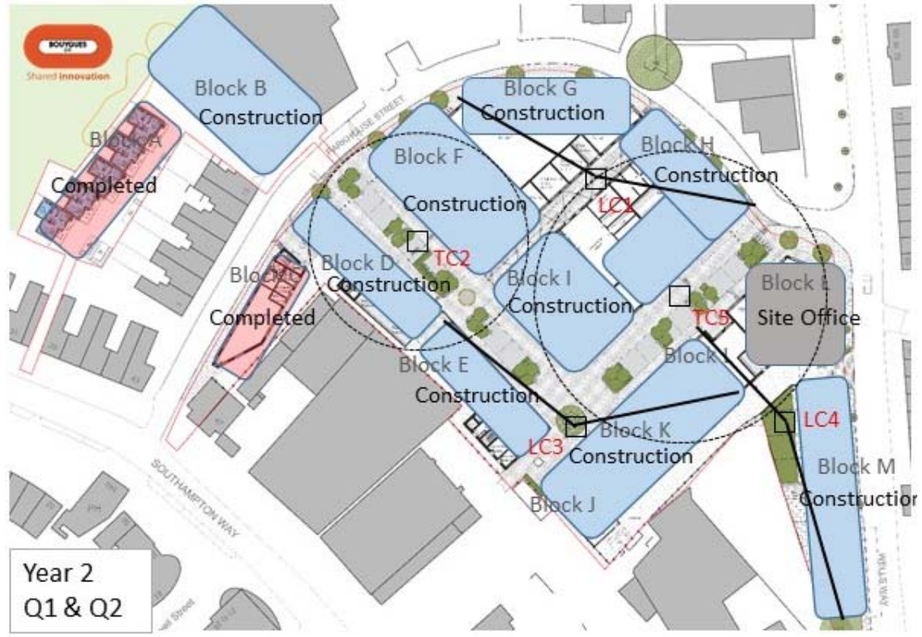
Figure 5.1 Summary Demolition and Construction Programme



The illustrations within Figure 5.2 present two key phases of construction works (demolition and groundworks; and construction) at selected periods within the programme of works. The yellow arrows represent the direction of progress within the first 6 months of work. The anticipated crane locations for construction works are also shown.

Figure 5.2 Phasing Snapshots – updated August 2018





Interface with Neighbouring Properties

5.10 Party wall agreements will be dealt with prior to works starting on site. Rights of light, noise and dust management will be integrated in the construction of the scheme and will be carefully considered when planning the works.

5.11 Neighbours will also be kept informed of the site progress on a regular basis through a monthly newsletter.

Pre-Commencement Surveys, Investigations, Consents / Licenses

5.12 A number surveys and investigations will need to be undertaken prior to the commencement of works on site. In addition, various consents and licenses will need to be granted. The following pre- commencement surveys and investigations are envisaged:

- Further asbestos surveys;
- Nesting birds survey (if site clearance works are to be undertaken between the months of March to July inclusive);
- Condition survey of adjoining party walls and boundary walls;
- Structural surveys of existing construction;
- Topographical survey to confirm existing site levels;
- Condition survey of perimeter roads;
- Spatial and condition surveys of existing highway structures;
- Geotechnical and Geoenvironmental (soil types, land contamination (type and levels), ground conditions and bearing capacities including archaeological watching brief);
- Invasive species investigation (due to presence of Japanese Knotweed on site);
- Existing statutory utility and public health services;
- Unexploded ordnance; and
- Surveys of existing services.

5.13 All Statutory, LBS and TfL consents and licences required to commence an onsite activity will be obtained ahead of the works commencing and giving the appropriate notice period. These will include:

- Notices for works on the highway in accordance with the Highway Acts 1980[1] and Road Traffic Act 1988[2];
- Hoarding and scaffold licenses for works on the perimeter boundary;
- Crane operator permit - required if mobile craneage / cherry pickers are to be used on the public highway;
- Construction notices;
- Connections to existing statutory services and main sewers;
- License for discharge of water from the site into the public sewer;
- Party wall act notices and agreements;
- Approval of an Environmental Management Plan (EMP) and Construction Logistics Plan (CLP), including any specific agreements relating to the control and monitoring of demolition and construction noise and dust; and
- Crane licenses for over sailing the highway.

5.14 Footpaths on the south side of Parkhouse Street will become part of the site, footpaths on the north side of Parkhouse Street will be maintained throughout the demolition and construction works. All consents and licences required to take over a footpath will be obtained ahead of the works commencing and giving the appropriate notice period.

ENABLING AND DEMOLITION WORKS

Site Establishment

Hoarding

5.15 The first stage of the demolition works will be to establish the area as a demolition site. The working area will be secure, and the public will be separated from the works. Demolition compound boundaries will be made safe and secure prior to works commencing with use of solid well-maintained hoardings and screening where required. Secure access points with wheel cleaning facilities will be established at the site entrance location. A pedestrian access point will be located close to the main vehicular access gate on Wells Way with a separate pedestrian gate and footpath provided.

5.16 The solid timber hoarding will be decorated to an agreed colour scheme, and if required incorporate marketing graphics / logos. Daily inspections will be carried out to ensure that the integrity of the hoarding is maintained, and the hoarding will be kept clean and in a good state of decoration.

Site Office and Welfare Facility

5.17 During the demolition phase of the project the labour levels on site will be relatively low as it is envisaged that the buildings will be demolished using long reach mechanical plant incorporating breakers and crunchers. The extent of welfare facilities will therefore be minor; however, the workforce will require toilet, washing and changing facilities and a kitchen area.

5.18 As well as welfare facilities, office space will be required for the demolition contractor to administer the day to day running of the works.

5.19 The facilities and office space will likely comprise of several ‘portakabins’ possibly double stacked to reduce the area that they take up. The cabins will be connected to temporary builder’s electrical and water supplies and if possible connected to an existing on site foul sewer. Where this is not practicable, a holding tank will be provided, which will be pumped out on a regular basis.

5.20 It is the intention to provide a main site office and welfare facility on site for the enabling and demolition works. The location of the office and welfare facility is yet to be determined and it will be identified and agreed with the LBS as part of the detailed enabling and demolition logistics programming.

Utility Diversions / Removals

5.21 Prior to any demolition works taking place, services locations will be identified and marked on site using utilities record drawings and on-site investigation techniques such as hand dug trial holes and scanning using a cable avoidance tool.

5.22 Once the utility companies have completed their work and before any demolition and excavation works take place, the area will again be scanned, and a permit to dig issued by the principal contractor in accordance with their health and safety procedures.

Description of the Demolition Works

5.23 The works will consist of surveying, de-commissioning, demolishing and disposing of the existing buildings that comprise Burgess Business Park (save for in relation to 45 Southampton Way and the chimney). That will include:

- Demolition asbestos survey (formerly known as type 3 survey);
- Isolation of all services to make them safe;
- Isolation of the demolished building from remaining structures, including the chimney;
- Breaking up of existing concrete slabs, using machinery such as excavators, hydraulic hammers, crushers, tippers and rollers, and stockpile crushed materials;
- Dust suppression; and

[1] Her Majesty’s Stationery Office (HMSO), (1980); Highways Act 1980

[2] HMSO, (1988); Road Traffic Act 1988

- Construction of the building platform and mat.

5.24 Demolition materials (bricks, blocks, concrete) will be re-used to level the site and create the building platform and mat for the following construction works.

5.25 The demolition of the existing building where Blocks A and B will sit will occur directly next to existing properties. Several measures will be implemented to keep disruption to a minimum:

- Dust prevention with the use of surrounding scaffold and sheeting;
- Dust suppression with the use of water hose and/or sprinklers if necessary; and
- Noise control with sound absorption blankets around noise emitting fixed machines.

5.26 Tree protection areas will be observed around trees to be maintained throughout construction.

5.27 Tree protection fencing will be erected around protected trees to serve as either the creation of a safe exclusion zone around the tree, or as a physical robust barrier to prevent accidental collision with the protected tree.

5.28 The retained chimney centrally located will be protected from traffic collision with a specific timber hoarding and wheel blocks.

SUBSTRUCTURE WORKS

Site Establishment

Hoarding

5.29 The hoarding will continue as existing from the demolition phase and will be adjusted from time to time to suit the various phases of work.

Site Office and Welfare Facility

5.30 The site offices and welfare facilities will continue developing as the works progress and more on-site operatives are present on site at any given time. It is intended at this stage to install stacked cabins at the location of Block L (commercial block). The pedestrian access gate will be located off Wells Way.

Description of Substructure Works

5.31 The following sequence of works is envisaged:

- Piling works;
- Construction of pile caps and installation of underground drain and service ducts;
- Completion of the pile caps at higher level (level 0 / GF); and
- Complete level 0 slab (core areas and podium).

CONSTRUCTION WORKS

Site Establishment

Hoarding

5.32 The hoarding will continue as existing from the previous enabling/demolition/excavation phases. The hoarding will be kept in good order and appearance throughout the works.

Site Office and Welfare Facility

5.33 The site offices and welfare facilities will continue developing as the works progress. It is intended at this stage to install stacked cabins at the location of Block L. Following completion of Block E, it is intended to move the site offices and welfare facilities into Block E ground and first floors, which are to become commercial spaces.

Description of the Superstructure Works

5.34 General sequence of vertical wall and column reinforced concrete construction will follow decking of the slab, installation of lower rebar, installation of upper reinforcement and concrete placing using concrete skips and concrete pumps.

Description of the Building Envelope Works

5.35 The building envelope consists of brickwork, metal and glass cladding and balconies. These activities will follow on from the construction of the reinforced concrete frame and will be carried out in-situ off mast climbers or scaffold.

Craneage

5.36 Saddle and luffing tower cranes will be used to facilitate the construction works. Cranes will not be able to lift a load over the Public Highways and the relevant over sailing license will be obtained prior to using the cranes. Cranes will not over sail any private properties, with or without a load.

Scaffolding

5.37 Scaffold, mast climbers and hoists will be required to complete the facades and dispatch materials internally to complete the internal fit-out.

Description of the Fit-Out Works

5.38 The fit-out works will commence once the area is water-tight, clean and dry. The general sequence of trades will include mechanical and electrical installation and commissioning, drylining, plastering, carpentry, joinery, painting, kitchen installation and flooring.

Description of the External / Landscaping Works

5.39 External works will consist in creating new public realm and hardscaped pedestrianized squares as well as a podium providing a communal garden and shared amenities.

MATERIALS AND RESOURCE USE

Demolition

5.40 Table 5.1 provides an estimate of likely quantities of material likely to be generated as a result of the demolition of the existing buildings and structures on site.

Table 5.1 Demolition Quantities

Demolition Material	Demolition Quantities
Concrete	4000 tonnes
Brick	1200 tonnes
Steel	150 tonnes
General	150 tonnes

5.41 It is anticipated that 100% of the concrete will be reused on site as a piling mat. The material will be stored locally within the site area until required for this purpose.

5.42 The other demolition materials will be removed from site via HGV.

Excavation and Construction

5.43 Estimates of bulk material quantities for key construction components are provided in Table 5.2. Within the mitigation measures section of this chapter, measures have been outlined to minimise the quantity of materials wasted and maximise recycling opportunities.

Table 5.2 Excavation and Construction Quantities

Activity	Estimate of Bulk Quantities
Bulk Excavation	20,000m^3
Arisings & Concrete in Piles	5,000 m^3
Concrete to foundations and substructures	15,000 m^3
Concrete in Superstructures	60,000 m^3
Substructure Rebar	1,500 tonnes
Superstructure rebar	5,000 tonnes
Façade Cladding and Glazing	86,250m^2
Roof finishes	8,000 m^2
Blockwork Walls	110,000 m^2
Internal Walls	87,500 m^2
Ceilings	49,000 m^2
Wall and Floor Finishes	127,000 m^2
Hard and Soft Landscaping	10,500 m^2

5.44 Based on the use of the Building Research Establishment's (BRE) waste benchmarking data it is anticipated that 2,470 tonnes of construction waste will be generated based on a rate of 0.18m3 waste per m^2 and a conversation rate of 0.87 tonnes per m^3.

ROAD VEHICLE MOVEMENTS

5.45 It is anticipated that peak vehicle movements will occur in Year 2019. The anticipated number of vehicle movements during this peak period is 20 per hour (10 vehicles in, 10 vehicles out).

5.46 The works will generate a maximum of 100 vehicle movements per day (50 vehicles in, 50 vehicles out) during the peak works period in 2019.

SITE ACCESS AND EGRESS

5.47 It is anticipated that there will be two entry gates and two exit gates off Parkhouse Street to the main site (phase 2 of works), and one entry/exit gate to the site area to the north of Park House Street (phase 1 of works), as shown in Figure 5.3.

Plant and Equipment

5.48 Consideration has been given to the types of plant that are likely to be used during the demolition and construction works. The plant and equipment associated with the demolition and construction process is set out in Table 5.3.

5.49 Where required, consents will be obtained from any adjoining owners for tower crane over sail. Consents will also be obtained from the LBS where tower cranes over sail the public highway.

Figure 5.1 Access and Egress – updated August 2018

HOURS OF WORK

5.50 The anticipated core working hours for demolition and construction works are:

- 08:00 – 18:30 hours on weekdays;
- 08:00 – 13:00 hours on Saturdays; and
- No working on Sundays, Bank or Public Holidays.

5.51 If works are required outside of the core hours, this will be agreed with the LBS prior to the commencement of such works.

5.52 To maintain the above working hours, the Principal Contractor may be required at certain times a period of up to one hour before and after normal working hours to start and close activities (this will not include works that are likely to exceed agreed maximum construction works noise levels). Specialist Construction operations and deliveries may also be required to be carried outside these core hours in agreement with the LBS and other relevant parties. The Contractors will not carrying carry out physical works during start and close of daily activities.

Table 5.3 Plant and Equipment Schedule

Plant	Stage			
	Demolition	Substructures Civil & External Works	Superstructure	Fit-Out
Tracked / Wheeled 360 Excavators	✓	✓	✓	
Skid Steer Loader	✓	✓		
Breakers	✓	✓	✓	
Hand Held Breaker	✓	✓	✓	
Pulverisers	✓	✓		
Crushers	✓	✓		
Compactors	✓	✓	✓	
Dumpers	✓	✓	✓	
Plate Compactors	✓	✓		
Concrete Crushing Plant	✓	✓		
Scabbler	✓	✓	✓	
Mobile Craneage / Tower Cranes	✓	✓	✓	
Muck Away Trucks	✓	✓		
Concrete Wagons	✓	✓	✓	
Wire Cutters	✓	✓	✓	
Burning / Cutting Equipment	✓			
Wheel Cleaning Plant	✓			
Road Sweeper	✓			
Air Compressors	✓	✓	✓	
Concrete Pump		✓	✓	
Site Mixer		✓	✓	
Vibrating Poker		✓	✓	
Diamond Cutting Tools / Saws	✓	✓	✓	
Power Tools	✓	✓	✓	✓
Hand / Power Tools	✓	✓	✓	✓
Wheel Washing Plant	✓	✓		
Piling Rigs		✓		
Scaffold	✓	✓	✓	
Mobile Access Platforms	✓	✓	✓	✓
Delivery Trucks	✓	✓	✓	✓
Skips and Skip Truck	✓	✓	✓	✓
Forklift Trucks	✓	✓	✓	✓
✓ Indicates that plant/equipment will be used during that stage of works				

CONSTRUCTION SUSTAINABILITY

5.53 An EMP will be developed for the construction works which shall include a strategy for minimising carbon emissions. The EMP will detail the approach for a range of resource efficiency principles including locally sourcing materials and services, auditing materials to demonstrate environment performance (e.g. ISO 14001[3] or equivalent) and options for reuse of supplies. The EMP will be carried out alongside a carbon foot printing procedure that will minimise carbon demands of the development, identify the use of renewable resources of energy and incorporate efficient energy supply and low carbon technologies.

5.54 The following tools will be used to ensure that alternative materials with a recycled content and low embodied carbon are specified where possible:

- The Green Guide to Building Specification[4] will be used to ensure that major building elements are specified which have higher Green Guide Ratings (A-C); and
- WRAP's net waste toolkit[5] will be used to ensure that 'quick wins' and opportunities to increase recycled content are identified at early stages of the design.

5.55 In addition to the EMP, a Construction Logistics Plan (CLP) will be developed that will include details of how construction traffic such as staff and visitors will access the site. Travel to site by car will be discouraged and access for trade vehicles will be monitored and assessed on an individual basis.

5.56 The Principal Contractor will maintain an active dialogue with residents, to ensure that the neighbourhood is not detrimentally impacted by the demolition and construction works.

DEMOLITION AND CONSTRUCTION MANAGEMENT AND MITIGATION

Environmental Management Plan (EMP) & Construction Logistics Plan (CLP)

5.57 A Principal Contractor will be appointed to develop and implement a site specific EMP and CLP covering the demolition and construction works of the development. The planning application is accompanied by an outline Construction EMP and CLP which will both be further developed in due course pursuant to planning conditions.

5.58 The EMP and CLP will provide a framework within which the environmental aspects of the demolition and new construction will be managed. This will identify and summarises issues relevant to the works to be undertaken on site and will contain a set of procedures for various aspects of the works and environmental management, including but not limited to, lighting, material and waste storage and handling, construction traffic management, air quality, noise and vibration, ecology, hazardous materials, emergency planning, water management, UXO and community liaison.

5.59 These plans will set out the management, monitoring auditing and training procedures in place to ensure compliance with the relevant legislation and ensure likely significant effects on the surrounding environment are mitigated.

5.60 The EMP and CLP will be contractual documents outlining the different procedures to be undertaken to complete the various works. Individual trade contractors will incorporate requirements for environmental control, based on good working practice, such as careful programming, resource conservation, adhering to environmental regulation and quality procedures. In this way those involved with the construction works, including trade contractors and site management, will be committed to adopting the agreed best practice and environmentally sound methods.

5.61 The trade contractors will be required to demonstrate how they will meet the requirements of the EMP and CLP and how the potential effects will be mitigated, reduced or minimised.

5.62 The EMP and CLP will include, but will not be limited to, the following main items:

- Programme and details of the works;

[3] International Organization for Standardization (ISO), (2015); ISO 14001:2015 – Environmental Management System
[4] Anderson, J, Shiers, D & Steele, K, (2009); The Green Guide to Building Specification – An Environmental Profiling System for Building Materials and Components, Fourth Edition, BRE Press
[5] WRAP, (2016); [online] Net Waste Tool. Available at: http://nwtool.wrap.org.uk/ToolHome.aspx

- A broad plan of the construction works, highlighting the various stages and their context within the project, including a full schedule of materials and manpower resources, as well as plant and equipment schedules;
- Detailed site layout arrangements (including requirements for temporary works), plans for storage, accommodation, vehicular movements, delivery and access;
- Site working hours;
- Prohibited or restricted operations (locations, hours, etc.);
- Details of plant to be used and associated noise levels;
- Waste management;
- Details of operations that are likely to result in disturbance, with an indication of the expected duration of each activity with key dates, including a procedure for prior notification to the LBS and relevant statutory and non-statutory (including neighbours) parties so that local arrangements can be agreed;
- Potential environmental impacts and Mitigation Measures Register;
- Training to ensure that all workforce and employees are aware of procedures to reduce and mitigate impacts;
- Responsibilities under the LBS Construction Practice;
- A procedure to ensure communication is maintained with the LBS and the local community to provide information on any operations likely to cause disturbance (through, for example, meetings and newsletters);
- Provisions for affected parties to register complaints and the procedures for responding to complaints;
- Provisions for reporting to the LBS;
- Details of access and egress and proposed routes for HGVs;
- An inventory and timetable of dust generating activities, dust control measures, and air quality monitoring; and
- Details of Emergency Incident procedure.

Considerate Contractors / Code of Practice

5.63 The site will be registered with the UK's Considerate Contractors Scheme[6] and any local requirement. This scheme is a voluntary code of practice that ensures contractors and trade contractors carry out their operations in a safe and considerate manner; with due regard to passing pedestrians, road users and neighbouring properties.

5.64 This code of practice seeks to:

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

5.65 The scheme requires contractors and trade contractors to adhere to a code of practice that includes:

- Being considerate to the needs of all those who are affected by the construction process and of its impact to the environment. Special attention to be given to the needs of those with sight, hearing or mobility difficulties;
- Being environmentally aware in the selection and use of resources by paying attention to pollution avoidance and waste management. Use of local resources wherever possible and keeping to a minimum noise from construction activities;
- Keeping the site clean and tidy and well presented to give a positive impression of the industry;
- Being a good neighbour by undertaking full and regular consultation with neighbours regarding site activities from prestart to final handover. Provide site information and viewing facilities where practical;
- Promoting respectable and safe standards of behaviour and dress. Derogatory behaviour will not be tolerated under threat of disciplinary action;
- Being safe. All construction and vehicle operations and vehicle movements to be carried out with care for health and safety of passers-by, neighbours and site personnel;
- Being a responsible employer to the operatives on site and the public. Support staff health and wellbeing and contribute to progressing the industry; and
- Being accountable to the public by providing site contact details and be available to deal with their concerns and develop good local relations.

Management of Trade Subcontractors

5.66 Individual contractor's contracts (for example groundwork's) will incorporate relevant requirements in respect to environmental controls. This will be based largely on the standard of good working practice and statutory requirements and as outlined within the EMP and CLP. All trade contractors will be required to demonstrate how they will adhere to procedures set out in the EMP and CLP, satisfying regulations and best practices regarding environmental control.

5.67 All appointed contractors will be required to produce and submit method statements which address the sequencing, methodology and the controls / precautions which they will use to control and mitigate the risks in respect to the health and safety of those who may be put at risk (i.e. workforce, public and visitors etc.) in connection with their scope of works but also to address the protection and risk mitigation in respect to the environmental aspects which could otherwise result insignificant effects upon the local environment and community (i.e. noise dust pollution, natural habitats etc.).

5.68 The contractor's method statements will be reviewed for adequacy by the principle contractor prior to their being permitted to commence works on site. All contractor method statements will be required to be supported by suitable and sufficient safety, health and environmental risk assessments, which address the relevant impacts, associated with the work activities.

5.69 A Green Procurement Code will be used where practicable and viable to do so.

Traffic Management and Road Cleanliness

5.70 To minimise the likelihood of congestion during the demolition and construction works, strict monitoring and control of vehicles entering and egressing the site will be implemented through the CLP.

5.71 Construction deliveries will also be carefully planned with delivery times agreed with each contractor using a booking system. Delivery schedules will be produced to look at the profiles of up and coming deliveries and to regulate deliveries and eliminate bottle necks.

5.72 Over the 3-year construction period, it is anticipated that there will be two entry gates and two exit gates off Parkhouse Street to the main site (phase 2 of works), and one entry/exit gate to the site area to the north of Park House Street (phase 1 of works).

5.73 Consideration has been given to reducing the number of vehicle movements by:

- The possible reuse of crushed concrete produced during demolition works;
- Reuse of excavated material for filling (based on its suitability);
- The use of reusable hoardings where they can be used in non-aesthetic locations; and
- The potential for the use of prefabrication techniques and modern methods of construction where practical and viable to do so without compromising quality.

[6] CCS, (2017); [online] Considerate Constructors Scheme: Available at: https://www.ccscheme.org.uk/ccs-ltd/what-is-the-ccs2/

5.74 Notices and details of traffic management proposals associated with works to the highway and footpaths will be given under the Highway Acts 1980 and Road Traffic Act 1988.

5.75 Effective wheel cleaning facilities will be provided at the site gates together with a concrete hard standing. Recycled water will be used wherever possible. Supplementary cleaning will be provided as necessary using Effective wheel cleaning facilities will be provided at the site gates together with a concrete hard standing. Recycled water will be used wherever possible. Supplementary cleaning will be provided as necessary using suitable means to keep the surrounding highway clean. Collected debris will be disposed of as controlled waste at a licensed waste disposal facility.

5.76 It is considered that the demolition and construction phase will have the greatest potential to contribute to cumulative effects, specifically in relation to road traffic movements. It is not unusual however for construction to take place on more than one site near each other, particularly in London. Therefore, the Principal Contractor will undertake regular liaison meetings and reviews with neighbouring sites and the LBS to plan works so that they do not cause unnecessary disruption.

Road Closures

5.77 Road closures are not anticipated however Temporary Road Orders (TRO's) may be required along Wells Way and Parkhouse Street.

5.78 TROs will also be required to establish and remove the tower cranes or to deliver large items of building plant and infrastructure items. This will be agreed with the LBS prior to commencement.

5.79 Notices regarding any planned TROs and diversion of either roads or footpaths shall be given by the principal contractor to the LBS, the police, fire brigade and other emergency services sufficiently in advance of the required closure or diversion.

Car Parking and Travel to the Site

5.80 There will be a general policy of not providing any car parking on the site and the site labour force will be encouraged to use public transport. Provisions will be made within the site for essential on-site parking if required for emergencies etc. The use of bicycles as a form of transport will be encouraged with bicycle storage and shower facilities made available on site.

Pedestrian and Cycle Routing and Amenity

5.81 Demolition and construction personnel and visitors to the demolition and construction site will be directed into the site through the access control gate located on Wells Way. There will be dedicated cycle park areas provided.

Artificial Lighting

5.82 Artificial site lighting for the demolition and construction works will be sensitivity positioned and directed, taking into account the proximity of surrounding residential buildings and Burgess Park. Light spill will be avoided so that no likely significant adverse effects are anticipated.

Buried Heritage Assets

5.83 The Museum of London Archaeology (MOLA) has carried out a desk-based Historic Environment Assessment of the site, dated May 2017. The study assesses the likely impact on buried heritage assets (i.e. archaeological remains) from the proposed redevelopment of the site.

5.84 The assessment concludes that the buried heritage assets which may be affected by the proposed redevelopment of the site comprise:

5.85 Buried heritage assets that may be affected by the proposals comprise 19th century structural remains, of low heritage significance. Both constituent areas of the site were developed in the early 19th century and contained houses with associated gardens/yards prior to the Second World War and subsequent redevelopment. Remains such as footings, foundations and potentially cellars are likely to survive. The site was located away from historic centres of settlement and as such is considered to have low potential for remains from other periods. The site is not located within an archaeological priority zone, as designated by the Local Planning Authority.

5.86 The chief past impact on archaeological survival within most of the site is the construction of warehouse and office units in the mid-to-late 20th century (supported on raft/pad foundations). Associated hard landscaping for parking in addition to a small basement covering half of a building footprint within an isolated area of the site will also have affected survival.

5.87 In summary, the assessment has identified the potential for remains of low heritage significance only.

5.88 Whilst field evaluation is unlikely to be necessary, considering the size of the site it possible that an archaeological watching brief would be required during preliminary ground preparation and subsequent foundation construction, which would ensure that any remains are not removed without record.

5.89 This strategy could be refined by the prior archaeological monitoring of geotechnical investigations, which would clarify the nature and depth of deposits: based on the results, it is possible that no further work may be necessary.

5.90 Any archaeological work would be undertaken in accordance with an approved Written Scheme of Investigation (WSI) and would be carried out under the terms of a standard archaeological planning condition set out under the granting of planning consent.

5.91 Based on the results of the Historic Environment Assessment, it is envisaged that the LBS will secure the necessary archaeological watching brief and subsequent reporting on any remains prior to the redevelopment of the site through appropriately worded planning conditions attached to the planning permission. As such, no likely significant adverse effects to buried heritage assets are anticipated.

Ground Conditions and Groundwater

5.92 A Phase 1 Environmental Risk Assessment has been prepared by Groundsure. A summary of the Phase 1 Report is provided below.

Existing On-Site Use

5.93 The application site comprises various warehouse units for storage and commercial usage, some of which are in use, some vacant and some derelict.

5.94 The current site does involve the use and storage of some chemicals. These are principally associated with the car wash and minibus depot where small quantities of oils, antifreeze and detergents are stored.

5.95 Currently, most the application site is covered in worn and broken tarmac hardstanding which does serve to reduce water infiltration and the potential for mobilisation of soil contaminants. It also reduces the potential for current site users to be exposed to the subsurface.

Historical Uses On-Site

5.96 In terms of the application site's history, in the first period of mapping the site was residential becoming increasingly industrial in the early to mid-1900s. After the area had been cleared, possibly because of WWII bomb damage, historical industrial activities include a laundry (c1916) and confectionary factory (c1952). Large volumes of chemicals are likely to have been used and stored for prolonged periods because of these industrial uses. Potential contaminants associated with the historical use of the site would reasonably be expected to include metals, non-metals, extreme pH, ash, coal, TPH and PAH.

5.97 In addition, appreciable thicknesses of Made Ground may exist because of bomb damage and development phases which may give rise to elevated levels of contaminants above, asbestos and soil gas. Hardstanding may have contained spillages and leaks, but localised hotspots are to be expected. Unexploded Ordnance cannot be discounted. A special waste transfer station operated on site between 1994 and 2006.

Historical Uses Off Site

5.98 The former Surrey Canal some 100m north was filled with inert waste c1975. This has some potential to be a source of migrating soil gas, although the intervening distance is used as amenity park so there is significant potential for any gas to vent to air. Further information has been sought from the Environment Agency regarding the off-site infilled canal.

5.99 A number of larger operations have been operational neighbouring the application site. These include an artificial fertiliser plant to the west and council and transport depot to the south. These have the potential for migration of fuel related contamination onto the application site.

Geoenvironmental Conditions

5.100 The application site is underlain by superficial deposits of Kempton Park Gravel in the north and the less permeable Langley Member in the south. The entire site is underlain by Lambeth Group Bedrock. Kempton Park Gravel and Lambeth Beds are both Secondary A aquifers. Although both the Lambeth Group and Kempton Park Gravels are Secondary A aquifers, the Lambeth is unproductive (which given its location to the south of the application site where most of the existing industrial development is located may be helpful if it's sufficiently thick).

5.101 No surface water has been identified on or near the application site. The application site is within a defended flood zone 3.

5.102 Residential properties with gardens adjoin the current site and although hardstanding may reduce the infiltration the possibility for migration of mobile contamination offsite cannot be entirely discounted.

Preliminary Risk Assessment

5.103 A preliminary risk assessment has been undertaken for the site and provides a conceptual model based on a source-pathway-receptor pollutant linkage risk assessment as detailed in the Environment Agency's Model Procedures for the Management of Land Contamination (CLR 11, 2004). A summary of the preliminary risk assessment is provided below (the full preliminary risk assessment will be presented in the Phase 1 Environmental Risk Assessment).

5.104 As noted above, currently, most the application site is covered in worn and broken tarmac hardstanding which does serve to reduce water infiltration and the potential for mobilisation of soil contaminants. It also reduces the potential for current site users to be exposed to the subsurface. As such, in the application site's current form there is limited potential for significant exposure pathways to exist. This is also agreed by the LBS.

5.105 The preliminary risk assessment concludes the following:

- That the existing site uses generate a low-moderate risk to the health of existing site users, existing off-site workers and residents and construction workers;
- That the existing site uses generate a moderate – high risk to the health of future site users in the absence of any further investigation and remediation (as appropriate);
- That there is a low-moderate risk to the existing property on site resulting from potential gas migration from the former infilled canal located 100m from the application site;
- That there is a moderate risk to the existing property on site resulting from migrating hydrocarbons from existing on-site services;
- That there is a moderate - high risk to the existing property on site resulting from onsite made ground; and
- That there is a moderate risk to controlled waters (groundwater) through the possible vertical and lateral migration through the subsurface of mobile chemicals that are currently used on-site.

5.106 Based on the preliminary risk assessment and due to the proposed development including residential uses with resultant potential for exposure to the subsurface, the Phase 1 Environmental Risk Assessment will recommend that an intrusive ground investigation is undertaken across the application site to verify the findings of the preliminary risk assessment, refine the preliminary conceptual site model (if appropriate), and determine the geotechnical parameters for detailed scheme design.

5.107 It is envisaged that several procedures will need to be fulfilled pre-commencement of the works across the application site to ensure the protection of human health and the environment. The procedures are standard practices that need to be undertaken prior to the start of below ground works on any site. It is envisaged that the fulfilment of these procedures would be secured through appropriately worded planning conditions attached to the planning permission. Planning conditions pertaining to the following are anticipated:

- The undertaking of an Unexploded Ordnance (UXO) survey across the site;
- Preparation and execution of a site investigation scheme. The site investigation scheme shall be based on the risks identified in the preliminary risk assessment and shall provide provision for, where relevant, the sampling of vapor, ground gas, surface and groundwater;
- As required, preparation of a remediation method statement which will detail any required remediation works and shall be designed to mitigate any remaining risks identified in the risk assessment;
- As required, the execution of the remediation method statement and preparation of a verification report;
- Definition of the procedures for long term monitoring past the completion of the development works to verify the success of the remediation works;
- Selection of appropriate piling techniques and preparation of a piling method statement so as not to result in any unacceptable risk to groundwater.

Conclusion

5.108 The analysis undertaken to date by Groundsure has provisionally defined the risks in relation to the redevelopment of the site on human health and the environment, including controlled waters.

5.109 The risks are considered however to be adequately managed (through industry recognised standards and best practice measures), and so the redevelopment of the application site is unlikely to generate any significant ground conditions (including groundwater) related environmental effects.

5.110 The risks will be adequately managed so as not to cause unacceptable harm to human health, the development itself, the environment or controlled waters.

5.111 As such, it is considered that the risks and resultant effects are sufficiently well understood and that based on the information currently available, it is likely that the residual effects associated with ground conditions and groundwater would be insignificant.

5.112 Furthermore, several planning conditions attached to the planning permission are envisaged to cater for the further reporting, site investigation works and (if required) remediation prior to the start of works on-site are anticipated.

Unexploded Ordnance (UXO)

5.113 Screening for UXO in areas not covered in any previous munitions clearance surveys will be undertaken by the contractor/s. A watching brief for UXO will be maintained during excavation works.

5.114 The identified risks will be adequately managed (through industry recognised standards and best practice measures) and so no likely significant adverse effects associated with UXO are anticipated.

Water Use and Discharges

5.115 . Discharge arrangements into the foul water sewer will be agreed with Thames Water Utilities Limited (TWUL). All existing utilities will be identified and marked before works commence, with the use of signs to warn of their presence. Damage to existing infrastructure would be immediately repaired, and an Emergency Response Plan will be prepared, and which will set out the procedure to be adopted in the event of a leak or spill.

5.116 All liquids and solids of a potentially hazardous nature (e.g. diesel fuel, oils and solvents) will be stored on surfaced areas, with bunding, in accordance with the EA's requirements.

5.117 The Principal Contractor will ensure that any water that may have come into contact with contaminated materials, will be disposed of in accordance with relevant legislation, and to the satisfaction of the EA and/or TWUL.

5.118 All relevant contractors will be required to investigate opportunities to sustainably manage the use of water, such as:

- Implementation of staff based initiatives such as turning off taps when not in use, both on site and within site offices;
- Use of recycling water systems; and
- Use of a rainwater harvesting system, for use in equipment and vehicle washing, will also be investigated.

5.119 The water consumption throughout the demolition and construction phases will be monitored, either through sub-metering or reading of utility bills, to allow comparison against best practice benchmarks and improvements to be made.

Waste Management

5.120 In line with the five-step Waste Hierarchy, introduced in the EU Waste Framework Directive in 2008[7], a primary aim during demolition and construction works will be to reduce the quantities of waste generated and exported

[7] European Parliament and the Council of the European Union, (2008); 'Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on Waste and Repealing Certain Directives'.

from site. This is consistent with the UK Government's 'Waste Strategy 2000'' As per the five-step Waste Hierarchy, the 'disposal' of waste will be treated as the least attractive waste management measure, with the other steps prioritised from the top to the bottom of the Hierarchy.

5.121 Where waste materials are disposed, the waste or other materials removed from the site will be disposed of in accordance with the requirements of all relevant legislation, including:

- The Environmental Permitting (England and Wales) Regulations 2016[8] ;
- Defra's Waste Management Plan for England (2013)[9]
- The Waste (England and Wales) (Amendment) Regulations 2014[10];
- The Waste Management (England and Wales) (Amendment) Regulations 2006[11];
- Clean Neighbourhoods and Environment Act 2005[12];
- Control of Pollution Act (COPA) 1974[13];
- Hazardous Waste (Amendment) Regulations 2016[14]; and
- Additionally, although The Site Waste Management Plans Regulations 2008[15] were repealed on 1 December 2013, contractors will be encouraged to adopt the principals of these Regulations as good working practice.

5.122 It is anticipated that 100% of the concrete and mainly brick arisings will be reused on site as a piling mat. The material will be stored locally within the site area.

5.123 The remaining other demolition materials will be removed from site.

5.124 Any waste effluent will be tested and where necessary, disposed of at the correctly licensed facility by a licensed specialist contractor/s.

5.125 Waste disposal sites and routes will be identified in consultation with LBS and presented in the CLP. The mode of waste transportation, and alternatives to reduce the potential for likely significant adverse environmental effects, will be considered when assessing the most suitable waste disposal sites and route options for landfill disposal. In line with the 'Proximity Principle' transport times will also be considered, as well as landfill capacity.

5.126 Trade contractors involved in the demolition and construction phase of the Proposed Development will be required to investigate opportunities to minimise and reduce waste generation, by implementing the following, where possible:

5.127 A 'just-in-time' material delivery system to avoid materials being stockpiled;

5.128 Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;

5.129 Attention to material quantity requirements to avoid over-ordering and generation of waste materials;

5.130 Re-use of materials wherever feasible, in line with the Waste Hierarchy, e.g. re-use of concrete for construction/landscaping purposes (concrete will be taken off site for crushing prior to re-use). As detailed in the Directive 2008/98/EC and Defra's 2013 Waste Management Plan for England, there is a 70% target for the re-use, recycling and material recovery of demolition and construction waste. Contractors will be required to maximise the proportion of materials recycled, and in keeping with best practice, contractors will aim to meet the 70% target, where possible;

5.131 Segregation of waste at source where practical;

5.132 Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing);

5.133 Skips will be colour coded and signposted to reduce risk of cross contamination and covered to prevent dust and debris blowing around the site, these will be cleared on a regular basis; and

5.134 Burning of wastes or unwanted materials will not be permitted on-site.

5.135 Intrusive site investigation work will be undertaken to identify any significant areas of contamination. It is likely that the intrusive site investigation work will comprise soil chemical testing to further characterise soil material for disposal, including Waste Acceptance Criteria (WAC) analysis. Where possible, the project will seek to maximise the reuse of suitable soils on-site, to minimise waste disposal.

5.136 The EMP (or equivalent) will contain:

- The classification of all wastes arising from the demolition and construction phase;
- An estimation of the quantity of each waste stream;
- Performance measures and target setting against estimated waste forecasts;
- Measures to minimise waste generation (as per examples provided above);
- Opportunities for reuse and recycling;
- Provision for the segregation of waste streams on site that are clearly labelled;
- Recording of proposed carriers and licenses for disposal sites;
- An audit trail encompassing waste disposal activities and waste consignment notes;
- Measures to avoid fly tipping by others on land being used for construction;
- Measures to provide adequate training and awareness through toolbox talks; and
- Consideration of alternatives means of removing waste other than by road.

5.137 The Principal Contractor will ensure that the EMP (or equivalent) will be kept on-site and will make sure that every other contractor is aware of where the document is kept. All relevant contractors will be required to investigate opportunities to minimise and reduce waste generation.

5.138 Risk of infestation by pests or vermin will be minimised by making adequate arrangements for the disposal of food and other material that may attract pests.

Energy Usage

5.139 All relevant contractors will be required to investigate opportunities to minimise and reduce the use of energy to avoid any likely significant adverse effects associated with excessive energy consumption. Measures to minimise energy usage will include:

- Use of alternative fuels where practicable to do so;
- Selection and specification of energy efficient plant and equipment; and
- Implementation of staff-based initiatives such as turning off plant and equipment when not in use both on-site and within site offices; encouraging a paper-reduced office and encouraging double-sided printing and photocopying.

Air Quality – Dust

5.140 A preliminary Dust Risk Assessment (DRA) has been undertaken of the demolition and construction works associated with the Proposed Development (refer to **Chapter 9: Air Quality of this ES (Volume 1).** The DRA has been undertaken in accordance with the Institute of Air Quality Management (IAQM) guidance and SPG on The Control of Dust and Emissions during Construction and Demolition[16].

5.141 The DRA identifies the following magnitude of dust impact associated with the various work stages:

- the dust emission magnitude class for demolition are considered to be large;
- the dust emission magnitude class for earthworks is considered to be large;
- the dust emission magnitude class for construction is considered to be large; and

[8] HMSO, (2016); The Environmental Permitting (England and Wales) Regulations 2016
[9] Defra, (2013); Waste Management Plan for England
[10] HMSO, (2014); The Waste (England and Wales) (Amendment) Regulations 2014
[11] HMSO, (2006); The Waste Management (England and Wales) (Amendment) Regulations 2006
[12] HMSO, (2005); Clean Neighbourhoods and Environment Act 2005
[13] HMSO, (1974); Control of Pollution Act 1974 (as amended 1989)
[14] HMSO, (2016); Environmental Permitting (Amendment) Regulation 2016.
[15] HMSO, (2008); Contractors will be encouraged to adopt the principals of The Site Waste Management Plans Regulations 2008
[16] Mayor of London, (2014); The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance (SPG) (July 2014).

- the dust emission magnitude class for trackout is considered to be large.

5.142 The area surrounding the site is considered to be of 'high' sensitivity to dust soiling for both the onsite works and due to trackout. In terms of human health, the area surrounding the site is of 'low' sensitivity due to onsite works, and 'medium' sensitivity due to trackout.

The dust emission magnitudes have been combined with the sensitivities of the area in order to assign a risk category to each activity. Table 5.4 presents the risk of impact.

Table 5.4 Summary of Risk of Dust Impacts Without Mitigation

Source	Dust Soiling	Human Health
Demolition	High Risk	Medium Risk
Earthworks	High Risk	Low Risk
Construction	High Risk	Low Risk
Trackout	High Risk	Medium Risk

5.143 The IAQM guidance does not provide a method for assessing the significance of effects before mitigation, and advises that pre-mitigation significance should not be determined. With appropriate mitigation in place, the IAQM guidance is clear that the residual effect will normally be 'not significant'.

5.144 Measures to mitigate dust emissions will be required during the demolition and construction works of the Proposed Development in order to minimise effects upon nearby sensitive receptors.

5.145 The GLA's SPG on The Control of Dust and Emissions During Construction and Demolition[Error! Bookmark not defined.] describes measures that should be employed, as appropriate, to reduce the impacts, along with guidance on what monitoring should be undertaken during the construction phase. This reflects best practice experience and has been used, together with the professional experience of the consultant who has undertaken the dust impact assessment and the findings of the assessment, to draw up a set of measures that should be incorporated into the specification for the works. These measures are described in **ES Volume 3, Appendix Air Quality: Annex 9**.

5.146 The mitigation measures shall be written into a dust management plan (DMP). The DMP may be integrated into a Code of Construction Practice or the Construction EMP, and may require monitoring. The GLA's guidance suggests that, for a High-Risk site, automatic monitoring of particulate matter (as PM_{10}) will be required. It also states that, on certain sites, it may be appropriate to determine the existing (baseline) pollution levels before work begins. However, the guidance is clear that the Local Authority should advise as to the appropriate air quality monitoring procedure and timescale on a case-by-case basis.

5.147 Where mitigation measures rely on water, it is expected that only sufficient water will be applied to damp down the material. There will not be any excessive use of water.

Air Quality – Non- Road Mobile Machinery (NRMM)

5.148 Demolition and construction plant emissions are a small, insignificant and temporary emission sources relative to ambient conditions. However, suitable best practice mitigation measures for site plant will be adhered to as follows to reduce the likelihood of significant adverse air quality effects form NRMM throughout the demolition and construction works:

- No vehicles or plant will be left idling unnecessarily;
- NRMM will be well maintained. Should any emissions of dark smoke occur (except during start up) then the relevant machinery will be stopped immediately, and any problem rectified before being used again;
- Engines and exhaust systems will be regularly serviced according to manufacturer's recommendations and maintained to meet statutory limits/opacity tests;
- Plant will be located away from the boundaries close to residential areas, where possible;
- Use of diesel or petrol-powered generators will be avoided by using mains electricity or battery powered equipment where possible and if safety concerns can be overcome, where possible; and
- All NRMM will meet the emission standards required by the Mayor of London's SPG on The Control of Dust and Emissions during Construction and Demolition.

5.149 Based on the above, no likely significant adverse effects associated with NRMM throughout the demolition and construction works are anticipated.

Noise and Vibration

5.150 The construction Environmental Management Plan (EMP) will have regard to appropriate legislation, guidance and measures to minimise demolition and construction noise and vibration.

5.151 Best Practicable Means (BPM) as defined in Section 72 of the Control of Pollution Act 1974 will be employed to keep the level of noise and vibration generated on site as low as reasonably practicable. Measures to be considered in implementing best practicable means will be consistent with recommendations of British Standard (BS) 5228-1:2009+A1:2014[17][18] and will include but not be limited to:

- Careful programming to ensure activities which may generate significant noise are planned well in advance and SRs are notified of the works;
- Identification and use of low noise techniques. For example, equipment that breaks concrete by munching or similar, rather than by percussion. Where construction plant which is known to generate significant levels of noise then it is to be used sparingly and the construction activity is closely monitored to minimise noise levels;
- All plant brought on to Site should comply with the relevant EC/UK noise limits applicable to that equipment or should be no noisier than would be expected based on the noise levels quoted in BS 5228. Plant should be properly maintained and operated in accordance with manufacturers' recommendations;
- Where feasible, all stationary plant should be located so that the noise at all occupied SRs is minimised and, if practicable, every item of static plant when in operation should be sound attenuated using methods based on the guidance and advice given in BS 5228 (e.g. local screening);
- Items of plant on the Site operating intermittently should be shut down in the intervening periods between use;
- Adoption of a noise monitoring regime and the establishment of noise Action Levels in consultation with LBS, above which consideration would be given to the use of alternative techniques and/or other means of controlling noise levels;
- If appropriate, agreement with the LBS through a Section 61 Application (under the of the Control of Pollution Act 1974) on the details of the work to be carried out, the time of the works and details of any measures to reduce the noise from the works;
- Use of hoarding to the required height and density appropriate to the noise sensitivity of the site; and
- Implementation of a Construction and Logistics Plan (CLP) to pre-plan and manage traffic associated with the works to minimise disturbance to SRs. The CLP would include aspects such as operation of a 'Just in Time' policy for the delivery and supply of materials for the work to minimise the disruption to the local community.

5.152 Further details can be found in Chapter 8: Noise and Vibration of this ES (Volume 1).

Ecology and Invasive Species

5.153 The requirements of the Wildlife and Countryside Act 1981 (as amended)[19] the Countryside and Rights of Way Act 2000[20], the Conservation (Natural habitats etc.) Regulations 1994[21], and other relevant legislation and policy guidance in respect of areas of nature conservation interest and protected species will be complied with.

5.154 All reasonably practicable measures will be taken to minimise harm and disturbances to wildlife or their habitats caused by any work, light, noise, dust and vibration.

[17] BSi, (2009); BS 5228-1:2009+A1:2014. Code of practice for noise and vibration control on construction and open sites
[18] BSi, (2014); BS 5228-2:2009+A1:2014. Code of practice for noise and vibration control on construction and open sites
[19] HMSO, (1981); Wildlife and Countryside Act 1981 (as amended)
[20] HMSO, (2000); Countryside and Rights of Way Act 2000
[21] HMSO, (1994); The Conservation (Natural Habitats, &c.) Regulations 1994

5.155 To mitigate potential impacts upon breeding birds, the clearance of the vegetation and buildings will be undertaken outside the bird-breeding season (i.e. between August and February inclusive). However, should this not be practicable, and if it is necessary to undertake these works between the months of March to July inclusive, then a survey for all nesting birds will be undertaken by an experienced ornithologist, prior to clearance, to check for the presence/absence of any bird's nests.

5.156 In the unlikely event bats are encountered during any of the proposed works, then all works would be halted immediately, and advice sought from a licensed bat ecologist.

5.157 A single stand of Japanese knotweed, listed on schedule 9 of the Wildlife and Countryside Act 1981 (as amended)[22], is present in the site on the eastern boundary.

5.158 Appropriate site management and waste disposal will be undertaken in accordance with relevant management guidance to prevent the spread of invasive plant species.

5.159 Based on the above measures, no likely significant adverse effects to ecology or invasive species (spread of) are anticipated.

Health & Safety and Emergency Response

Site Security

5.160 Operatives and any site visitors will need to access the site through a security checkpoint / turnstile and be required to sign in at the start of the day and sign out when leaving. In the unlikely event of a need to evacuate the site, this log would be used to account for all personnel.

Emergency and Fire Routes

5.161 Before construction works commence on site, emergency procedures and fire exit routes from the site will be identified within the fire safety plan. Throughout the course of the construction works these will be regularly inspected and maintained. The fire safety plan will be updated regularly as construction works progress, particularly as areas become progressively completed, and as the means of escape from the evolving building change. Fire alarm points and extinguishers will be situated at each floor of the buildings at the stair cores and within main corridors.

5.162 Site management, operatives and any visitors to the site will undergo an induction to ensure they are briefed on what actions to take in case of an emergency.

[22] HMSO, 1981; 'Wildlife and Countryside Act.'