B&Q Cricklewood
ES Volume I

Chapter 6: Demolition and Construction

Montreaux Cricklewood Developments Ltd

July 2020

Table of Contents

6. Demolition and Construction 6-1
6.1 Introduction 6-1
6.2 Programme of Works 6-1
6.3 Description of Works 6-4
6.4 Construction, Excavation and Demolition Waste 6-11
6.5 Hours of Works 6-14
6.6 Traffic Management 6-14
6.7 Construction Environmental Management Plan (CEMP) 6-19

Figures

Figure 6-1 Indicative Construction Programme 6-2
Figure 6-2 Indicative Phasing Plan 6-3
Figure 6-3 Master Logistics Plan 6-6
Figure 6-4 Demolition Plan 6-7
Figure 6-5 Site Accommodation and Materials Storage Logistics Plan 6-8
Figure 6-6 Crane Logistics Plan 6-9
Figure 6-7 Hoist Logistics Plan 6-10
Figure 6-8 Estimated Monthly Vehicle Movements (EMVM) 6-15
Figure 6-9 Local Traffic Logistics Plan 6-16
Figure 6-10 Remote Logistics Plan 6-17

Tables

Table 6-1 Estimated Enabling Works and Demolition Works Waste 6-11
Table 6-2 Estimated Construction Works Waste 6-12
Table 6-3 Indicative Plant and Equipment 6-13

6. Demolition and Construction

6.1 Introduction

6.1.1 This chapter of the ES describes the demolition and construction works to be undertaken for the Proposed Development and outlines the environmental management measures committed to by the Applicant to manage the potential environmental effects associated with the construction and demolition activities (collectively referred to as 'demolition and construction phase' effects).

6.1.2 AECOM Infrastructure & Environment UK Limited (AECOM) has prepared this chapter in conjunction with the Applicant and members of the wider design team including Stace LLP, WWA Cost Consultants and Entran Ltd. (refer to Table 1-1 within *Chapter 1: Introduction*). The methodology for construction is necessarily broad at this stage and will be subject to modification during future detailed construction planning and Reserved Matters Applications. However, it is considered that the assessment of the demolition and construction phase effects set out in this ES are based on reasonable assumptions related to the construction programme and the collective experience of the Applicant and wider design team from working on similar projects of this scale and nature.

6.1.3 This chapter and the ES outline mitigation measures for the management of potential demolition and construction phase effects which will need to be included within a Construction Environmental Management Plan (CEMP) (or equivalent) that will be prepared by the demolition and construction contractors with further Reserved Matters Applications for the Proposed Development prior to the start of works.

6.1.1 The assessment of potential environmental effects arising from the demolition and construction works identified within this chapter is presented in each of the technical chapters of this ES (i.e. *Chapters 8 – 16* and *ES Volume II: TVBHIA*). Where required, the environmental management and mitigation measures applicable to the demolition and construction phase are further discussed within the respective technical chapters (i.e. *Chapters 8 –16* and *ES Volume II: TVBHIA*). A summary of all mitigation measures is provided in *Chapter 17: Summary of Mitigation*.

6.2 Programme of Works

6.2.1 An indicative development programme has been prepared in order to enable assessment of the likely environmental effects during the demolition and construction phase of the Proposed Development. The indicative programme is based on a number of assumptions, including the likely phasing of the demolition and construction works technical considerations and professional experience.

6.2.2 The Proposed Development has been divided into 3 Phases with Development Parcels A and B located in Phase 1, Development Parcels C in Phase 2, and Development Parcel D in Phase 3, which will be built out separately, as shown in Figure 6-1. It is noted that prior to the start of construction, the phasing of individual Development Parcels and areas of public realm to be delivered with each Parcel will be confirmed.

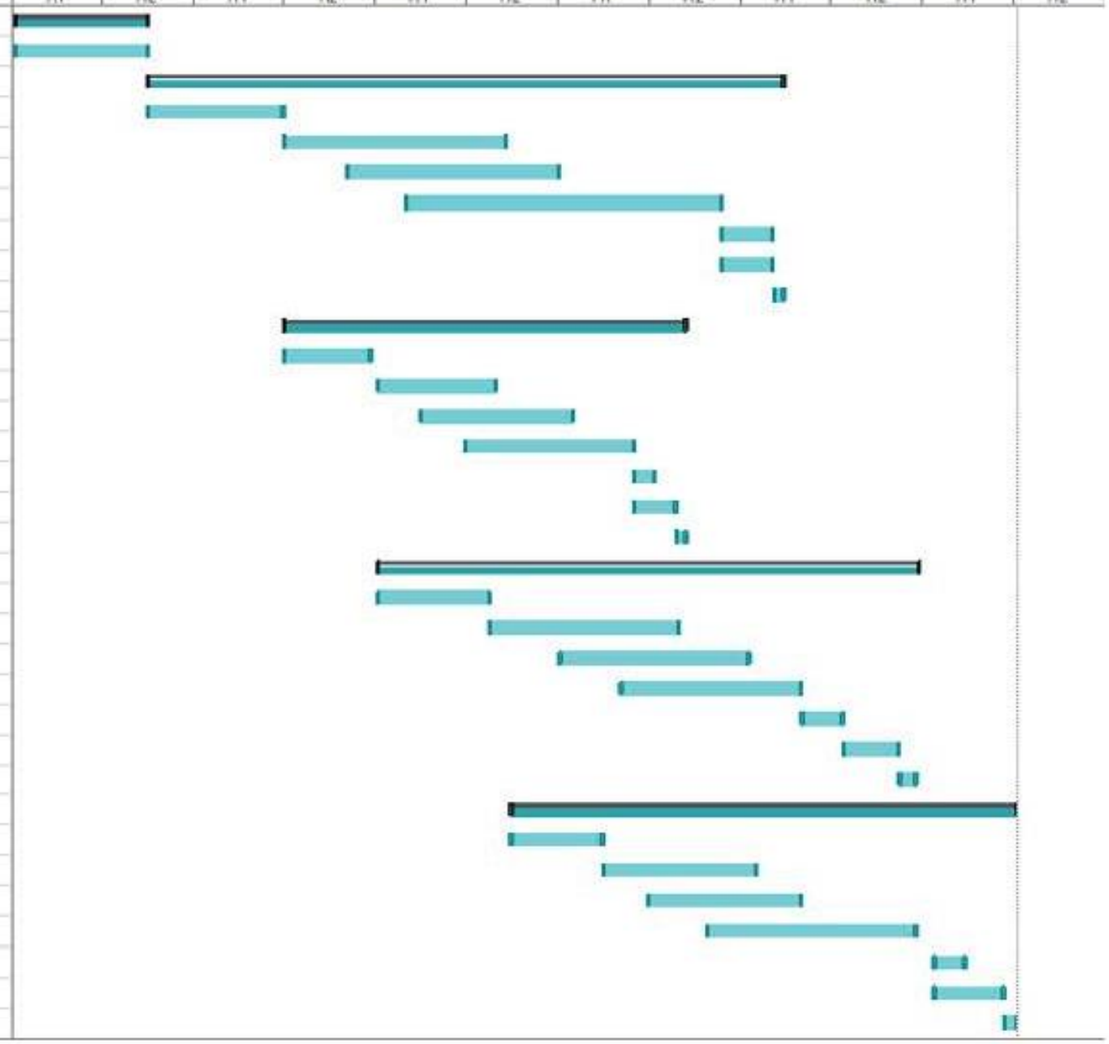
6.2.3 For the purpose of the EIA, and as detailed in Figure 6-2, it has been assumed that the demolition and construction works will be undertaken from January 2021 to July 2026, each phase taking two to three years to complete. For the purposes of this Environmental Statement it has been considered that early phases of the Proposed Development may be occupied during the construction of latter phases and therefore a qualitative assessment has been undertaken and included within the technical chapters. Whilst the phasing of the Proposed Development is indicative the effects on early occupants would not change if the order of phasing varied.

Figure 6-1 Indicative Construction Programme

stace
construction and property consultants

Cricklewood Lane - Barnet
Summary - Draft Construction Programme
December 2019

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Demolition**	**38 wks**	**Mon 11/01/21**	**Fri 01/10/21**	
2	Demolition and Site Clearance	38 wks	Mon 11/01/21	Fri 01/10/21	
3	**Block A - Blocks A1, A2, A3, A4 - 369 Units (6-25 Storeys)**	**182 wks**	**Mon 04/10/21**	**Fri 28/03/25**	
4	Foundations	39 wks	Mon 04/10/21	Fri 01/07/22	
5	RC Frame Superstructure	64 wks	Mon 04/07/22	Fri 22/09/23	
6	External Cladding	61 wks	Mon 07/11/22	Fri 05/01/24	
7	Internal Fit Out	90 wks	Mon 06/03/23	Fri 22/11/24	
8	Test Comissioning	15 wks	Mon 25/11/24	Fri 07/03/25	
9	External Works and Landscaping	15 wks	Mon 25/11/24	Fri 07/03/25	
10	Handover	15 days	Mon 10/03/25	Fri 28/03/25	
11	**Block B - Blocks B1, B2, B3 - 170 Units (5-12 Storeys)**	**115 wks**	**Mon 04/07/22**	**Fri 13/09/24**	
12	Foundations	25 wks	Mon 04/07/22	Fri 23/12/22	
13	RC Frame Superstructure	34 wks	Mon 09/01/23	Fri 01/09/23	
14	External Cladding	44 wks	Mon 03/04/23	Fri 02/02/24	
15	Internal Fit Out	48 wks	Mon 03/07/23	Fri 31/05/24	
16	Test Comissioning	6 wks	Mon 03/06/24	Fri 12/07/24	
17	External Works and Landscaping	12 wks	Mon 03/06/24	Fri 23/08/24	
18	Handover	3 wks	Mon 26/08/24	Fri 13/09/24	
19	**Block C - Blocks C1, C2, C3, C4 - 332 Units (8-18 Storeys)**	**155 wks**	**Mon 09/01/23**	**Fri 26/12/25**	
20	Foundations	32 wks	Mon 09/01/23	Fri 18/08/23	
21	RC Frame Superstructure	54 wks	Mon 21/08/23	Fri 30/08/24	
22	External Cladding	54 wks	Mon 08/01/24	Fri 17/01/25	
23	Internal Fit Out	52 wks	Mon 06/05/24	Fri 02/05/25	
24	Test Comissioning	12 wks	Mon 05/05/25	Fri 25/07/25	
25	External Works and Landscaping	16 wks	Mon 28/07/25	Fri 14/11/25	
26	Handover	5 wks	Mon 17/11/25	Fri 19/12/25	
27	**Block D - Blocks D1, D2, D3 - 229 Units (3-16 Storeys)**	**145 wks**	**Mon 02/10/23**	**Fri 10/07/26**	
28	Foundations	26 wks	Mon 02/10/23	Fri 29/03/24	
29	RC Frame Superstructure	44 wks	Mon 01/04/24	Fri 31/01/25	
30	External Cladding	44 wks	Mon 01/07/24	Fri 02/05/25	
31	Internal Fit Out	60 wks	Mon 28/10/24	Fri 19/12/25	
32	Test Comissioning	9 wks	Mon 26/01/26	Fri 27/03/26	
33	External Works and Landscaping	20 wks	Mon 26/01/26	Fri 12/06/26	
34	Handover	4 wks	Mon 15/06/26	Fri 10/07/26	



Jewson

Railway Terraces

Kara Way Playground

Beacon Bingo

Depot Approach

Cricklewood Broadway

Claremont Road

Cricklewood Station Platform

Cricklewood Green

Cricklewood Lane

Oak Grove

Elm Grove

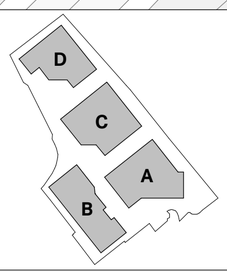
D

C

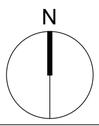
A

B

Keyplan



North



Notes:
1. Do not scale
2. Contractor to Check all dimensions and report omissions and errors to the Architect
3. EPR Architects accepts no liability for use of this drawing by parties other than the party for whom it was prepared or for purposes other than those for which it was prepared.
4. This drawing is issued in dwg/dgn format as an uncontrolled version to enable the recipient to prepare their own documents/drawings/models for which they are solely responsible. This drawing is based on project information current at the time of issue. EPR Architects Limited accepts no liability for any alterations or additions to or discrepancies arising out of any change to such project information that occurs to the information after it is issued by EPR Architects Limited.
5. This drawing does not contain shared coordinates and is not issued for coordination purposes.

No.	Revision	Date	Initial	Chk'd
1	For Approval	200731	SN	JE

- Site and operational access required for Phase 1
- Phase 1 – Development Parcels A and B
- Phase 2 – Development Parcel C
- Phase 3 – Development Parcel D

NOTE :
- All site boundaries and legal demises are indicative and shown for information only, based on desktop studies of land registry and record information, and are subject to survey and verification on site.

EPR Architects
30 Millbank, London SW1P 4DU
+44(0)20 79327600
www.epr.co.uk

B&Q Cricklewood Lane
NW2 1ES

Parameter Plan
Phasing

Scale @A1	Status	Suitability	Revision
1:500	For Approval	**S4**	**P1**

Project Code	Originator	Zone	Level	Type	Role	Class.	Number
10965	EPR	XX	XX	DR	A	TP	0105

6.3 Description of Works

6.3.1 The following sections provide a description of the works involved in the demolition and construction phase of the Proposed Development.

Demolition/Site Clearance

6.3.2 Prior to the start of demolition, the enabling works on Site are likely to comprise:

- Installation of hoarding around the entire Site Boundary;
- Installation of an access gate;
- Welfare set up;
- Wheel wash installation;
- Additional site investigations, if necessary; and
- Installation of environmental monitoring equipment.

6.3.3 The Site clearance will include removal of all but one of the existing structures on-site within the Site boundary. The structures to be removed are shown Figure 6-4. Vegetation clearance will be undertaken outside the bird nesting season (February to August), if possible, or vegetation will be checked for nesting birds by a suitably qualified ecologist prior to removal, if clearance is required during the bird nesting season.

6.3.4 Before demolition commences, protective screens and scaffolding will be installed, as required. Following the installation of these measures, long reach 360' excavators will progressively remove the superstructures of existing buildings on site. Measures to minimise dust during this period are likely to include the following:

- Excavators mounted with concrete pulveriser tools and hydraulic hammers, sized appropriately to the task; and
- Water suppression applied at source by high powered hoses. A further mist creating water cannon will maintain a blanket of mist over the entire demolition area, as an additional precautionary measure.

6.3.5 Demolition arisings will be processed on-site to maximise recycling and reuse and to minimise the need to take material off site, thus reducing the number of Heavy Goods Vehicles (HGV) trips entering and departing the Site. Any waste steel will be extracted for recycling off-site and a crusher will be used to process bulk material, foundations and hard standing for re-use on-site, where possible, for use as back fill and piling mats, reducing the amount of new materials needed for construction.

6.3.6 Following the removal demolition works, existing utilities will be diverted, and the Site will be remediated to bring the existing brownfield areas to an acceptable standard for new development (refer to Chapter 12: Ground Conditions and Contamination). Whilst further investigation will be required to develop a detailed method statement, it is anticipated that the existing foundations will be removed, this material will be crushed on site for re use a piling mat and laid following the completion of the formation level excavation.

6.3.7 Site Access & Site Construction Roadways. As the site is mainly covered by Car parking Areas and roads to access and egress the site, it would be prudent for the Main Contractor to retain sections of these roads to the configurations/areas as noted on the Site Logistics Plans for use a temporary construction roadway. This would significantly reduce the amount of dust arising from construction traffic on the site during construction operations.

Piling and Substructure

6.3.8 Following remediation and the removal of any existing foundations and utilities, a piling mat will be installed. The bearing piles will be installed with a suitably sized Continuous Flight Auger (CFA) piling

rig, or equipment of a similar scale. This will be serviced by a 360' excavator and a crane to lower reinforcement cages and place concrete via a concrete skip.

6.3.9 Pile caps will be formed, and all underground drainage will be installed prior to casting the ground level slab.

Super Structure

6.3.10 Following completion of all substructures, tower crane bases will be installed, and tower cranes will be erected. (See Appendix 6.5 Crane Logistics Plan). Static concrete pumps will be positioned to service all superstructure concrete pours. These will be appropriately positioned and acoustically housed to minimise adverse noise impacts to local residential receptors, with dedicated washout facilities.

6.3.11 The main cores will be built up, followed by horizontal slabs and vertical elements, formed using proprietary false work systems, and serviced by a tower crane. A concrete placing boom will assist the tower crane, pumping concrete from a static pump position.

6.3.12 At height, a full protective screen is likely to be erected to totally enclose the buildings' structural formation – this will encompass three full levels and will move up the building as it is constructed. All Building Parcels will have full screens.

6.3.13 Slab edge protection will be installed progressively as the building rises and will be left in place until removed by façade contractor. Reinforcement will be delivered in flat bed lorries and off loaded using the tower cranes. Materials will be lifted into position directly to reduce on-site storage.

Envelope

6.3.14 The façades will be constructed with a light weight steel metsec frames to support the windows for the earliest watertight envelope, followed by brick and cladding. Installation of the façade elements will be via temporary scaffold with elements distributed to the required level via hoists and cantilever loading platforms, where they will be craned out and installed on to the façade.

6.3.15 Balconies will be installed on to preformed spigots attached to the structure following the completion of the façade and removal of the scaffold.

6.3.16 Roof finishes will be applied to a water proofed slab, with final façade capping to close the façade system. Ground level commercial glazing will follow the main façade works to seal the building completely. Roof landscaping will be installed following completion of all façade installations.

Fit-Out

6.3.17 The fit-out stage will include the installation of floors and suspended ceilings, the fitting of mechanical and electrical services and the finishing of internal surfaces.

Public Realm

6.3.18 The public realm works will include the landscaping of the Site, as set out in the Design and Access Statement and the indicative Landscape Strategy. This will incorporate planting of trees and other vegetation, as well as the installation of hard landscaping, roads and street furniture.

Figure 6-3 Master Logistics Plan

Figure 6-4 Demolition Plan

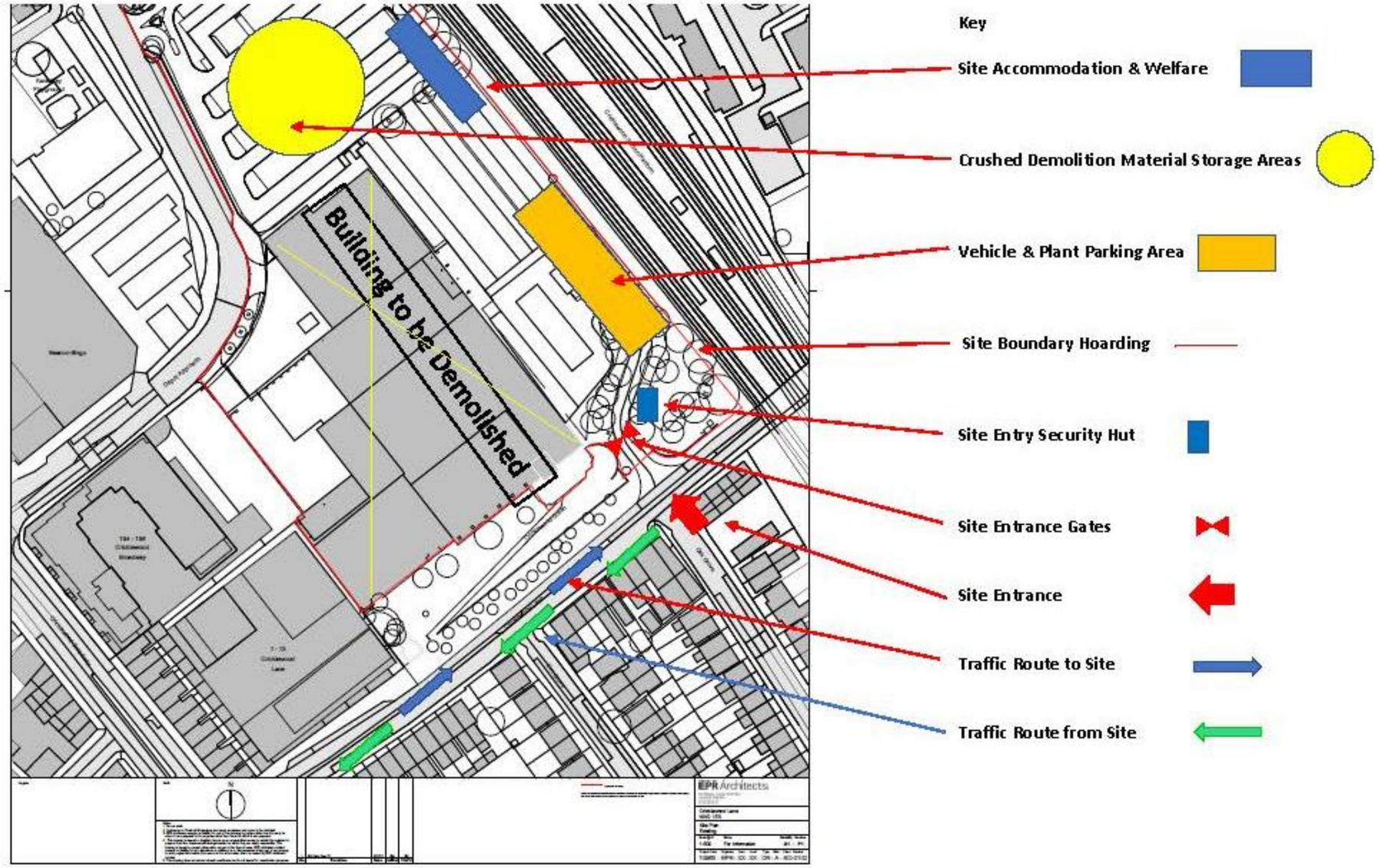


Figure 6-5 Site Accommodation and Materials Storage Logistics Plan

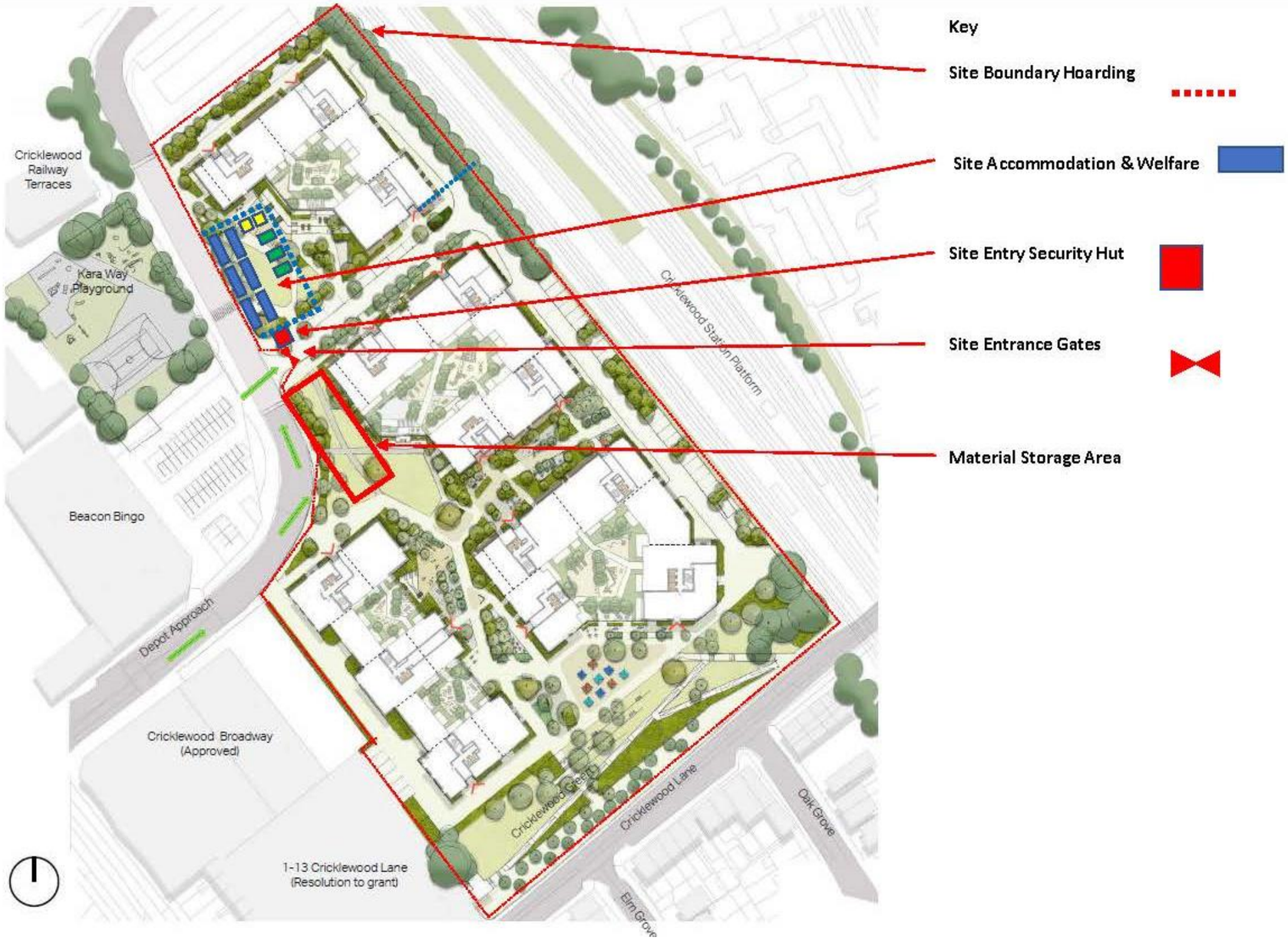
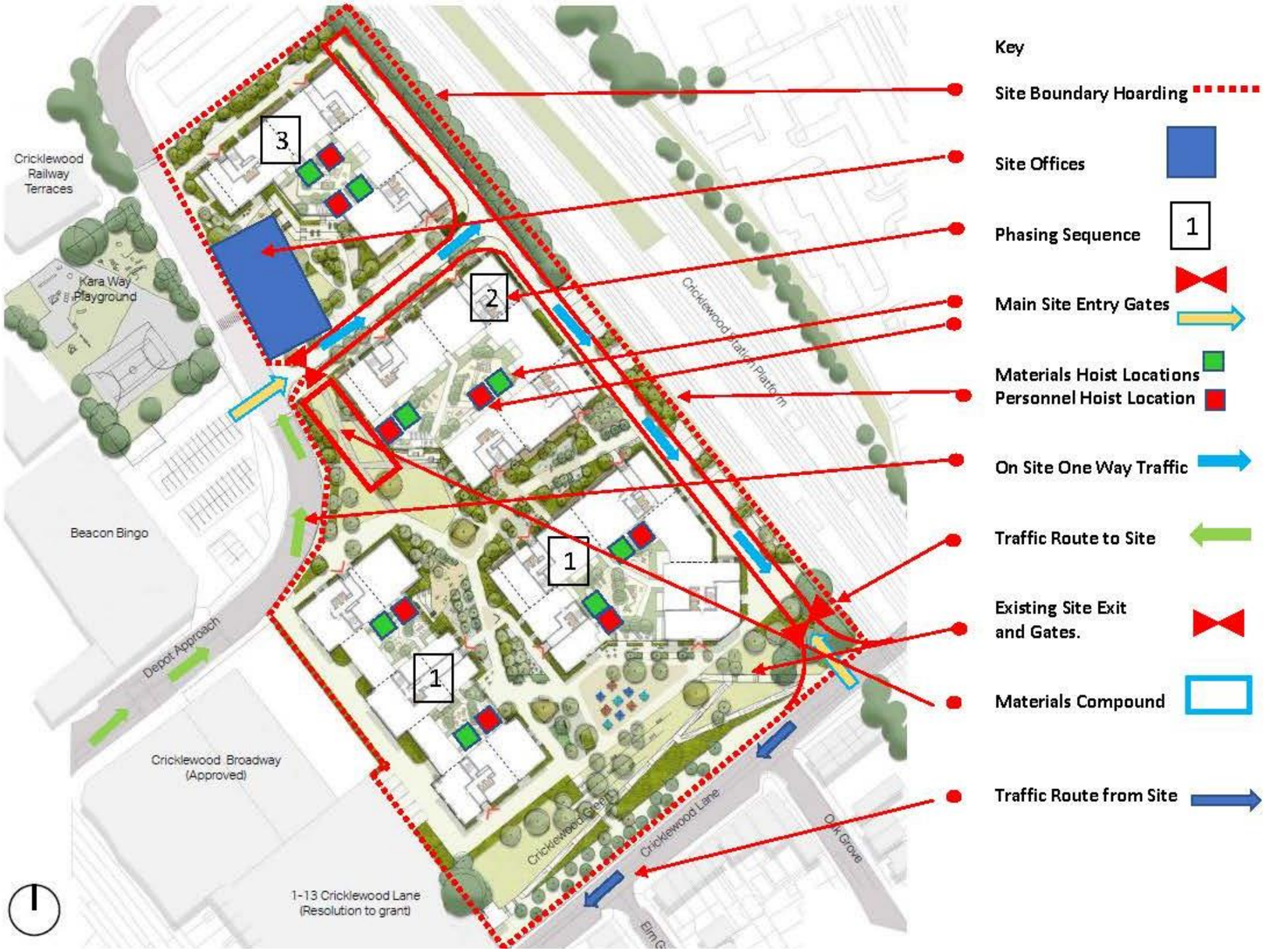


Figure 6-6 Crane Logistics Plan

Figure 6-7 Hoist Logistics Plan



6.4 Construction, Excavation and Demolition Waste

6.4.1 Waste arising from Site clearance, earthworks and installation of foundations is expected to comprise of demolition rubble, vegetation, topsoil, and arisings from piling activities.

6.4.2 Any clean excavated material that cannot be reused on-site will be removed by licensed waste carriers and sent for reuse at another development site or for disposal at appropriately licensed facilities (these are expected to be inert waste landfill sites).

6.4.3 Waste expected to be generated during construction includes packaging (including wooden pallets, cable drums etc), plasterboard, timber, cement and plaster, insulation, metal, dry concrete products (blocks, slabs etc), plastic products, ceramic material and landscape materials. Other waste types including doors, frames, partitioning, fixtures and fittings etc. may also be generated. All relevant contractors will be required to investigate opportunities to minimise and reduce waste generation in line with WRAP's 'Halving Waste to Landfill'initiative by:

- Agreeing with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
- Implementing a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;
- Using standard size components in design detailing to eliminate risk at source where possible to do so;
- Paying attention to material quantity requirements to avoid over-ordering and generation of waste materials;
- Re-using materials wherever feasible, e.g. re-use of excavated soil for landscaping (the Government has set broad targets of the use of reclaimed aggregate, and in keeping with best practice, contractors will be required to maximise the proportion of materials recycled);
- Segregating waste at source where practical;
- Re-using and recycling 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);
- Colour coding and signposting skips 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
- Not burning waste or unwanted materials on-site.

6.4.4 Anticipated volumes of demolition waste at the Site are shown in Table 6-1, and equate to a total 2,295 tonnes.

Table 6-1 Estimated Enabling Works and Demolition Works Waste

Waste Stream	Estimated Quantity (Tonnes)
Concrete	1500
Steel	100
General Waste	500
Bricks	100
Electrical	5

Waste Stream	Estimated Quantity (Tonnes)
Hazardous	TBC
Plasterboard	50
Timber	40
Total	**2,295 - Approx.**

6.4.5 The relevant contractors will be required to carry out works in such a way that, as far as is reasonably practicable, the amount of spoil and waste to be disposed of by landfill is minimised and that any waste arisings from the Site are transported and disposed of in accordance with relevant legislation including the following:

- The Environmental Permitting (England and Wales) Regulations 2018 (as amended);
- The Waste (England and Wales) Regulations 2011 (as amended);
- The Waste Management (England and Wales) Regulations 2006; and
- Clean Neighbourhoods and Environment Act 2005.

6.4.6 In addition, the contractors, in consultation with the LBB, and the Environment Agency, will identify disposal sites and routes. When assessing the most suitable option for landfill disposal, the mode of waste transportation and alternatives to reduce adverse environmental effects, transport times and landfill capacity will be considered.

6.4.7 Due to the fact that waste generated during construction will be minimised and reused wherever feasible, there is not predicted to be any significant effect upon landfill capacity as a result of the construction waste volumes.

6.4.8 The Principal Contractor will be required to prepare a Construction Resource Management Plan (CRMP) (or equivalent) in line with the Building Research Establishment Environmental Assessment Methodology (BREEAM) UK New Construction Technical Manual (2014) (refer to BREEAM Pre-Assessment submitted with the planning application). The CRMP will aim to promote the reuse, recycling and recovery of waste rather than disposal, thereby improving efficiency and profitability; reduce fly-tipping; and increase environmental awareness.

6.4.9 The CRMP will set out the principles for construction waste management, identify measures to minimise waste by design, estimate construction waste quantities, set targets for waste minimisation and a framework for construction waste monitoring that the Principal Contractor will be required to implement on Site. Furthermore, the CRMP will set out measures required for compliance with waste legislation and relevant planning policies.

Table 6-2 Estimated Construction Works Waste

Estimated Construction Waste Arisings Waste Stream	Estimated Quantity (tonnes)
Packaging	500
Plaster / Cement	1250
Miscellaneous	2500
Timber	700
Concrete	14,000

Estimated Construction Waste Arisings Waste Stream	Estimated Quantity (tonnes)
Insulation	3000
Metal	2500
Plastics	1750
Total	**26,200**

Plant and Equipment

6.4.10 The assumed plant and equipment associated with each key phase of the demolition and construction process are set out in Table 6-3 as follows.

Table 6-3 Indicative Plant and Equipment

Plant and Equipment	Enabling Works	Demolition and Site Clearance	Earth works and Substructure	Super Structure	Roofing and Cladding	Fit-out & Lift Install
Tower cranes				✓	✓	
Passenger/goods hoists				✓	✓	✓
Excavators and breakers	✓	✓	✓			
Cutters, drills and small tools	✓	✓	✓	✓	✓	✓
Crushers		✓	✓			
Floodlights		✓	✓	✓	✓	
Fork lift truck			✓	✓	✓	✓
Hydraulic benders and cutters			✓	✓		
Lorries and Vans	✓	✓	✓	✓	✓	✓
Mobile Cranes			✓	✓	✓	✓
Mobile Lorry mounted concrete pump			✓	✓		
Poker vibrator			✓	✓		
Ready mixed concrete lorry			✓	✓		

Plant and Equipment	Enabling Works	Demolition and Site Clearance	Earth works and Substructure	Super Structure	Roofing and Cladding	Fit-out & Lift Install
Concrete splitters/concrete saws		✓	✓	✓		

6.5 Hours of Works

6.5.1 It is anticipated that the core working hours for both the demolition and construction phases would be as follows, with no working normally undertaken on Sundays or Bank Holidays:

- 08:00 – 18:00 weekdays; and
- 08:00 – 13:00 Saturday.

6.5.2 Further to this it is noted that there may be the requirement for some out of hours works (e.g. for pouring piles) that will continue to 23:00, in exceptional circumstances only , subject to prior approval from the LBB. All works will be within the agreed hours, unless or in the event of exceptional circumstances such as;

- An emergency or health and safety issue demands continuation of works (e.g. if safety hoarding is dislodged and needs to be replaced);
- Works are being carried out within the containment of the building envelope;
- Completion of an operation that would otherwise cause greater interference with the environment / general public if left unfinished;
- A requirement to complete concrete pours due to unforeseen overruns caused by, for example, offsite batching plant issues and traffic delays; and/or
- Weekend periods when partial road closures may be required for works, such as tower crane installation and decommissioning, and craning plant onto roof spaces, so not as to disrupt traffic during a weekday when the area will be busier.

6.5.3 Although night-time working will not normally be undertaken, it is possible that some deliveries may be required at night and that certain works may be undertaken during this period. Any night-time work activities would be discussed and agreed with the LBB and carried out subject to reasonable notice.

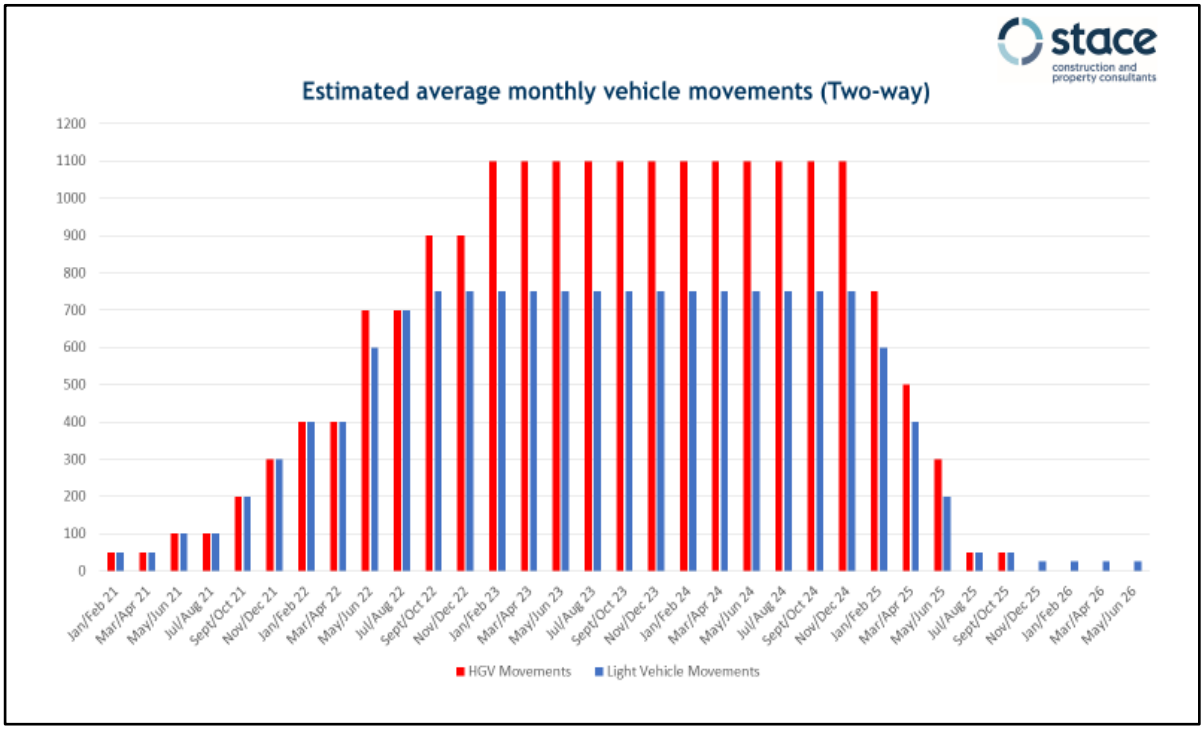
6.5.4 It is recognised that approval from the LBB will be required for any works that need to be undertaken outside of these permitted hours, and that the LBB might may vary these hours (by agreement) where the works are in close proximity to sensitive businesses and/or residential properties.

6.6 Traffic Management

6.6.1 It is anticipated that the largest vehicle accessing the Site will be an articulated lorry. As the Site and surrounding road network is capable of receiving deliveries from large vehicles, it is not deemed necessary for large loads to be broken down into smaller delivery vehicles prior to being delivered to Site. This will reduce the overall volume and impact of deliveries upon the road network and neighbours. It may be necessary to limit the use of large vehicles during peak commuting times.

6.6.2 Figure 6-8 shows the Estimated Monthly Vehicle Movements (EMVM) associated with each phase of works at the Site.

Figure 6-8 Estimated Monthly Vehicle Movements (EMVM)



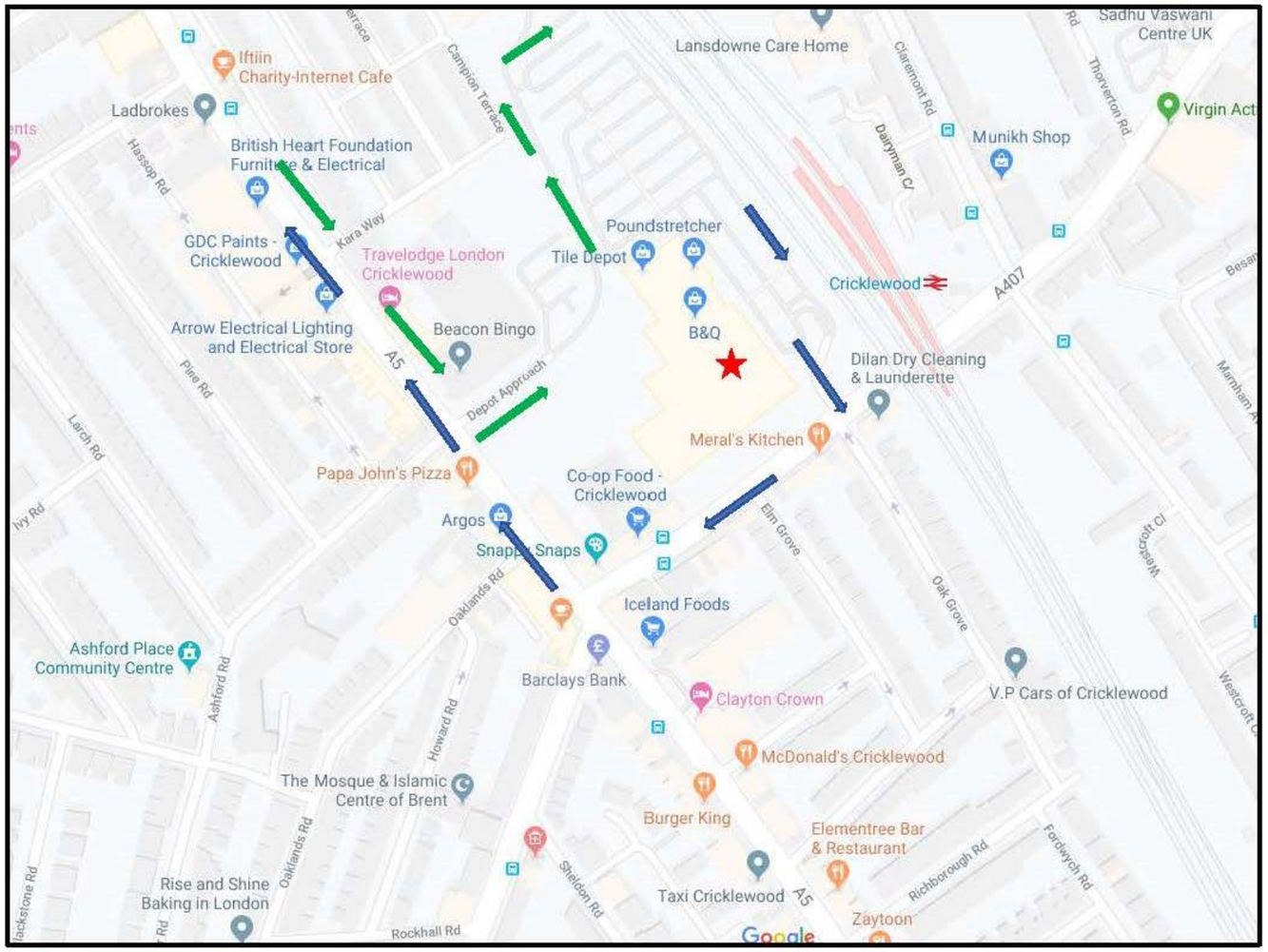
6.6.3 The estimates of the construction material quantities, together with the outline construction programme, have been used to estimate the peak vehicle movements over the 66 months demolition and construction period. Construction knowledge and historic data have been applied to the anticipated programme and construction methodology (as summarised within this ES chapter) to develop the estimates below. During the peak months, there will be approximately 1,100 construction HGV vehicles accessing the site per month and approximately 750 LGV vehicles per month. On this basis, the average number of vehicles in a peak month is approximately 40 HGV (two way) vehicles per day and approximately 30 LGV (two way) vehicles based on a 5.5 day working week.

6.6.4 A Construction Traffic Management Plan (CTMP), will be conditioned as part of the planning permission to ensure that construction traffic is appropriately managed. This will be agreed with the LB Barnet Highways Department and the Local Police Traffic Section. Oversize vehicles will be transported to site at the hours agreed with the local Traffic Police Department. These will normally be transported in the early hours of the morning to avoid traffic delays and disruption.

6.6.5 Access routes to and from the Site which will be utilised by HGVs will be agreed with the LBB prior to the start of the demolition and construction works. At this stage, it is anticipated that the strategic road network will be used as far as possible by construction traffic, with vehicles assumed to access the site from the east and west along the A406 and into Barnet via the A5 and avoiding the most congested areas of Barnet.

6.6.6 The exact location of site accesses for demolition/construction vehicles is yet to be determined. Any local traffic management measures will be agreed with LBB and TFL prior to the start of the demolition and construction works. At this stage it is anticipated that the strategic road network will be used as far as possible by construction traffic, with vehicles assumed to access the Site from east and west along the A406 and into Cricklewood Lane via the A5. (refer to *ES Volume I Chapter 15 Traffic and Transport* for further details).

Figure 6-9 Local Traffic Logistics Plan



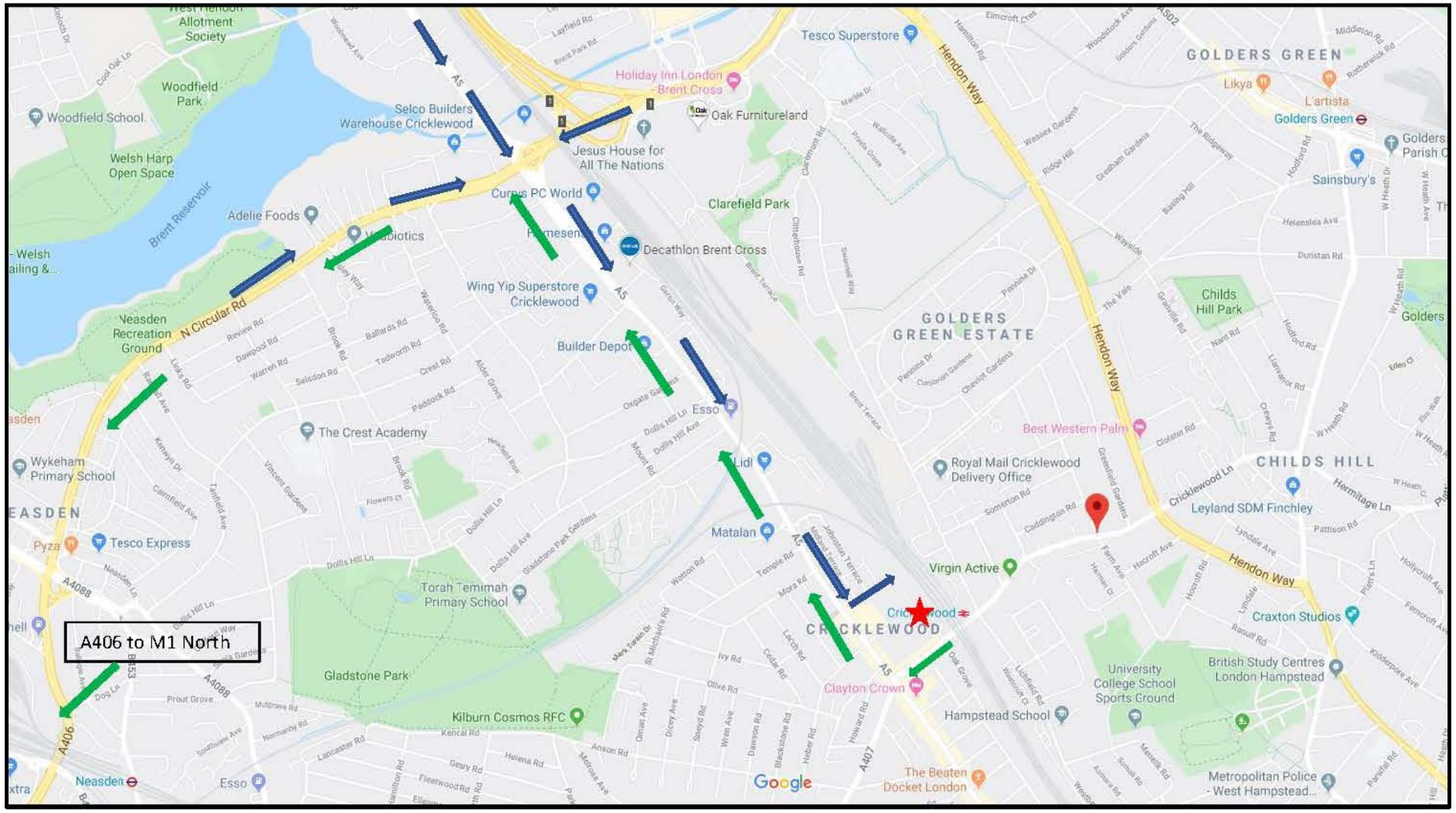
Key

Site Location

Traffic Route from Site

Traffic Route to Site

Figure 6-10 Remote Logistics Plan



Construction Logistics Plan

6.6.7 A Construction Logistics Plan (CLP) will be produced and submitted alongside the Reserved Matters Applications, which will provide a framework for the management of construction vehicle movements to and from the Site. The CLP will set out measures so that construction materials can be delivered, and demolition and construction waste can be removed in a safe, efficient and sustainable manner.

6.6.8 The CLP will implement a series of measures to reduce the impact of construction vehicle traffic upon the highway network, these include;

- The provision of clear signed and uncongested routes for construction vehicles, and providing drivers with access route maps;
- Encouraging construction workers to travel to the Site using alternative modes of travel to cars;
- Encouraging contractors to use local materials, reducing the number of deliveries and distance of vehicles travelled;
- Publish details of construction facilities and procedures to workers and contractors to indicate the most suitable times for deliveries, delivery locations, and preferred suppliers and couriers.
- The use of a centralised area for loading and unloading of construction materials, if possible, in close proximity to materials storage area, to minimise construction vehicle movements within the Site;
- Freight Operator Recognition System (FORS) - the use of companies who are FORS members and encourage contractors to sign up to FORS scheme to increase the sustainability of freight movements to improve safety/fuel efficiency and the reduction of carbon dioxide emissions. FORS also promotes awareness of cyclists and associated vehicle safety measures;
- Implementation of a vehicle booking system, to manage and schedule deliveries to the Site; and
- Managing access and egress through a ‘Just in Time’ operating system, with vehicles travelling to the Site held in a holding yard until notified by the site operative, to prevent multiple vehicles from entering and leaving the Site at the same time.

6.6.9 The CLP also provides a framework for future on site contractors for construction to develop targets including, the number of construction vehicle trips during AM and PM peak hours, the proportion of servicing and delivery companies to be members of FORS and a percentage of vehicles to be ‘green’ or low emission vehicles.

Track out and Wheel Washing

6.6.10 Mud and debris on the road is one of the main environmental nuisance and safety problems arising from construction sites. In the early stages of the construction, vehicle wheel washing facilities will be made available. Where utilised, a wash bay area will be impermeable and isolated from the surrounding area by a raised kerb or roll over bund to contain solids, with effluent directed to the foul sewer (foul and surface water drainage will be connected to the existing Thames Water networks).

6.6.11 The contractor(s)'s on-site supervisors will assess if wheel washing is needed to ensure that mud/detritus originating from the Site is not deposited on the public highway, and they will be responsible for carrying out a subsequent inspection.

6.6.12 No vehicles will be permitted to leave the Site if it is considered they pose any risk to the public highway. To ensure highways are maintained in good order it is anticipated that the contractor(s) will undertake cleaning of the surrounding roads as necessary to remove any unwanted material from the wearing course.

6.6.13 Muck away vehicles will be fully sheeted to minimise the risk of any mud over-spilling onto the highway and watering down will be carried out as required to suppress dust on:

- Unpaved areas that are subject to traffic or wind;
- Sand, spoil and aggregate stockpiles; and
- During loading/unloading of dust generating materials.

6.6.14 The following procedure is intended to ensure no mud, dirt, debris or other loose material is deposited outside the Site on the public highway:

- During the earthworks phase of the Proposed Development, facilities for wheel washing will be installed and maintained at the main site vehicle entrance;
- All loads of loose or dusty materials transported from the Site shall be securely sheeted; and
- Sufficient road sweeping equipment and personnel will be provided to keep the highways clean.

6.7 Construction Environmental Management Plan (CEMP)

6.7.1 An ISO 14001 (or equivalent) compliant CEMP is to be prepared by the Principal Contractor and submitted prior to the start of construction works in each Parcel (or part therein). The aim of the CEMP is to provide an overarching and strategic framework for the management of environmental effects and the implementation of measures prior to, and during, the demolition and construction phase of the Proposed Development. The CEMP will be a 'live' document and will be continually reviewed and updated by the Principal Contractor, following the submission and approval of the Reserved Matters Application in accordance with the measures agreed under the approved reserved matters.

6.7.2 The CEMP will include the following information (but not be limited to):

- Site information:
  - Location of the works, including a Site plan, showing construction site boundaries and any sensitive receptors (e.g. retained trees, water courses, local residents etc.);
  - Detailed management structure and key contacts (such as the appointed Liaison Manager, Site Environmental Manager, the relevant LBE contacts and contacts at the Environment Agency and Highways Agency in the event of an emergency); and
  - Procedures for environmental training of all permanent and temporary Site staff, which staff will be covered within the 'Toolbox Talks', a series of training sessions relating to specific health and safety issues relating to the construction industry.
- Construction information:
  - A description of the works to be undertaken and a detailed programme of the construction activities;
  - Proposed working hours during construction, including any abnormal hours;
  - Details of the main haulage routes and Site access points;
  - Proposed dates and sequence of the works;
  - Equipment and plant to be used; and
  - Method of delivery / removal of materials and plant.
- Environmental Management:
  - An internal environmental audit programme, e.g. ISO 14001 or details of policies specific to the Applicant;
  - An Environmental Mitigation Register with associated procedures, which show how environmental risks will be addressed for each activity;

- Schedule of potential environmental effects relating to each activity (based on the effects identified in the ES);
- Procedure for neighbourhood liaison and dealing with complaints;
- Measures to exclude the public from the vicinity of the Site during construction and ensure maintenance of public safety;
- Measures to reduce visual impact of the construction Site, including nuisance from construction lighting;
- Arrangements for the removal of contaminated material, where appropriate;
- Arrangements for the storage of raw materials on-site (including potentially contaminative material, such as fuels);
- Waste storage and removal arrangements (either as part of the CEMP or a separate SWMP, or equivalent);
- Measures to be followed to minimise noise, dust and vibration levels during demolition and construction, including limits to be complied with for certain activities (such as piling), as appropriate;
- Any specific management plans relating to archaeological works;
- Measures to minimise effects on ecology;
- Measures to deal with waste water generated during construction activities, to minimise the risk of potentially contaminative material entering the local drainage network; and
- Emergency procedures to be followed in the event of an environmental incident (e.g. spillage).

- Monitoring:
  - Targets for continuous improvement on construction environmental performance, such as energy and water use, carbon emissions, and waste;
  - Monitoring requirements and procedures for recording and reporting the results and for taking remedial action in the event of a non-compliance with specified limited (if appropriate);Monitoring proposals, which should include details on the receptors for which monitoring will be undertaken; frequency of monitoring; factors against which the monitoring results will be analysed; threshold levels; list of organisations / individuals to whom results will be distributed; and actions to be taken in the event that thresholds are breached;
  - Procedures for monitoring construction processes against the project environmental objectives and for the appropriate action if thresholds have been breached; and
  - Procedures for co-ordinating the monitoring results to ensure that the combined effect of the works in different locations does not trigger threshold levels.
- Legal requirements:
  - Schedule of appropriate environmental legislation and good practice that will be adhered to, which is both current at the time of contract and which may come into force during the course of the contract;
  - A list of specific objectives and targets that have been imposed by planning conditions and agreed in consultation with third parties; and
  - A register of permissions and consents required, with responsibilities allocated and a programme for obtaining them.

6.7.3 The CEMP will be updated and developed throughout the demolition and construction phases in consultation with LBB. The CEMP will be regularly monitored during the construction works and revised to reflect any changes to programme or events and activities on-site.

6.7.4 Further details on specific measures to be included within the CEMP to mitigate potential effects identified within this ES are provided within technical chapters (*Chapters 8-16*), *ES Volume II: TVBHIA* and *Chapter 17: Summary of Mitigation*.

Considerate Constructors Scheme

6.7.5 The Site will be registered with the 'Considerate Constructors Scheme'. This is a national initiative through which construction sites and companies registered with the scheme are monitored against a Code of Considerate Practice, designed to encourage best-practice beyond statutory requirements.

Neighbour and Public Relations

6.7.6 A key aspect of the successful management of the Proposed Development will be the maintenance of good relations with neighbours and the general public. The project team is engaged in consultation with a range of stakeholders and neighbours and this will continue through the various phases of the Proposed Development.

6.7.7 To successfully develop and implement a Neighbour and Public Relations Strategy during demolition and construction works, the following actions will be undertaken:

- Initial Contact: Prior to the submission of Reserved Matters Applications, the project team will make formal contact with the nearest neighbours and those who would be affected by the Proposed Development; and
- Contact during the Works Period: A single point of contact will be established, with a senior member of the project team nominated for the role. This person would usually be the Construction or Logistics Manager. Outside normal working hours, site security will act as the main point of contact via a dedicated phone number. Security will alert the Construction or Logistics Manager if necessary (available 24 hours). Any complaints will be logged, fully investigated and reported to the relevant department within the LBB as soon as possible. The complainant will be informed as to what action has been taken.

6.7.8 Contact with neighbours and the general public will be proactively maintained throughout the construction period, with regular update meetings on a quarterly basis and the issuing of a newsletter with an update on progress.

Management of Trade Contractors

6.7.9 Individual contractor contracts will incorporate relevant requirements in respect of environmental control, based largely on the standard of 'good working practice' as outlined within the CEMP, as well as statutory requirements. All trade contractors will be required to demonstrate how they will adhere to procedures set out within the CEMP, satisfying regulations and best-practices regarding environmental control.