Camden Lock Village

Construction Management Plan

September 2012

Contents

1.0 Executive Summary

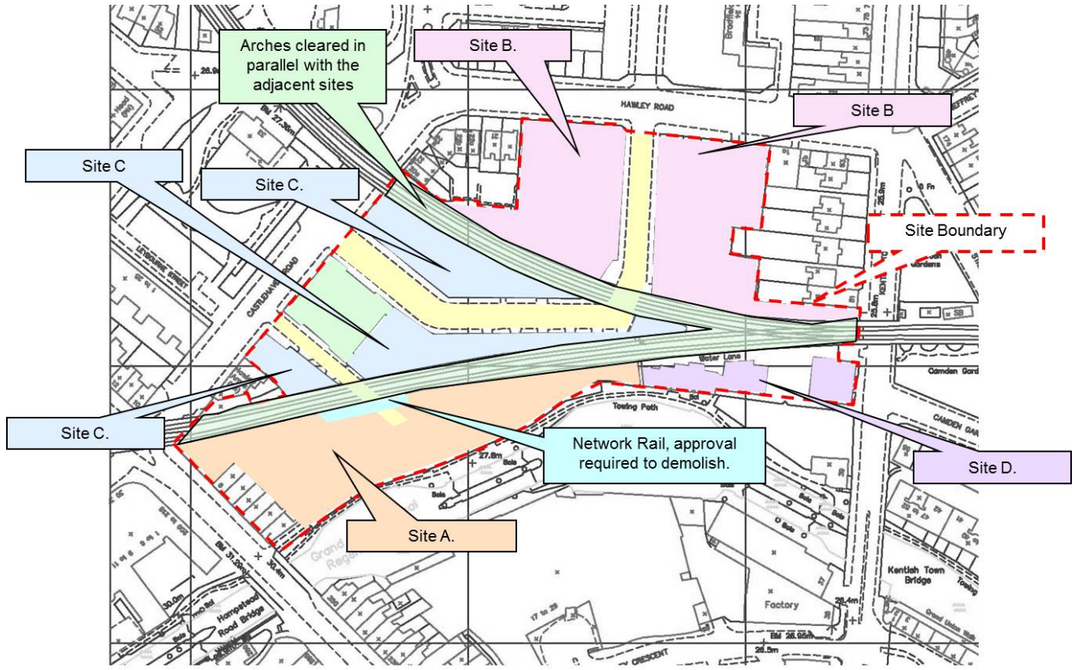
This submission has been prepared to set out the construction methodology and programme requirements for the regeneration of the Camden Lock Village site. It should be stressed at this point that Mace have prepared this document in the capacity of preconstruction advisors, and that Stanley Sidings have not yet selected the contractor who will be carrying out the works.

The document describes, how we propose the work to be carried out with an emphasis on how Mace would intend to mitigate the environmental impact that site activities could have on the surrounding area, its residents, businesses and the environment generally. Mace is accredited to ISO 14001 Environmental Management standard and is committed to continually improving environmental performance.

The construction methodology considered in this report has been based on available information to date and our experience on similar projects. The proposed construction methodology has been planned so as not to present any significant risks and in a phased manner.

For ease of description / reader interpretation and consistency with the ES, the Site has been divided into Site Areas A, B, C and D (refer to Figure 1.1).

Figure 1 Site Notations



Site Constraints – Site Notations

There are a number of existing constraints to be observed to maintain a suitable and safe environment during the construction of the development:

- Site works vehicular access is to be restricted to coming off Castlehaven Road (sites A and C), Hawley Road (Area B) and Kentish Town Road (Area D)
- Existing markets site to be developed and available at the earliest feasible date
- Network rail interfaces with works adjacent to existing rail viaducts
- Camden Lock and adjoining towpaths to the Grand Union Canal
- Residential properties along Castlehaven Road, Hawley Road and Kentish Town Road, bordering the site
- Potential interfaces with Camden Market

Based on our initial evaluation the construction period for the Camden Lock Village development (including demolition) will be 34 months. Table 2.0 under Section 3.2 – Key Project Milestones, summaries the main activities to be undertaken and the approximate duration of the works, and is further demonstrated on the strategic programme Camden Lock Village – Base draft Programme (School Option) CAMLK/Strat/01 Rev H, dated 16/08/2012, included in appendix A. Some of these works will be occurring concurrently in order to achieve the demolition and construction timetable.

As a consequence of the early stage of the design numerous assumptions have been made as set out on page 6 of this document. As investigations and surveys are carried out and design developed these assumptions will be challenged and subsequently firmed up. Should a departure from assumptions be required then Mace Limited will revise the methodology and programme accordingly.

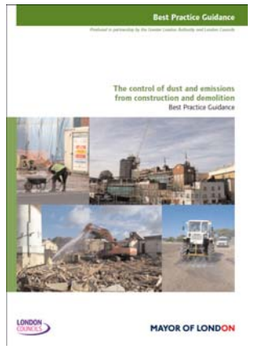
This Construction Delivery Report is based on minimising the impact upon the surrounding area by making the site as self-sufficient within it's boundary as possible and Mace's commitment to implementing industry best practice and will draw upon the following reference documents:-

- ICE Demolition Protocol
- Considerate Constructor's Scheme
- BS 5228: 2009 Noise & Vibration Control on construction sites
- BS 6187: 2000 Code of Practice for Demolition
- The Control of Asbestos at Work Regulations 2002
- The Asbestos (Licensing) Regulations 1983
- The Mayor of London's Best Practice Guide for the Control of dust and emissions from construction and demolition

- Camden's Environmental Health Section Consent under Section 61 of the Control of Pollution Act 1974.

As the Principal Contractor, Mace will at all times carry out works in a safe and considerate manner with due regard to the public, adjoining properties, businesses and road users. The project would be registered under the Considerate Contractors Scheme.

It is proposed that an Environmental Management Plan (EMP) would be prepared and implemented, incorporating relevant guidance identified within the London Borough of Camden (LBC) Guide for Contractors Working in Camden[i], and British Waterway's Code of Practice for Works Affecting British Waterways[ii] (albeit it should be noted that no direct works are proposed within the Regent's Canal). The EMP would be discussed and agreed with the relevant planning officers at the LBC following the approval of the planning application. However, an outline of the content of the EMP is provided in this chapter.



THE SITE

The site is located in the Borough of Camden. It is bounded by the busy Castlehaven Road, Hawley Road, Kentish Town Road, Grand Union Canal and the rear of properties to Chalk Farm Road.

It has two Network Rail viaducts crossing it running from East to West which split the site into three key areas, but which are linked by access routes beneath the arches of the viaducts, which in the final scheme are to provide pedestrian walkways linking the sites.

Two of the site areas (A and D) are linked on the south side of the railway, and both have the Grand Union Canal running along their southern boundaries.

The site also has interfaces with UKPN who have HV cables running within the canal towpath, but are oil cooled, with the cooling tanks situated on the site.

Castlehaven Road is a primary route in the one-way system in Camden, as is Hawley Road being part of the southbound flow towards central London. They are both residential roads. Kentish Town Road is a quieter but narrower road and a bus route. Chalk Farm Road in the vicinity of the site has very heavy pedestrian usage as a main route for visiting the existing Camden Market.

Fig 2 Existing: Site Boundary & Buildings within Application Area

THE NEW DEVELOPMENT

The new development will provide a new mixed use development comprising employment and residential land uses on four separate, but linked sites.

Area A comprises the redevelopment of the existing market site with the construction of a new market building linked to the back of existing retail properties on Chalk Farm Road

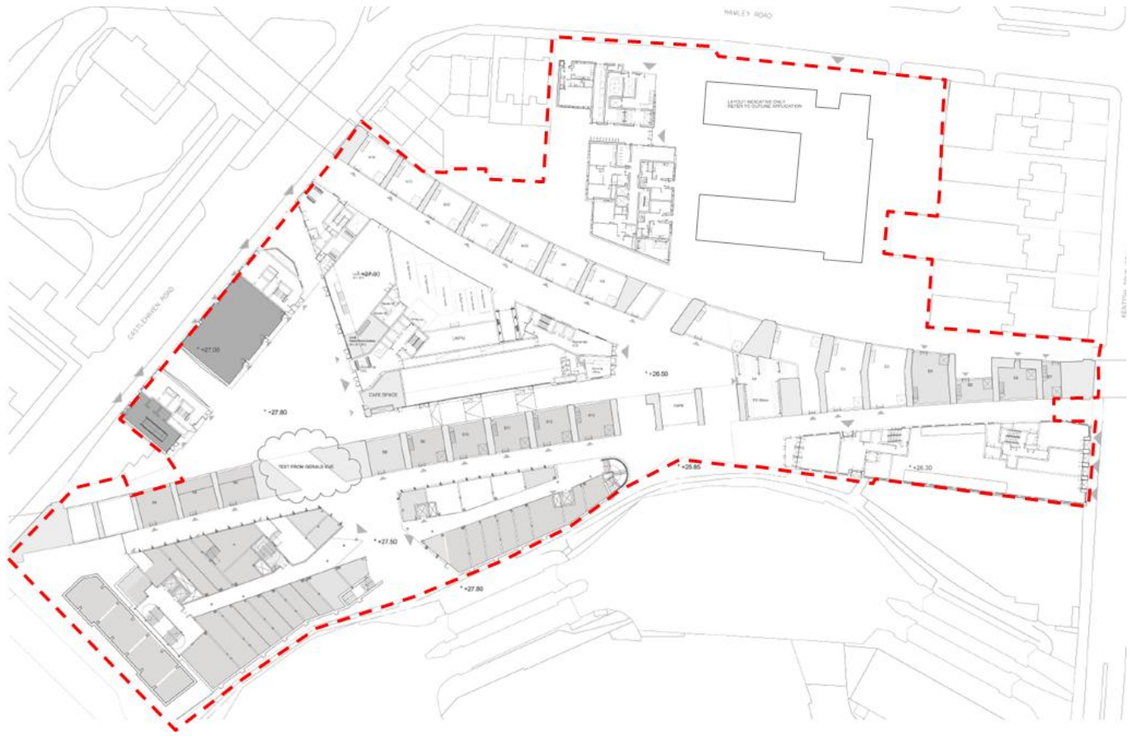
Area B comprises a residential building and a proposed new school

Area C Comprises the construction of a predominantly residential building with retail at ground floor and a cinema entrance into the basement (C1) and a mixed use building (C2) with retail and residential uses and a loading bay, constructed over a common basement

Area D comprises a new residential building

Incorporated with the planning of these works will be the demolition and clearance of the sites, the diversion of existing utility services and installation of new services for the new buildings, and works to fit out the arches beneath the existing railway viaducts crossing the site.

Fig 3 Proposed Layout



Site Access

Site access will vary during the course of the construction operations and will generally be taken from either Castlehaven Road and / or Hawley Road plus Kentish Town Road for Area D depending upon the stage of construction:

Area A	In	Out
• Set Up / Demolition	Castlehaven Road (via extg roads)	Castlehaven Road
• Substructure	Castlehaven Road (via Area C)	Castlehaven Road
• Structure & Finishes	Castlehaven Road (via Area C)	Castlehaven Road
Area B		
• Set Up / Demolition	Hawley Road (via extg roads)	Hawley Road
• Substructure	Hawley Road	Hawley Road
• Structure & Finishes	Hawley Road(partly from the street)	Hawley Road
Area C	In	Out
• Set Up / Demolition	Castlehaven Road (via extg roads)	Castlehaven Road
• Substructure	Castlehaven Road	Castlehaven Road
• Structure & Finishes	Castlehaven Road (from the street)	Castlehaven Road
Area D	In	Out
• Set Up / Demolition	Kentish Town Road	Kentish Town Road
• Substructure	Kentish Town Road	Kentish Town Road
• Structure & Finishes	Kentish Town Road (from the street)	Kentish Town Road

As the substructures to the buildings on sites B & C & D reach completion, it will be necessary to utilise unloading from the adjacent streets, which is common practice on sites in tight-knit urban environments.

Where this is necessary for the advancement of the works, the adjacent footpaths will remain open with protective gantries erected over the footpaths adjacent to the site, and localised suspensions of parking will be required to be arranged by the contractors, which again is common practice on sites such as this.

The canal may provide an alternative means of access to the site, and whilst it may not be efficient or prove economical a feasibility study will be carried out to determine whether it could be used during the preconstruction period for the project

Figure 4 Example of protective gantry

Constraints & Assumptions

Key Assumptions and Constraints

Certain key assumptions have had to be made in order to develop a robust project delivery strategy.

- Vehicular access to the site will be from the streets noted above to each of the sites;
- No access from Chalk Farm Road
- Parking suspensions will be required in Castlehaven Road and Hawley Road;
- UK Power Networks cables and oil pipelines and tanks will need to accurately located prior to the start of any works ;

- Full consents will be required including the issue and approval by Network Rail of method statements for works to and adjacent to the existing railway viaducts including demolitions, piling and substructures, the use of tower cranes and scaffolding;
- Existing services need to be surveyed to confirm requirements for diversions
- Existing Canal towpath access alongside the site and to the lock must be maintained
- Site contamination and remediation requirements to be confirmed

Current project constraints are considered below in Table 1.0, and are based on available information to date. Constraints and assumptions have been established and formulated from reviewing design information available, site visits and our experience of working on similar projects.

Table 1.0

Reference	Constraints
1	Pedestrian access along Castlehaven Road, Hawley Road, Kentish Town Road and the canal towpath will require suitable protection during construction operations
2	Adjoining properties and specific provisions required achieving Party Wall agreements and site red-line boundary conditions/rights and / or access issues?
3	Existing utility services provisions to be determined so that suitable strategies for working around / diverting can be developed.
4	Party wall awards can be achieved to suit the construction programme requirements
5	All site hoarding lines to be erected with public safety in mind with regard to lighting, and creating potential 'crime spots'
6	Where possible walkways are to be opened up across the stage at early stages subject to site phasing (but not to the detriment of public safety or the efficiency of the execution of the works)
7	Designs will progress to suit the construction programme requirements
8	Topographical and bore hole investigations would need to be undertaken to inform construction programme
9	Planning condition discharges will progress to suit the construction programme requirements
10	Requirements for protection to the Network Rail viaducts to be developed
11	Requirements for protection to the existing UKPN cable routes to be developed
12	Requirements for protection to the existing canal towpath to be developed
13	Occupation and operation of the new market building prior to the completion of the development construction programme
14	Phased residential / commercial occupation during the development construction programme

The works will be managed such that the effects of the programme of works upon the local residents and traders will be minimised as far as is reasonably practical.

PROGRAMME

Assuming continuous working, the demolition and construction programme will span **34 months** including demolition works.

Whilst full details regarding demolition and construction have not been finalised at this stage, this submission is based upon the following information regarding the demolition and construction activities.

The proposed works comprise the following activities:

- Demolition of the existing buildings currently on-site undertaken in phases to suit the construction sequences of the individual sites ;
  - Sites A&C are sequentially linked because access to Area A will be from Castlehaven Road across Area C
  - Area B to be developed independently in time from A & C
  - Area D to be developed independently in time from A & C
- Early closure of the existing market site (Area A);
- Construction of the basement of Area C using top-down methodology ;
- Construction of Area B such that the residential units and school building on that site are available before the completion of sites C and D

We have programmed for sectional completions.

Prior to any works being undertaken on site, the discharge of planning conditions, utility disconnections and approvals of general methods of work need to be undertaken and approved by LB Camden, Network rail and BWB,

Along with these activities will be the progression of design activities, appointment of the main contractor and sub-contractor appointments.

KEY PHASING STAGES

6.1. The overall development programme can be divided into six key component parts. These are listed below in order of their anticipated sequence:

- Phase 1: Site Preparation and Enabling Works, including:
  - Closures of Haven Street, Leybourne Road and Torbay Street;
  - Utility service diversions on Haven Street / Leybourne Road;
  - Demolition and clearance, as appropriate, of existing buildings and structures within:
    - The west and centre of the Site (Area C);
    - The north of the Site (Area B), excluding 1 Hawley Road;
    - The south and south west of the Site (Area A); and
    - The southeast of the Site (Area D).

- Phase 2: Construction of the majority of the Area C buildings (basement and substructure of Building C1, basement and substructure of Building C2 and the Northern Arches);
- Phase 3: Construction of Area A building (Building A, the Southern Arches and 1 – 8 Chalk Farm Road, commencing only after the ground floor slab of Building C1 and C2 are complete);
- Phase 4: Construction of the remainder of the Area C buildings (Building C1);
- Phase 5: Construction of Area B buildings (Buildings W, X, and School Block); and
- Phase 6: Construction of Site Area D buildings (Building D and Eastern Arches).

Each of the construction phases (Phases 2 - 6) would comprise a number of different activities, including:

- Any further demolition and Site clearance as necessary;
- Piling and construction of the substructure (construction of foundations and, where applicable basement levels);
- Construction of the structural frame, installation of the external envelope, and shell and core of buildings;
- Where applicable, structural works to existing buildings to be retained (Numbers 1 - 6 Chalk Farm Road (Area A) and the Grade II Listed Number 1 Hawley Road (Area B);
- Installation of services;
- Fit out; and
- Landscaping (including public realm, hard and soft landscaping).

Table 2.0 below sets out the phasing activities in order of their anticipated sequence, and includes the approximate duration of the works. It should be noted that in order to achieve the demolition and construction programme, a number of these activities are expected to overlap. In particular, the service diversions and Site preparation and enabling works can occur simultaneously, as can the fit-out and hard and soft landscaping. Works will be undertaken on site commencing from the Castlehaven Road

It should be clear that although "phased" this is in-fact a single phase development, and the different phases are constructed in parallel.

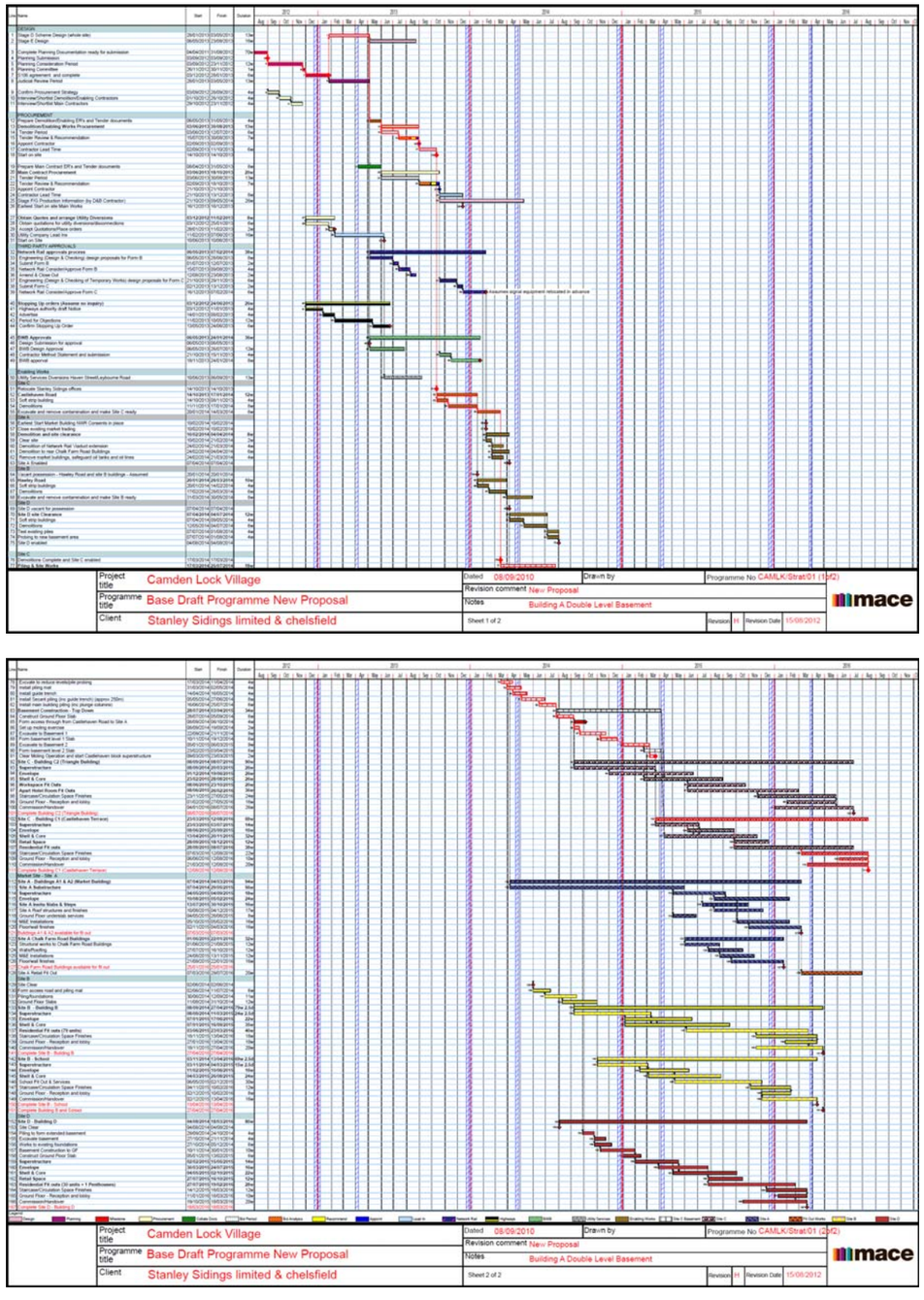
KEY PROJECT MILESTONES

Table 2.0

Activity	Start	Period
Area A		
Enabling Works & Demolition	Month 5	2 months
Piling & Substructure	Month 7	13 months
Superstructure and envelope	Month 20	9 months
Shell & Core Services	Month 20	10 months
Chalk Farm Road Buildings – Shell & Core	Month 21	7.5 months
Retail Fit Out	Month 31	5 months
Area B		
Enabling Works & Demolition	Month 4	4.5 months
Piling & Substructure	Month 8	6 months
Superstructure and envelope	Month 12	9.5 months
Primary Services/Shell & Core	Month 16	8.5 months
Residential Fit out & services	Month 21	10 months
School fit out & services	Month 20	12 months
Area C		
Enabling Works & Demolition	Month 1	5.5 months
Piling & Substructure	Month 6	12.5 months
Superstructure and envelope C1	Month 18	3.5 months
Primary Services/Shell & Core C1	Month 19	8 months
Residential and Retail Fit out & services C1	Month 24	11 months
Superstructure and envelope C2	Month 12	10 months
Primary Services/Shell & Core C2	Month 17	9 months
Workspace and residential fit out & services units	Month 20	13 months
Area D		
Enabling Works & Demolition	Month 7	4 months
Piling & Substructure	Month 12	5 months
Superstructure and envelope	Month 17	6 months
Primary Services/Shell & Core	Month 20	6 months
Residential and Retail Fit out & services	Month 22	8 months
Overall Completion		**34 months**

STRATEGIC PROGRAMME (SUMMARY)

(Refer to appendix A for enlarged prints)



CONSTRUCTION METHODOLOGY/STRATEGY

GENERAL SITE MANAGEMENT

Prior to the commencement of demolition works, hoardings will be erected around the perimeter of the site. Hoardings will provide acoustic screening of the site from road level as well as ensuring the safety of pedestrians and vehicles, and provide security. Site access points will be protected with secure gates and security staff will also be present during working hours and 24 hour security during the later fit out stages.

The identification, of existing utility services in vicinity of the site will be undertaken, utilities feeding the demolition areas being decommissioned and disconnected prior to commencement of works, by others. The relocation of existing UKPN substations on the site and all other utility services diversions will be carried out such that continuity of services for adjoining properties is not broken at any time.

All careful deconstruction and demolition works will be undertaken in a safe method with due regard for the neighbours.

All activities on site are subject to pre-planned method statements approved by Mace in accordance with the Construction Design and Management regulations 2007 and the Management of Health and Safety at Work regulations 1999.

The following key considerations will be taken into account in preparation of demolition method statements:

- Site location and access / traffic management
- Protection of the public and adjacent property
- Maintaining public access routes around the site and to the Grand Union Canal
- Asbestos / substances hazardous to health
- Any unexpected ground contamination if discovered
- Safe and secure hoardings to all site perimeters in accordance with the requirements of LB Camden, which will be externally lit and painted and maintained in good condition at all times.
- Existing services
- Access / rights of way
- Noise and vibration
- Air quality / dust control
- Waste management and material re-use

- Storage and handling of materials
- Local community liaison
- Emergency / accident procedures
- Training
- Monitoring procedures

Plant selected will be inherently quiet and will work within the guidelines agreed with Camden's Environmental Health Department.

Our aim will be to recycle as much demolition waste as economically viable and it is proposed to crush waste material on site to form the required piling mat. The crusher and stockpiled material will be located adjacent to on Area C.

The works are described below on a phase-by-phase basis

Phase 1: Site Preparation and Enabling Works

During the Site preparation and enabling works, as works commence hoardings would be erected as appropriate. The hoardings would comply with the Health and Safety Executive (HSE) and LBC requirements. They would be well lit and maintained throughout the works to ensure public safety.

In total, the enabling works for the entire Site (Areas A, B, C and D) are anticipated to take around 10 months across all of the sites. The enabling of each Area would be intermittent, although they would be phased and carried out separately according to the general descriptions as follows. The phasing of the enabling works is necessary to facilitate further work within each of Areas A, B, C and D.

Utility services diversions would be carried out early within the Site preparation and enabling works with services diversions to be carried out within Haven Street and Leybourne Road (Area C).

Following the relocation of the office occupants of James Cameron House, and the closure of Leybourne Road and Haven Street within the central and western portions of the Site (Area C) demolition works would commence within the western and southern portions of the Site. With regard to the existing Northwest-East and East-West Viaducts, the businesses located within the 'arches' beneath would be vacated and the areas would become vacant during the works. These enabling works are anticipated to take approximately 5 months.

All works to be carried out to the Northwest-East and East-West Viaducts would be done so in consultation with Network Rail and in accordance with their approval process to ensure the rail lines associated with the viaducts can remain operational throughout the entire Site works. Further details of this protection would be confirmed within a mutually agreed method statement. All further works to Network Rail land and assets would also follow Network Rail's agreed processes for consultation and approval.

In addition, due to the proximity of the London Underground Limited (LUL) Northern Line tunnels beneath Chalk Farm Road and Kentish Town Road, works would be carried out as appropriate and in agreement with LUL.

Enabling works required within the north of the Site (Area B) would follow those within the west and central areas of the Site (Area C). These works would include the closure of Torbay Street, the demolition and clearance of existing structures and buildings, and the appropriate safeguarding of the Grade II Listed Number 1 Hawley Road. In addition, eight existing trees within Area B would be removed. The remaining businesses located within the Northwest-East Viaduct would be vacated.

Enabling works required in the southeast of the Site (Area D) are anticipated to take approximately four months in total. Enabling works would include the clearance of existing structures within the area of convergence of the East-West and Northwest-East Viaducts that have not previously been removed, together with the removal of three existing trees located within Area D. Existing piles would be tested for their integrity and re-used as appropriate.

The south and southwest of the Site (Area A) would remain operational for the majority of the Phase 1 works, and would be the last area to be enabled. Enabling works would take approximately three months and would include:

- Removal of the existing fencing which separates the market from the Regent's Canal towpath;
- Demolition of the Network Rail East-West Viaduct gantry;
- Part demolition of the front and rear of 1 - 6 Chalk Farm Road;
- Bracing of 1 - 6 Chalk Farm Road to ensure structural integrity;
- Clearance of the existing temporary market structures;
- Removal of two trees; and
- Grading and levelling of Area A.

Prior to demolition of buildings and structures on the Site, internal building soft furnishings would be stripped and removed and would be carried out together with intrusive inspections to identify the presence of any potentially hazardous materials. If present, these would be removed from the Site and disposed by appropriately licensed contractors following prescribed health and safety procedures.

Following the previously described Site clearance and demolition activities, any necessary contamination remediation would be undertaken. Further details can be obtained by reference to EIA Chapter 14 of the EIA: Ground Conditions and Contamination.

Phase 2: Construction of the Majority of the Area C Buildings (Basement and Substructure of Building C1, Basement and Substructure of Building C2 and the Northern Arches)

Piling and Substructure Construction

In order to facilitate clear construction vehicle access to the south and southwest of the Site (Area A) from Castlehaven Road, the substructure of the building fronting Castlehaven Road (Building C1) would be prioritised at the start of Phase 2.

The combined basement of Building C1 and Building C2 would be approximately 11.5m below ground level (BGL), and is anticipated to take approximately 12.5 months to construct.

To ensure vehicular access is available from Castlehaven Road via haven Street across Area C to Area A as early as possible within the development programme, the priority would be to install the perimeter piles and the ground floor slab in advance, with the rest of the basement of Buildings C1 and C2 constructed using a 'Top Down' method whereby the ground floor level slab would be constructed first. Following construction of the ground floor slab with a preformed access hole for excavation, excavation of the basement would commence. This methodology ensures stability of the retaining wall and would limit potential movement of the East-West Viaduct and would be agreed with Network Rail.

The Top Down construction methodology within the central and western portion of the Site (Area C) gives clear construction vehicle access to the south and southwest of the Site (Area A. Details on anticipated construction traffic routing are provided later within this document.

Where possible, excavated material would be reused on the Site (refer to EIA Chapter 7: Waste Management and Chapter 14: Ground Conditions and Contamination). However, where excavated material cannot be reused on the Site it would be removed to a licensed waste facility capable of accepting waste of the quality and grade encountered during excavation activities. Licensed waste carriers would be employed to transport all excavated material and comprehensive records would be maintained by the contractor.

At 11.5m BGL potential groundwater ingress may occur within the basement excavation. However, as the Site is underlain by London Clay and although perched water is likely to be found within the made ground on the Site, significant quantities of groundwater are not expected to be present. As such, waterproofing measures are unlikely to be required. In addition, the pile wall would limit groundwater ingress during construction.

The basement wall would comprise secant piles formed from ground level within Area C. It is likely that the remainder of the foundations beneath Building C2 would be piled.

Construction of the Superstructure

The construction of the Building C1 superstructure commences following completion of the substructure, for details refer to Phase 4: Construction of the Remainder of Area C.

Construction of Building C2's superstructure would comprise an in-situ reinforced concrete frame. Spanning concrete slabs would be supported internally by load bearing columns and concrete cores. Within the Building C2, the retail shell construction would include a pre-cast concrete frame structure.

Works to Existing Buildings / Structures

No structural works to existing buildings or structures would be necessary within Phase 2.

Installation of Services

Appropriate services would be installed within the Building C2 and the Northern Arches.

Fit Out

The residential and workspace fit out works for the Building C2 are anticipated to take approximately 5 and 7 months respectively. However, these timescales would overlap.

The servicing loading bay proposed within the Building C2 would be installed and completed in parallel with early fit out works. The Northern Arches would be completed at the same time as these fit out works.

Landscaping

Landscaping, including the installation of green roofs, permeable paving and four new trees associated with Area C would be completed as part of Phase 4: Construction of the Remainder of Area C.

Phase 3: Construction of Area A Buildings (Building A, the Southern Arches and 1 – 8 Chalk Farm Road

Piling and Construction of the Substructure

Where appropriate the foundations of the buildings located within the south and southwest of the Site (Area A) would use secant piles / sheet piling for the buildings located within the south and southwest of the Site (Area A).

The basement of Building A1 is a double storeys basement structure and it is anticipate to take approximately 8 months to construct.

Construction of the Superstructure

The superstructure of Building A is an in situ reinforced concrete frame. The building slabs would comprise sloping concrete which would be built in-situ; the slope in the slab is created to remain in keeping with the current market areas.

The external envelop brickwork and metal / glass cladding system to upper floors will be completed after the structure is complete.

The superstructure of the new building proposed for 7 / 8 Chalk Farm Road would commence during this phase.

Works to Existing Buildings / Structures

The following works are required to the existing buildings at 1 - 6 Chalk Farm Road:

- Removal of the single storey shop front extensions to create a wider walkway easing pedestrian access and improving the appearance of these buildings;
- Retain gaps at both the northern and southern sides of these buildings, to ensure entrances to the proposed market areas remain;
- Retention of the original building but punching holes into the rear of the building so that it connects with the new retail buildings; and
- Concrete works to link the existing 1 - 6 Chalk Farm Road to Building A and a roof top terrace.

Installation of Services

Service installation would commence once Building A, the Southern Arches and 1 - 8 Chalk Farm Road are made watertight to ensure water damage from rainfall does not occur.

Fit Out

Fit out works throughout these buildings would commence as suitable areas are available. However, any work vulnerable to water damage would only take place once buildings are made watertight.

Landscaping

Hard landscaping within the south and southwest of the Site (Area A) would comprise paving for pedestrian access. The roof top terrace planting and green wall would be installed in Building A. Two trees would be planted to the south of the Site adjacent to the Regent's Canal towpath.

Phase 4: Construction of the Remainder of the Area C Buildings (Building C1)

The construction of Building C1's superstructure commences following completion of the substructure. This is to ensure access for construction vehicles would be maintained through to the south and southwest of the Site (Area A) throughout construction of the buildings within this area. As such, this would ensure that access for pedestrians and vehicles would not be compromised on Chalk Farm Road, and nor would the towpath be utilised as a construction traffic route.

As the superstructure of Building C1 is planned to be deferred until the completion of the buildings within the south and southwest of the Site (Area A) the construction of this phase would take approximately 27 months.

Construction of the Superstructure

The superstructure of Building C1 would comprise an in-situ reinforced concrete frame. Spanning concrete slabs would be supported internally by load bearing columns and concrete cores. External cladding would be installed as the frame is completed and when areas are water tight internal trades would proceed.

Works to Existing Buildings / Structures

No structural works to existing buildings or structures would be necessary within Phase 4.

Fit Out

Within Building C1 the fit out of the proposed cinema would comprise walls, seating, acoustic and technical fit out. The residential fit out would comprise mechanical and electrical services and appropriate installations, and would take approximately 10 months. Both the cinema and residential fit-out are due to take place in conjunction with each other.

Landscaping

Hard landscaping would consist of paving for pedestrian and vehicular access, including the central paved area which would include three new trees. Where there are areas of soft landscaping, these would include the importation of clean planting medium and would involve the planting of grass, trees and shrubbery.

The installation of the green roof on Building C1 would be completed.

Phase 5: Construction of Area B (Buildings W, X, and School Building)

Piling and Construction of the Substructure

Excavation of an area approximately 700m3 would be required for the installation of the proposed surface water attenuation tanks.

Foundations would be constructed using Continued Flight Auger (CFA) piles to a depth of approximately 20m and diameter of approximately 600mm. Construction of the ground floor slab for Buildings W, X and the School Building would take approximately 8 weeks.

Construction of the Superstructure

The superstructures of Buildings W, X and School Building would comprise concrete frames (including steel structures for the School Block), together with concrete slabs supported by concrete columns, all of which would be precast. External cladding would be installed as the frame is complete.

Internal Fit Out & Finishes

The fit out of the buildings in Area B would fall into two separate and distinct work streams. Within Buildings W and X the sequence of works would be a traditional residential install sequence of forming the internal division walls between the apartments, followed by riser and drainage stacks, prior to the building being weathertight, followed by internal services and finishes, of which those works that would be susceptible to water ingress, would be deferred until the building is weathertight.

Within the School Building a sequence of internal services fit out and finishes would be developed that also recognises the appropriate stages of weather tightness to the finishes that are to be installed.

Works to Existing Buildings / Structures

The conversion and refurbishment of the existing Grade II Listed Number 1 Hawley Road would take place within this phase, including any internal structural work to retain the integrity of the building.

Installations of Services, Fit Out and Landscaping

The installation of services, fit-out and landscaping would commence and would include the planting of new trees within Area B, play areas and communal and private gardens.

Phase 6: Construction of Area D (Building D and Eastern Arches)

Piling and Construction of the Substructure

Foundations would be constructed as required using continuous piled walls.

The excavation of the basement associated with the Building D would be to a maximum depth of 3.5m BGL.

Construction of the Superstructure

The superstructure of the Building D and the Eastern Arches would be erected in-situ using reinforced concrete.

External cladding would be installed as the frame is complete and when areas are water tight internal trades would proceed.

Works to Existing Buildings / Structures

No structural works to existing buildings or structures are due to take place within Phase 6.

Installations of Services, Fit Out and Landscaping

The installation of services, fit-out and landscaping would commence, and would include the planting one new tree, together with the installation of a green roof and permeable paving within the west of Area D.

Further Notes Regarding Working Methods

Enabling Works

The identification, surveying, testing, decommissioning, and removal of existing electrical sub-stations, including the re-energising of supplies for existing users and site suppliers will be a major consideration when planning the enabling . This will also involve temporary protection and weather proofing of key services, and any necessary re-instatement to ensure safe clearance prior to the demolition process.

All buildings and underground facilities currently existing on-site will be demolished in a safe method within the programme period stated above.

An initial archaeological assessment of the site has been undertaken and has concluded with the following, initial, mitigation strategy:

- The assessment of the potential effects of the Development on the archaeology is dealt with in Chapter 13: Archaeology of the EIA. This reveals that the southern portion of the Site (Area A and Area D) is located within the Regent's Canal Archaeological Priority Area 13 (APA). However, a desk-assessment has identified limited potential for archaeological remains from all periods. This is on account of previous works on the Site which are likely to have removed any archaeological remains.

- Despite the above, in line with a precautionary approach, further evaluation would take place prior to the start of intrusive works. The scope and form of any further mitigation required would be dependent upon the results obtained. All archaeological works would be undertaken in accordance with relevant national and best practice guidelines.

With the phased nature of the site it would be preferred to procure and undertake any further on site archaeological investigations prior to the commencement of the build programme. However it is recognised that this might need to be phased to suit the overall development phasing, and as such we would look to work with all parties to minimise the impact of any investigations upon the development programme.

The outline methodology for the enabling works stage of the work is as follows:-

- Clear the buildings of Asbestos and issue appropriate certification.
- Decommission existing underground fuel storage vessels and pipe lines.
- Carry out internal soft strip, removing internal fittings and finishes.
- UXB surveys
- Erect fully sheeted scaffolding

The outline methodology for the deconstruction of the existing buildings is as follows:

- Install structural movement monitoring in accordance with the Structural Engineers specification and all agreements reached in respect of works close to adjoining Network Rail structures, BWB's canal wall installations, and the UKPN cables.
- Remove the existing roof coverings.
- Demolish the existing structures from ground level using long reach 'munching' demolition machinery.
- Hand demolition / trimming to be kept to an absolute minimum and when used, utilisation of vibration minimising tools.
- Grubbing up of existing foundations.

Piling

Bearing pile installation is to be carried out using a rotary bored and / or CFA pile method which will result in the least practicable noise and vibration and will be undertaken from ground level.

Typical Rig for Rotary Bored Piling Works

As muck is drilled out of the ground during this phase of the works wheel washing facilities will be employed at site exits to maintain cleanliness of the surrounding roads and pavement crossings.

We have assumed that the basement walls will be formed using secant piling. As the secant piles are installed following closely behind will be the construction of the capping beam. All piling operations will be undertaken from ground level and we have planned for two piling rigs to be employed on site installing the piles working on an output rate of 3-4 piles per day per rig.

Piling operations will be phased across the four site areas such that operations on sites A, B, and C are in parallel, but Area D will lag behind.

Frame and Cladding

SUBSTRUCTURE

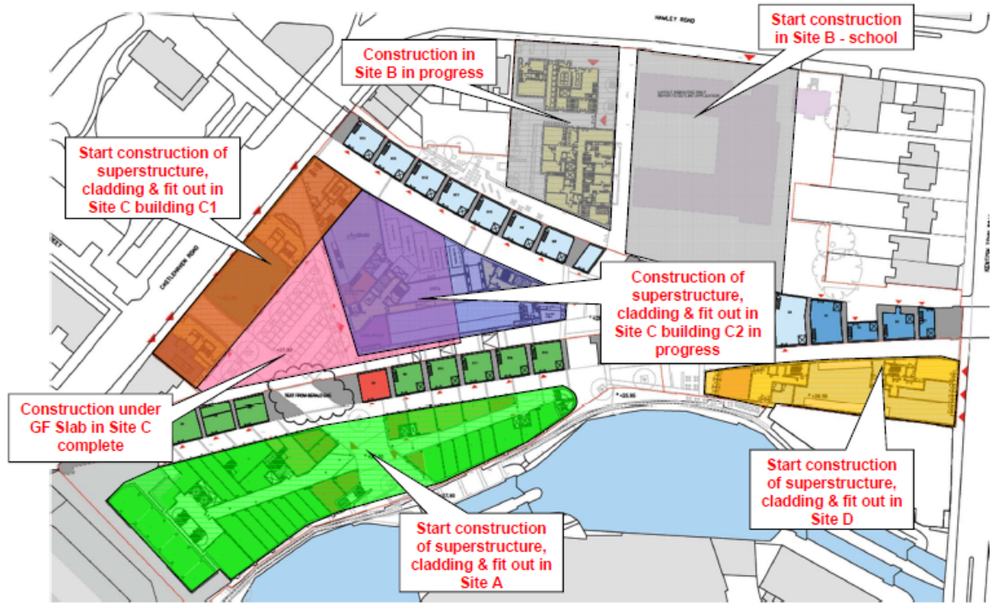
The basement on Area C will be constructed using top-down methodology. This constructions method will minimise the risks of movements in the ground from a conventional open-cut basement excavation, and obviate the need for temporary support of the railway viaducts during the excavation of the new basement.

It will be sequenced as follows:

- Demolition and site clearance
- Prepare and install the piles from ground level
- Formation of the ground floor slab on the ground prior to main basement excavation
- Excavation of the basement to level B1 working from ground level and by utilising small excavation equipment operating beneath the ground floor slab
- Formation of the B1 slabs
- Excavation and formation of basement level B2, beneath the newly constructed B1.
- New pile caps, lift pits, under slab services and vertical elements up to and including the ground floor slab.
- The in-ground drainage, service ducting, lightning conductor connections and the like will be coordinated with the construction sequence
- Our primary aim in the early stages of substructure construction is the formation of the core areas as once constructed we can commence the erection of the core formwork.
- This will enable the construction of the building C2 superstructure to progress in parallel with the substructure ‘top-down’ works.

The substructures of buildings on the other sites will follow a more conventional bottom up sequence.

Stage 7 – Construction of Site C building C1



As the design develops, and due to the physical size of the site, there might be opportunities to look at using sheet piling to support the basements on area A, which may reduce the need for an expensive secant or contiguous pile perimeter wall and capping beam solution.

Core

We have assumed that the cores will be constructed using a crane assisted climbing jump form or similar method of construction, rising from the basement slab to the roof with insitu reinforced concrete flat slab construction. The cores will house the lifts, stairs and service risers, providing lateral stability to the frame. Precast / preformed stairs will be installed as the core rises giving access and egress opportunity.

After the initial set-up time of the core form system, we have allowed (based on current experience/and a percentage of tower crane downtime) a cyclical turnaround of about 1.5 weeks per floor lift from the basement level. We have assumed that the cores will be constructed one floor ahead of the slabs. Crane usage will be minimised by pumping concrete from below with pump lines set up as the core progresses.

To assist with general site logistics we have assumed that the ground floor slab will be designed to take construction delivery vehicles providing limited off-loading opportunities until such time as the superstructure over has been constructed, and limited on-site storage facility.

Frame

We have assumed that a reinforced concrete frame will be adopted for each of the new buildings, except Area A which will have a large proportion of precast concrete framing. The pour sizes will need to be agreed with the engineer. Beams and slab will be poured together in the defined pour zones. The use of precast and / or twin wall column and wall elements to form the vertical frame elements has been allowed for on the programme.

Cladding/Facade

Envelope construction techniques will vary depending on design development, but will ideally be designed to facilitate prefabricated installation.

However, a significant proportion of hand-set brickwork is likely to be required across the development, which will utilise scaffolding.

Cladding installation will commence when the frame has been suitably progressed to enable safe and meaningful access to the lower levels. We have assumed for the purposes of this report and analysis that installation will start from the ground floor level.

The method of installation of prefabricated panels where applicable requires more detailed assessment when more information is available and/or a specialist contractor is appointed.

Fit Out

In the retail areas, work to the risers will start on site as soon as possible**.** The main M&E carcasses to the floors are installed followed by progressive fit out of the core areas and circulation spaces. The programme allows for a fit out period during months 23-28, once the shell & core section of the building is complete.

For the residential buildings, as soon as practical the commencement of first fix operations will occur. The initial operations will be the setting out of partitions and installation of main service runs from the risers to the individual apartments. These initial installations, partitioning metal studwork and services first fix, can commence prior to achieving a fully weather protected environment.

Weather dependent activities, i.e. screed, dry lining and joinery first fix operations, will take place once a suitable level of weather proofing is achieved.

Second fix dry lining, skim coat and decorations mist and 1st coat will then follow, which will precede the installation of joinery and M&E 2nd fix operations, final decorations, fixtures and fittings will occur. As rooms are completed an initial inspection and de-snag will be undertaken prior to a formal inspection with the client.

During fit out and prior to the availability of permanent services dead testing of electrical based circuits and pressure testing of pipe work will be undertaken as part of the installation process. Final testing will be undertaken as soon as circuits back to the main boards are complete and ready, for the early completions we expect this to commence using temporary power.

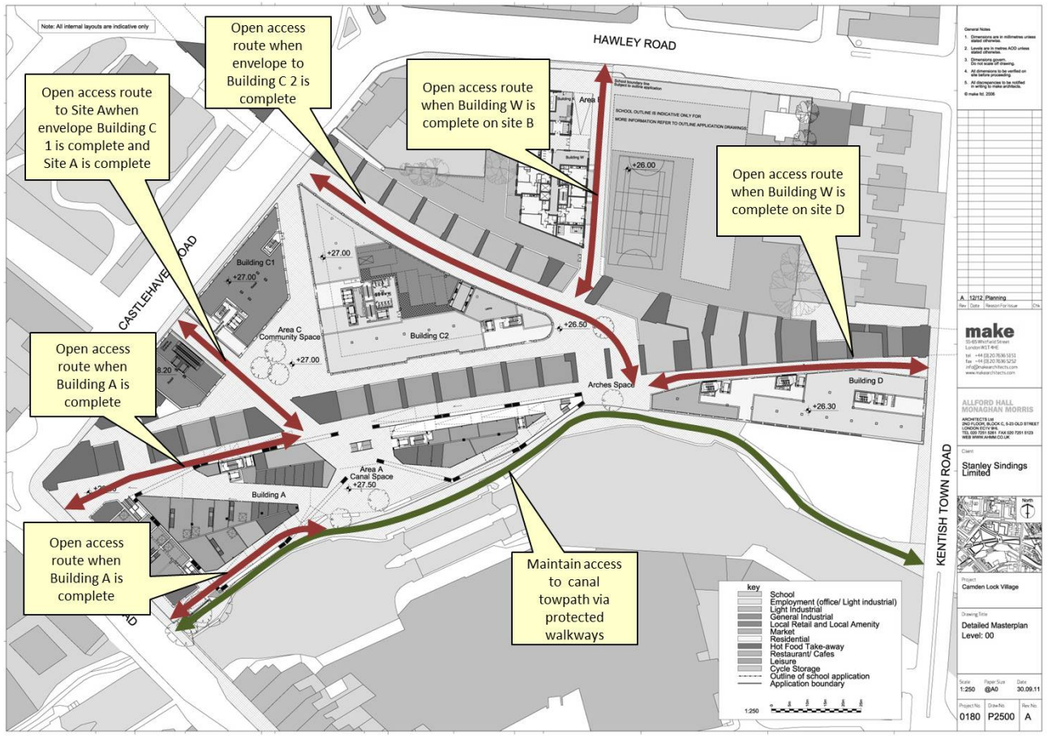
Fit out of the circulation spaces will follow the apartments fit out on a floor. This allows materials to be moved through the corridors to the apartments whilst minimising the risk of damage to completed installations.

Lift Installation to the cores will commence once the structure is complete and a waterproofing membrane is installed over the core. The lifts will be installed as early in the programme as possible to allow for early beneficial use to aid logistics and allow for the early removal of the external goods hoist.

Commissioning will commence as systems become available. Electrical commissioning starts in October 2015 with the main electrical distribution systems. Once power is commissioned it will release commissioning of the remaining cable based and mechanical systems as installations, utility supplies and plant rooms become available.

External Works

External works commence as soon as areas are available and will be completed to suit the phased completion of the various sites. But also not be so early that the completed works will be damaged by ongoing construction operations.



Once handovers commence site hoarding lines will be amended to allow safe access and egress for residents across the development whilst keeping the ongoing construction operations segregated from the general public. Access routes will be clearly marked and signage erected to avoid confusion.

The opening of these routes to the general public will be coordinated with the phased completion of the buildings on the individual sites.

As the scheme is progressed construction zones will contract, with more space given over for public amenity. However, access for the construction and fit out of Blocks A, B, C and D, will need to be maintained right through to the completion of the works, in line with health and safety practices.

GENERAL SITE LOGISTICS

TRAFFIC AND EGRESS

Proposed demolition and construction traffic routes are illustrated in Appendix B.

The access and egress of construction traffic will be carefully managed to minimise its impact upon the surrounding highway and local road users. Access and egress for construction vehicles will vary according to the particular stage of construction.

Our proposal is that during the early stages of the project access will predominantly be from Castlehaven Road and Hawley Road. We envisage that Haven Road, Leybourne Road and Torbay Street will be closed at the commencement of the site works, and that these redundant roads will be suited to provide access onto the site for demolition and enabling works to keep site traffic off the surrounding streets.

As the substructures progress on sites B and C vehicular access will be off the street, with deliveries and loading/unloading being largely confined to within the site confines.

All access to Area A will be across Area C beneath the rail arches using Haven Street and the new route across the site between buildings C1 and C2.

As the superstructure progresses, access from Castlehaven Road will be reduced to providing an off loading from the street for use by the tower cranes serving the rear of the site. It is common practice to use adjoining roads in tight knit urban environments.

All construction traffic coming to / leaving site will be closely controlled. Vehicles making deliveries to site or removing spoil or demolition material etc., will travel via designated routes, which will have been previously agreed with London Borough of Camden, and other relevant bodies, see appendix B for proposed routes to / from site from the North and South.

Deliveries will be phased and controlled on a 'just in time' basis, all being clearly marked to show their destination. This will minimise transport disruption and traffic jams caused by the works around the site and any associated noise. All transportation to, from and on the site will be on rubber tyre vehicles.

We have planned on deliveries being off loaded on the public highway during the erection of the C1 building and the envelope to C2, plus the frame and envelope works for site B and construction of Area D. For off-loading / loading and deliveries will be collected from the delivery vehicle and moved via pallet truck or rubber tyred telehandler / fork lift to the service hoist which will be located at ground floor level.

Whenever in use the unloading / loading location would be cordoned off with temporary barriers that will be withdrawn at the end of each working day. All deliveries will be marshalled to manage the safety of the public.

During substructure construction, wheel washing facilities will be installed to minimise the transfer of site generated soils to the local road network. Separate access gates will be provided for pedestrian and vehicular access into the Site, with clear signage to maintain the safety of the site and the public.

Any local traffic management measures for site access will be agreed with the relevant authorities.

There will be no car parking on site and the site labour force will be encouraged to use public transport. No parking on public roads will be allowed.

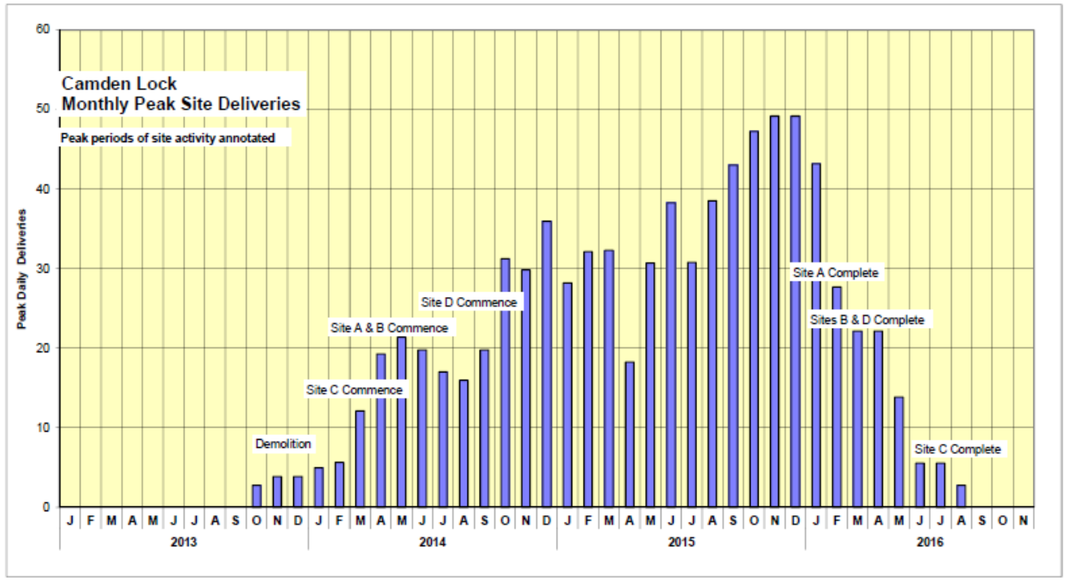
It is envisaged that some local parking suspensions will be required in Castlehaven Road and Hawley Road

Traffic Numbers

For the initial demolition and site enabling works, it is estimated that construction traffic flows will be in the order of 10-20 vehicles per day (two way flow), rising to 50 vehicles per day, coinciding with bulk excavation works.

However, during the internal fit out, this could be in the order of up to 40 -50 vehicles a day.

Vehicles making deliveries to the Site or removing spoil or demolition material will travel via designated routes which will be agreed with Camden, Transport for London (TfL) and the police as required.



Plant and Equipment

Consideration has been given to the types of plant and equipment that are likely to be used during the demolition and construction works. An indication of typical types of plant and equipment associated with the demolition and construction phases are identified in Table 6.4.

Indicative Plant used During Demolition and Construction

Plant and Equipment	Site Preparation and Enabling Works	Piling and Construction of the Substructure	Construction of the Structural Envelope, Shell and Core	Works to Existing Buildings / Structures	Services Installations	Fit out	Landscaping
Concrete crusher.	✓	×	×	×	×	×	×
Concrete silo and ready-mix lorries.	×	✓	✓	✓	×	×	✓
Concrete splitters and concrete saws.	✓	✓	×	×	×	×	×
Cranes and hoists.	×	✓	✓	✓	×	×	×
Cutters, drills and small tools.	✓	×	✓	✓	✓	✓	✓
Excavators and breakers.	✓	✓	×	×	×	×	✓
Floodlights.	×	×	✓	✓	✓	✓	×
Fork lift trucks.	×	×	✓	✓	✓	✓	✓
Hydraulic benders and cutters.	✓	✓	×	×	✓	×	×
Road Brush Vehicles.	✓	✓	✓	✓	✓	×	×
Piling Rigs.	×	✓	×	×	×	×	×
Lorries / vans.	×	×	✓	✓	✓	✓	✓
Tarmac laying equipment.	×	×	×	×	×	×	✓
Scaffolding and hydraulic access platforms.	✓	×	✓	✓	✓	×	×
Temporary supports.	×	✓	✓	✓	✓	×	×
Tipper lorries.	✓	✓	×	×	×	×	✓
Wheel washers.	×	✓	✓	✓	×	×	✓
Skips & Skip trucks.	✓	✓	✓	✓	✓	✓	✓

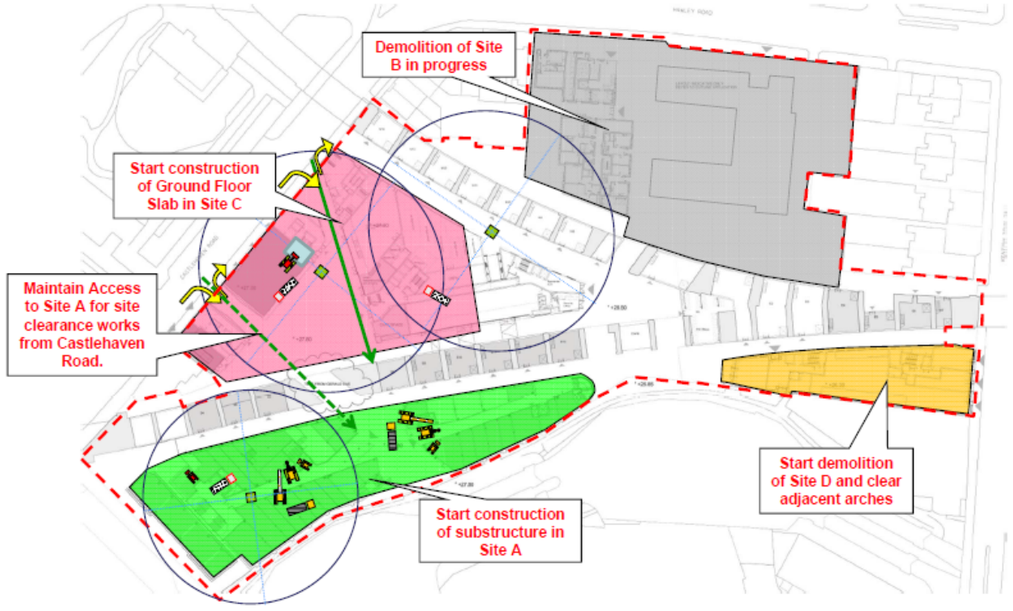
Site Craneage

The site logistics drawings in appendix C identify our initial thoughts on tower crane requirements.

During the construction of the development as whole our initial assessment is that 7No. tower cranes will be required.

The following layouts show the anticipated crane locations and unloading points.

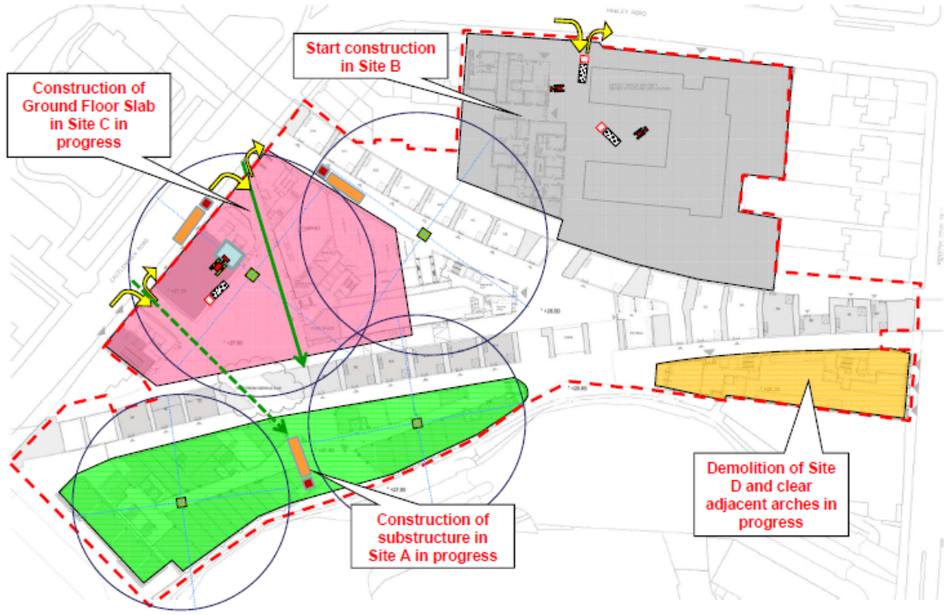
Stage 3 – Ground floor slab construction in Site C, Substructure to Site A & Demolition of Site D



Craneage Stage 3

Tower crane pick up points during the substructure period for areas A, B and C will all be from within the site. The initial cranes will be installed for Area C

Stage 4 – Construction of Site B building & Construction of Site A buildings

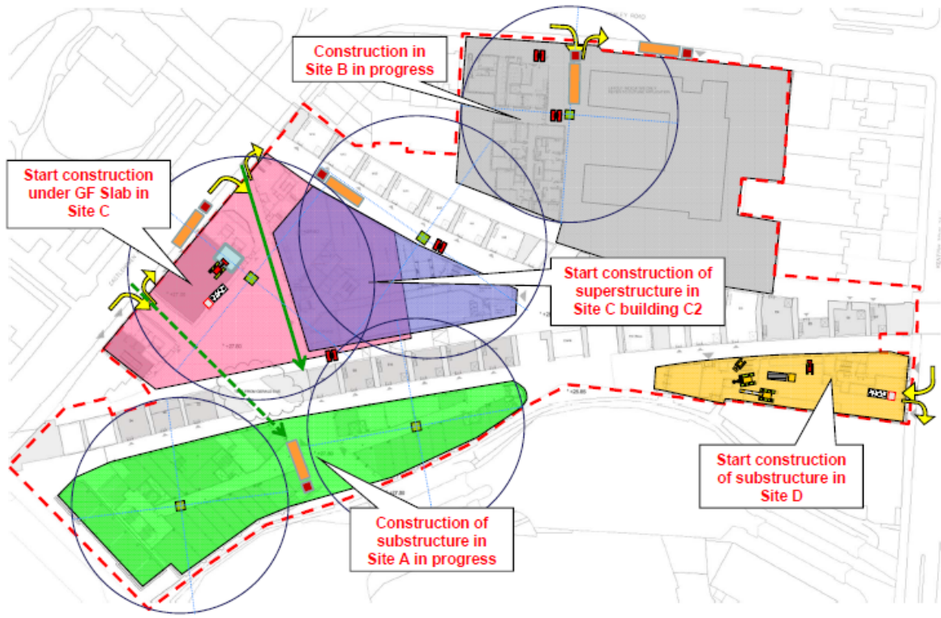


Craneage Stage 4

As the project progresses and the work faces open up on stages A and B further cranes will erected for the substructures of these buildings. Generally unloading points for these cranes will be within the site, although as the superstructures of blocks C2 and W progress, unloading facilities on Castlehaven Road and Hawley Road

During the superstructure for each building materials handling will be supplemented by the installation of external building hoists which will be used to service the external cladding and internal services/finishes works.

Stage 5 – Construct substructure under GF in Site C, Construction of Site C building C2 & Construction of Site D building

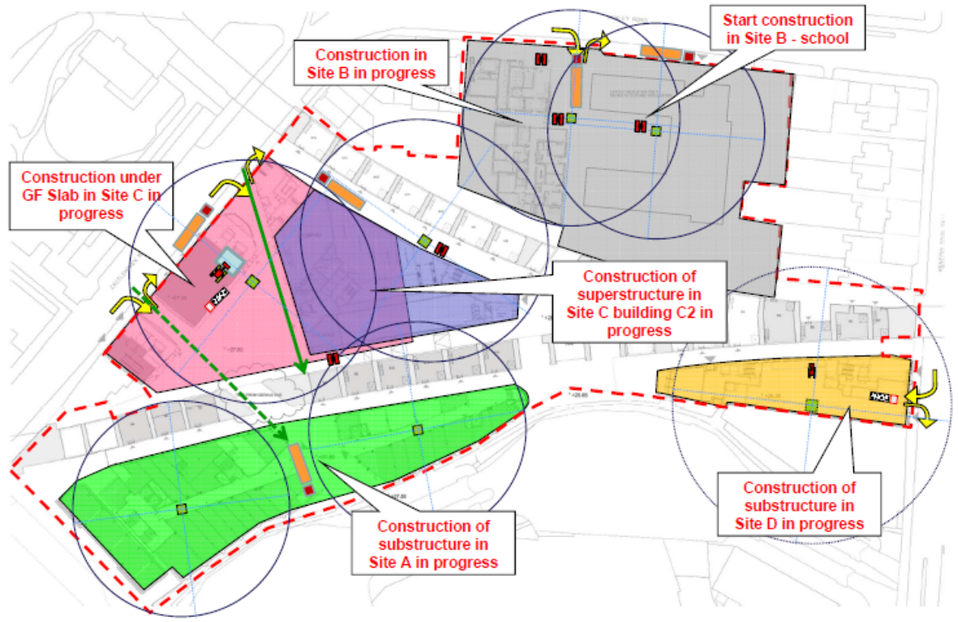


Craneage Stage 5

With the project progressing further and the superstructure to Area A progressing; an access route will be maintained across Area C such that building C1 superstructure is deferred. Unloading for C2 will be from Castlehaven Road, whilst the Hawley Road unloading point will remain and be used for the second crane serving the school of area B.

On Area D the substructure will commence and largely unloading for these works will be from within the site which will also have its own tower carne.

Stage 6 – Construction of Site B school

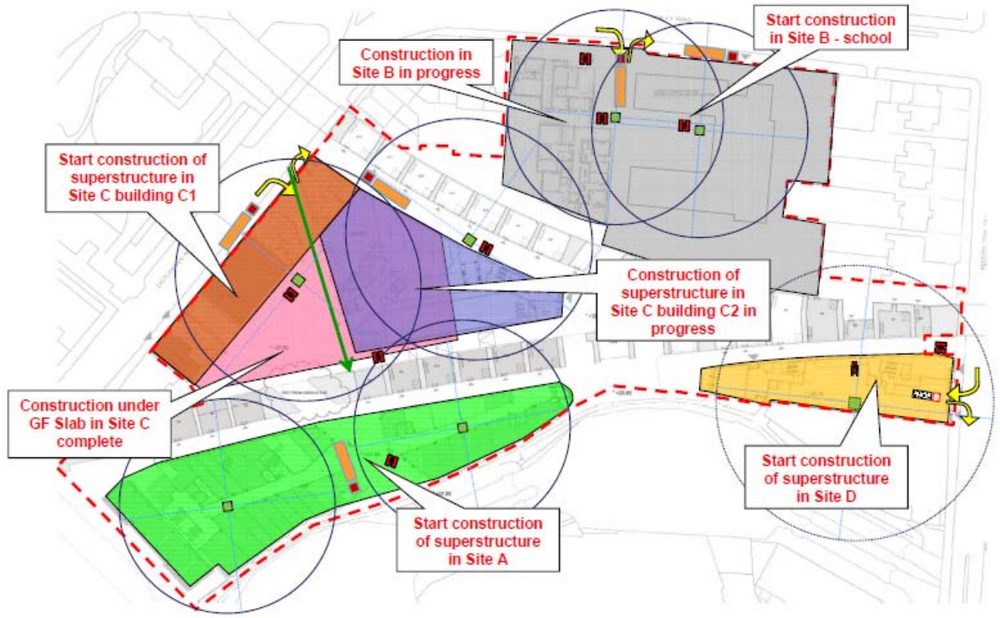


Craneage Stage 6

As the envelopes and fit out of the buildings on sites C, A and B reach completion and the fit out remains in progress, building C2 and Area D will be the last two sections of the site with tower cranes, both of which will be removed by Q1 2015 (approximately month 16).

Material and Personnel Hoists

The plan below indicates our anticipated hoist positions which will be erected during the construction of the individual building frames, used for external cladding and internal services and finishes, and removed once the internal lifts are complete and available.



For the hoists shown above unlading would be organised as follows:

Ste A – vehicles will be unloaded within Area C

Site B – vehicles will be unloaded from Hawley Road and from within the site

Area C – vehicles will be unloaded from Castlehaven Road for building C1, and from within the site for building C2

Area D – vehicles will be unloaded from Kensal Green Road

The table below sets out the likely hoist allocation for each building.

Site/Building	Type	Location	Serving
Area A Market Building	1 x twin car / goods	Centre of building	Ground to roof level
Ste B Building W/X	1 x twin car passenger / goods each	Both accessible from Hawley Road	Ground to roof level
Site B School Building	1 x twin car / goods	Rear of building	Ground to roof level
Area C Building C1	1 x twin car passenger / goods	Rear of building	Ground to roof level
Area C Building C2	2 x twin car passenger / goods	Rear of building	Ground to roof level
Area D Building D	1 x twin car passenger / goods	Rear of building	Ground to roof level

A key target within the programme is the completion of the permanent lifts and their taking into beneficial use for vertical transportation of personnel, tools and lightweight goods. This will be undertaken as early as possible to allow the hoists to be removed as early in the programme as possible.

Hours of Work

Prescribed hours of work will be agreed with Camden. However, due to the proximity of residents and commercial activities to the site, it is likely that standard hours of work will be prescribed as set out below:

- 08:00 - 18:00 hours Monday to Friday;
- 08:00 - 13:00 hours Saturday; and,
- No working on Sundays or Bank Holidays.

All work outside these hours will be subject to prior agreement, and / or reasonable notice, to Camden who may impose further restrictions. No further restrictions apply to the site, such as Section 60 notices, that may affect the working hours of the project

Although night-time (23:00 - 08:00), out-of-hours or weekend working would not normally be permitted, it is conceivable that certain works (for example, highway works) may have to be undertaken during these periods. If necessary, the hours of operation for such works would be subject to prior agreement and reasonable notice with LBC, except in emergency conditions.

The programme assumes that the site will be closed bank holidays and Christmas

Safety and Security

Due to location of the site and the nature of the surrounding premises it is important to address the issue of safety and security around the site boundary. Key factors to consider are:

- Security guards will be required to provide site entrance and perimeter control during the Demolition and new Construction works;
- At the commencement of the project a perimeter hoarding will be required in order to establish a secure site boundary and to segregate the public from the construction area;
- The perimeter hoarding will require amendment as areas of the development are handed over and taken into use. At all times the hoarding will be maintained to provide a secure site boundary segregating the public from ongoing construction operations;
- Security gates installed at access points to control site access and movements;
- Public safety around the site perimeter must be considered and measures put in place to control vehicle access and unloading;
- All safety and security provisions will be undertaken in accordance with Camden's code of practice

The hoardings on the development will comply with the following requirements:

- Hoarding positioning is to ensure that there are no instances where people can hide or drug deal
- All hoardings will be lit to comply with LBC requirements with respect to red lights on interfaces with traffic, pedestrian lighting in dark corners, etc.
- Consideration will be given to public art potential on the hoarding
- Provision will be made as required to incorporate Legible London graphics on the site hoardings
- The project will be registered under the Considerate Contractor scheme
- Public routes will be re-opened as soon as is practically possible
- Phasing of the development will be as shown on the phasing plans within this document. Where possible areas will be opened early to the public to shorten walking routes around the site around the site
- However, these routes will only be made available when site traffic on any one onf the sites reaches a reduced and manageable level (during commissioning and completion of the buildings) to avoid causing any undue risks to public safety

Site Accommodation and Welfare

Because of the nature and size of the project and with regard to available space and construction phasing / sequencing, the site accommodation will need to be phased.

Enabling Works Demolition Phase

During this period, the site office/welfare will be located within the existing site areas, and will be flexible to suit the progress of the works, utilising existing hard standings where possible.

New Build Construction

During the main phase of works we will be looking to keep accommodation outside of the new buildings foot prints and have located our site accommodation on the corner of Area C at the rear of the proposed C1 building adjacent to the railway viaducts, but located so as not to obstruct access across the site to Area A.

However, because of the size of the Masterplan site and the distances between sites, there would also be a need to locate individual smaller accommodation set ups on each of the sites, and particularly Area B, which may have its own stand-alone site welfare facilities.

Noise, Vibration and Dust Management

To minimise impacts due to noise, vibration and dust, Site-specific best practice measures will be implemented by all contractors involved in the project. The framework of which will include a detailed review of the mitigation measures during the demolition and construction works, but a summary is provided below:

- Careful selection of demolition / construction methods and plant to be used in order to minimise noise and vibration impacts at source, as far as reasonably practicable;
- Switching off of plant and vehicle engines when not in use;
- Regular maintenance and servicing of vehicles, equipment and plant;
- Appropriate handling and storage of materials;
- Operational hours (to be agreed with Camden);
- The use of temporary acoustic barriers where appropriate;
- Breaking out of concrete structures will be undertaken using concrete 'munching' equipment where possible, if percussive breaking has to be used then it will be used during agreed hours;
- Damping down surfaces during dry weather;
- Implementation of measures to reduce dust emissions during transport (for example, sheeting the sides of vehicles carrying fine material);
- Use of dust screens and covers and the appropriate location of dusty materials storage;
- Use of water sprayers and boarding; and
- Restriction of drop heights onto lorries.

Threshold Noise Action Levels (NALs) will be agreed with Camden, and noise levels will be monitored during the demolition and construction phases. If the action levels are exceeded the activity will cease and rectification measures implemented.

The final measures implemented to mitigate and control noise and vibration will be determined by the final design decisions and be in accordance with the requirements identified within any planning conditions.

Dust monitoring will also be undertaken during the demolition and construction phases. Special provisions will apply for any materials containing asbestos. A safety method statement will outline the control measures necessary to minimise the risks to an acceptable level, and all statutory notices will be placed with the Health and Safety Executive (HSE).

Waste Management, Recycling and Disposal

An unavoidable by-product of demolition and construction activities is the generation of waste. Major sources of waste within the construction process are:

- Demolition spoil - concrete, brick rubble, steel, aluminium, plastics, wood etc.;
- Packaging - plastics, pallets, expanded foams etc.;
- Waste materials generated from inaccurate ordering, poor usage, badly stored materials, poor handling, spillage etc.; and
- Dirty water, for example from site run-off containing silt.

Mace is constantly striving to drive-out waste from its own activities and from those of the supply chain. We do this in a variety of ways:

- Using ‘Lessons Learnt’ reports from other projects
- Engaging with product and materials suppliers to review value stream
- Carrying out specific studies
- Shared Systems and Processes

Mace will instigate a ‘Site Waste Management Plan’ on the project. All relevant contractors will be required to investigate opportunities to:

1. Eliminate waste at source; i.e. avoiding un-necessary packaging
2. Reducing waste; cutting back on packaging, ordering materials to fit where traditionally brought in standard sizes, i.e. plasterboard
3. maximising re-use of packaging; i.e. returning packaging to source for re-use
4. recycling where we are unable to eliminate, reduce or re-use
5. where waste generation is unavoidable, to maximise the recycling and reuse potential of demolition and construction materials.

Wherever feasible, arising’s will be dealt with in a manner that reduces their environmental impact and maximises potential re-use of materials. Recycling of materials will largely take place off-site where noise and dust are less likely to result in impacts to the occupants of surrounding properties.

The destination of all waste or other materials removed from site will be notified to the relevant authority by the Contractor / Construction Manager for approval. Loads will only be deposited at authorised waste treatment and disposal sites. Deposition will be in accordance with the requirements of the Environment Agency, the Environmental Protection Act 1990, Controlled Waste Regulations 1992, Controlled Waste (Amendment) Regulations 1993, the Special Waste Regulations 1996, Special Waste (Amendment) Regulations 1996 & 1997, the Duty of Care Regulations 1991 and with due regard for the London Borough of Camden’s environmental and waste management strategies.

A ‘Site Waste Management Plan’ will be maintained, compiled with the aid of the logistics and other contractors, and regularly monitored. To prove the correct depositing of excavated material and to prevent the occurrence of fly-tipping, a docket system/waste monitoring system off-site will be used. The Contractor / Trade-contractor will operate a sequentially numbered docket system, to confirm that each load is received at the approved disposal site. Copies of the dockets are to be provided to the nominated manager, and available for inspection on site. Waste targets (and the use of early indicators) will be set for each trade/trade-contractor, based on measurements taken from previous experience.

No burning of demolition or construction waste will be undertaken on the site. Building materials containing asbestos will be fully assessed in advance of demolition works commencing. All asbestos materials will be removed in a controlled manner in accordance with current legislation and approved codes of practice and guidance.

In addition to the usual waste associated with a ‘normal’ construction project, due to the sites previous industrial uses and current part use as a fuel filling station there may also be quantities of contaminants or hazardous materials found during demolition and excavation. The control, handling and disposal of these materials will require special attention and the SWMP will detail the necessary requirements following a more thorough pre-commencement geotechnical investigation.

Management of Sub-Contractors

Where individual contracts are implemented (for example for demolition and waste removal) these will incorporate relevant requirements in respect of environmental control, based largely on the standard of 'good working practice' as outlined in the Environmental Management Plan (EMP) as well as statutory requirements.

Potential sub-contractors will be required to demonstrate how they will achieve the provisions of the EMP, how targets will be met and how potential effects will be minimised.

Management of Construction Works

Mace will assign a dedicated Project Manager who will have sole responsibility for delivering the project. Their contact details will be identified to all stake-holders, Camden, adjoining owners and local community groups. The Mace Project Manager will be responsible for not only delivery but also for dealing with queries from the public, complaints and enquiries.

This Mace Project Manager will be named at the site entrance, with a contact number, and will be identified to Camden, and community groups, prior to the start of site activities.

Regular liaison will also be undertaken with adjoining owners and community groups to keep them up to date with progress and advise on forthcoming site activities.

Social Inclusion

Mace's social inclusion programmes (SIP) aims to create a sustainable construction workforce, provide local communities with employment and transferable skills, and to be exemplary in achieving community involvement, local labour training and development excellence. Our overall objective is to close the "skills gap", a well-publicised and serious issue in the industry and in doing so we aim to reduce the burden on the local community. In particular, we aim to provide new opportunities for people with barriers to employment. Construction projects can deliver a substantial increase in local employment; these opportunities improve economic activity and address high levels of unemployment in areas of the UK.

Whenever appropriate, we establish a SIP aimed at forging links with local communities, offering relevant employment, training and supply opportunities on our projects. A 'workplace coordinator' facilitates the scheme bridging the gap between the public and private partners and local communities and construction employers. Mace's programme focuses on both individuals and local companies, ensuring all opportunities are identified. The programme also addresses those facing barriers to employment; the socially excluded, the long term unemployed, those with few or no skills, women, lone parents and people from local ethnic minority communities.

Response to Complaints

Any complaints will be logged on-site and reported to the relevant individual / stake-holder or specific individuals within Camden (and vice versa) as soon as practicable (if applicable).

The EMP will specify the roles and responsibilities of the Project Manager and Camden in respect of breaches and complaints from the public. The required actions will be different in each specific case, depending on the operation, equipment or location.

HEALTH & SAFETY

CLIENT DUTIES INDER THE CDM REGULATIONS

The CDM 2007 Regulations place legal duties on virtually everyone involved in construction work namely clients, contractors, designers, CDM co-ordinators and the workforce (duty holders). The client duties on construction projects include:

- Checking competence and resources of all appointees
- Ensure that there are suitable arrangements for Welfare facilities
- Allow sufficient time and resource for all stages of the projects
- Provide pre-construction information to designers and contractors.

Additional duties on notifiable projects i.e. (more than 30 days or 500 person days) are as follows:

- Appoint a CDM Co-ordinator
- Appoint a Principal/Main Contractor
- Ensure that the project doesn't start without suitable welfare facilities and a construction phase health and safety plan
- Provide information relating to the health and safety file to the CDM Co-ordinator
- Retain and provide access to the health and safety file.

The CDM Co-ordinator (CDMC) duties will include:

- Advising and assisting the client with their duties
- Notify HSE
- Co-ordinator of health and safety aspects of design
- Facilitate good communication between client, designers and contractors
- Liaise with principal contractor regarding on-going design
- Identify collect and pass on pre-construction information.
- Prepare and update the health and safety file.

PROJECT SPECIFIC HEALTH, SAFETY AND ENVIRONMENTAL ASPECTS

More specifically on the project there are a number of health, safety and environmental aspects identified below that will need addressing as the design and methodology develops.

- Provision of welfare facilities during construction including potential satellite facilities

- Separation of construction areas from public areas and separate pedestrian access to the site
- Segregation and protection of residents and retail activities from construction activities following early handovers
- Site security
- Control of vehicle movements
- Cleaning of site vehicles before they enter the highway
- Public protection, i.e. scaffolds, fans, crash decks
- Pedestrian routing around the site and especially during the Enabling/Demolition Works
- Fire strategy and emergency escape routes including interfacing with neighbouring landlords and tenants
- Noise control especially for removal of existing foundations and piling
- Establishing existing noise levels and monitoring during construction with Camden
- Dust control and monitoring (especially during demolition)
- Vibration monitoring and establishment of sensitive receptors
- Identification of potential contaminants in the ground – if any?
- Material deliveries and storage
- Fit out strategy
- Workforce site travel plan
- Set-up complaints procedures

CONCLUSION

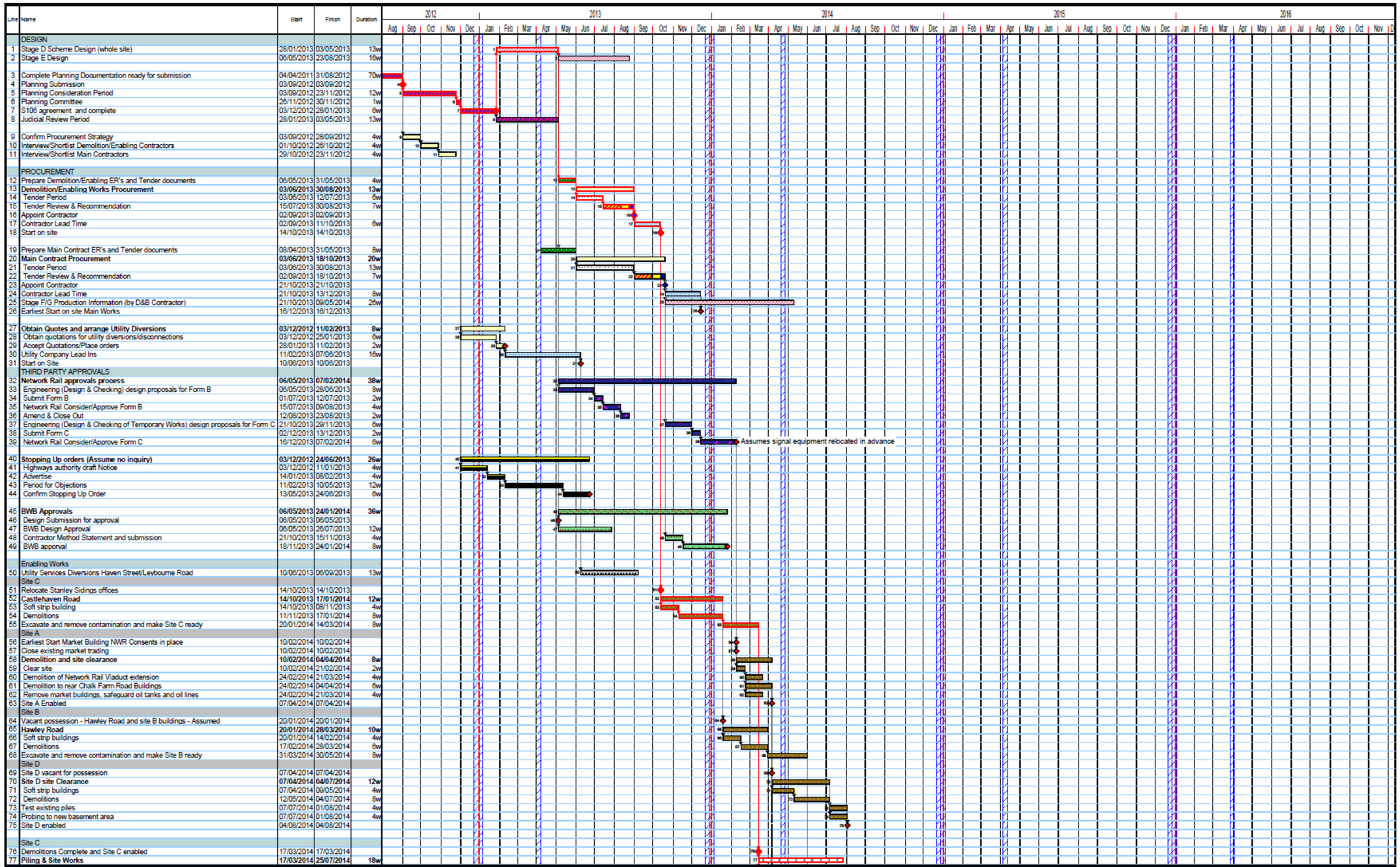
This report has been prepared in discussion with the Camden Lock Village project team in support of the planning and EIA process. It includes a range of measures to ensure that the development would be implemented in a manner that minimises or eliminates the impact on the surrounding area.

The content of the report and the assumptions will need to be regularly reviewed and updated as the detailed design develops, should the development be granted planning permission.

APPENDICIES

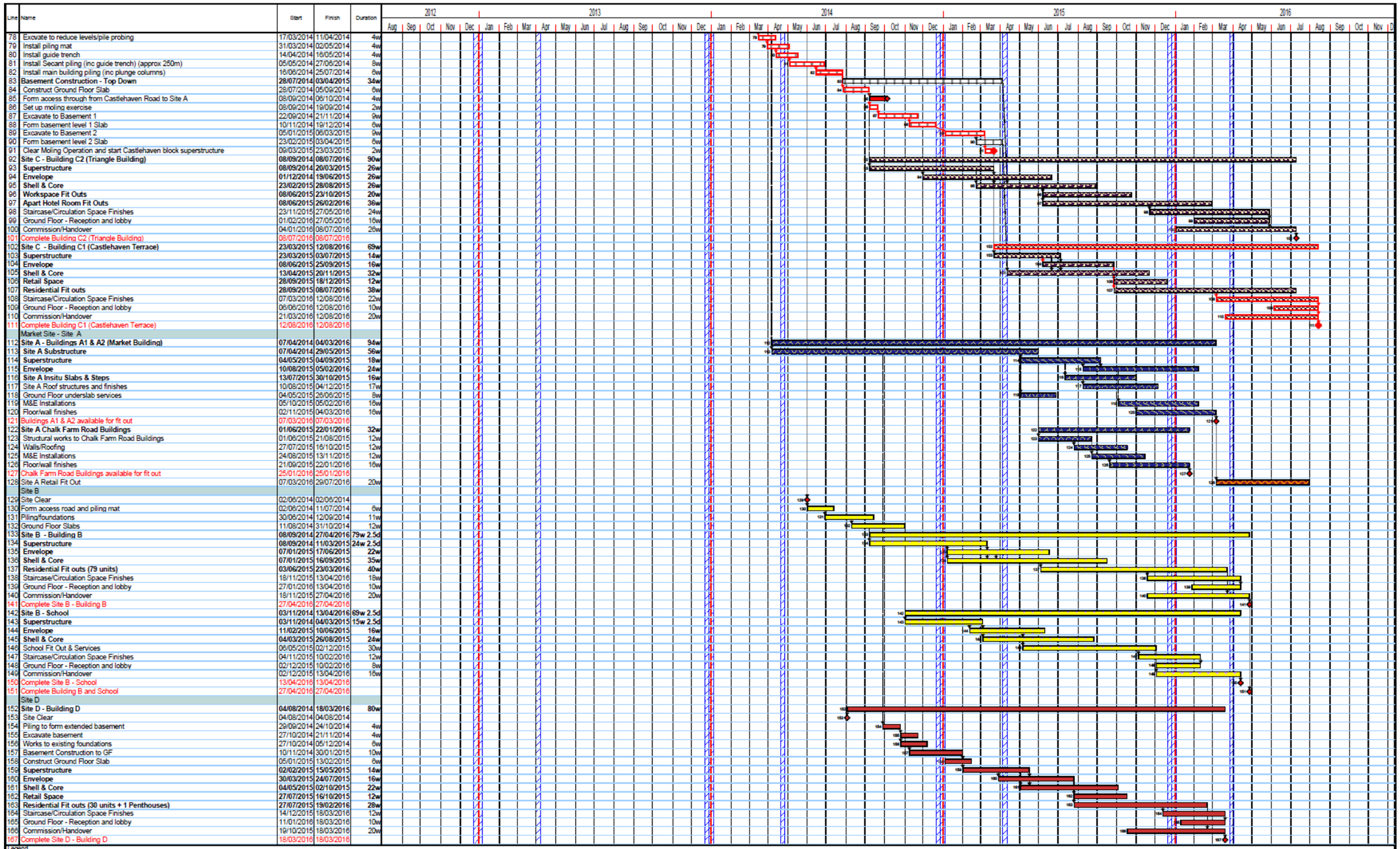
APPENDIX A: STRATEGIC PROGRAMME

Line	Name	Start	Finish	Duration
	DESIGN			
1	Stage D Scheme Design (whole site)	28/01/2013	03/05/2013	13w
2	Stage E Design	06/05/2013	23/08/2013	16w
3	Complete Planning Documentation ready for submission	04/04/2011	31/08/2012	70w
4	Planning Submission	03/09/2012	03/09/2012	
5	Planning Consideration Period	03/09/2012	23/11/2012	12w
6	Planning Committee	26/11/2012	30/11/2012	1w
7	S106 agreement and complete	03/12/2012	28/01/2013	6w
8	Judicial Review Period	28/01/2013	03/05/2013	13w
9	Confirm Procurement Strategy	03/09/2012	28/09/2012	4w
10	Interview/Shortlist Demolition/Enabling Contractors	01/10/2012	26/10/2012	4w
11	Interview/Shortlist Main Contractors	29/10/2012	23/11/2012	4w
	PROCUREMENT			
12	Prepare Demolition/Enabling ER's and Tender documents	06/05/2013	31/05/2013	4w
13	**Demolition/Enabling Works Procurement**	**03/06/2013**	**30/08/2013**	**13w**
14	Tender Period	03/06/2013	12/07/2013	6w
15	Tender Review & Recommendation	15/07/2013	30/08/2013	7w
16	Appoint Contractor	02/09/2013	02/09/2013	
17	Contractor Lead Time	02/09/2013	11/10/2013	6w
18	Start on site	14/10/2013	14/10/2013	
19	Prepare Main Contract ER's and Tender documents	08/04/2013	31/05/2013	8w
20	**Main Contract Procurement**	**03/06/2013**	**18/10/2013**	**20w**
21	Tender Period	03/06/2013	30/08/2013	13w
22	Tender Review & Recommendation	02/09/2013	18/10/2013	7w
23	Appoint Contractor	21/10/2013	21/10/2013	
24	Contractor Lead Time	21/10/2013	13/12/2013	8w
25	Stage F/G Production Information (by D&B Contractor)	21/10/2013	09/05/2014	26w
26	Earliest Start on site Main Works	16/12/2013	16/12/2013	
27	**Obtain Quotes and arrange Utility Diversions**	**03/12/2012**	**11/02/2013**	**8w**
28	Obtain quotations for utility diversions/disconnections	03/12/2012	25/01/2013	6w
29	Accept Quotations/Place orders	28/01/2013	11/02/2013	2w
30	Utility Company Lead Ins	11/02/2013	07/06/2013	16w
31	Start on Site	10/06/2013	10/06/2013	
	THIRD PARTY APPROVALS			
32	**Network Rail approvals process**	**06/05/2013**	**07/02/2014**	**38w**
33	Engineering (Design & Checking) design proposals for Form B	06/05/2013	28/06/2013	8w
34	Submit Form B	01/07/2013	12/07/2013	2w
35	Network Rail Consider/Approve Form B	15/07/2013	09/08/2013	4w
36	Amend & Close Out	12/08/2013	23/08/2013	2w
37	Engineering (Design & Checking of Temporary Works) design proposals for Form C	21/10/2013	29/11/2013	6w
38	Submit Form C	02/12/2013	13/12/2013	2w
39	Network Rail Consider/Approve Form C	16/12/2013	07/02/2014	6w
40	**Stopping Up orders (Assume no inquiry)**	**03/12/2012**	**24/06/2013**	**26w**
41	Highways authority draft Notice	03/12/2012	11/01/2013	4w
42	Advertise	14/01/2013	08/02/2013	4w
43	Period for Objections	11/02/2013	10/05/2013	12w
44	Confirm Stopping Up Order	13/05/2013	24/06/2013	6w
45	**BWB Approvals**	**06/05/2013**	**24/01/2014**	**36w**
46	Design Submission for approval	06/05/2013	06/05/2013	
47	BWB Design Approval	06/05/2013	26/07/2013	12w
48	Contractor Method Statement and submission	21/10/2013	15/11/2013	4w
49	BWB apporval	18/11/2013	24/01/2014	8w
	Enabling Works			
50	Utility Services Diversions Haven Street/Leybourne Road	10/06/2013	06/09/2013	13w
	Site C			
51	Relocate Stanley Sidings offices	14/10/2013	14/10/2013	
52	**Castlehaven Road**	**14/10/2013**	**17/01/2014**	**12w**
53	Soft strip building	14/10/2013	08/11/2013	4w
54	Demolitions	11/11/2013	17/01/2014	8w
55	Excavate and remove contamination and make Site C ready	20/01/2014	14/03/2014	8w
	Site A			
56	Earliest Start Market Building NWR Consents in place	10/02/2014	10/02/2014	
57	Close existing market trading	10/02/2014	10/02/2014	
58	**Demolition and site clearance**	**10/02/2014**	**04/04/2014**	**8w**
59	Clear site	10/02/2014	21/02/2014	2w
60	Demolition of Network Rail Viaduct extension	24/02/2014	21/03/2014	4w
61	Demolition to rear Chalk Farm Road Buildings	24/02/2014	04/04/2014	6w
62	Remove market buildings, safeguard oil tanks and oil lines	24/02/2014	21/03/2014	4w
63	Site A Enabled	07/04/2014	07/04/2014	
	Site B			
64	Vacant possession - Hawley Road and site B buildings - Assumed	20/01/2014	20/01/2014	
65	**Hawley Road**	**20/01/2014**	**28/03/2014**	**10w**
66	Soft strip buildings	20/01/2014	14/02/2014	4w
67	Demolitions	17/02/2014	28/03/2014	6w
68	Excavate and remove contamination and make Site B ready	31/03/2014	30/05/2014	8w
	Site D			
69	Site D vacant for possession	07/04/2014	07/04/2014	
70	**Site D site Clearance**	**07/04/2014**	**04/07/2014**	**12w**
71	Soft strip buildings	07/04/2014	09/05/2014	4w
72	Demolitions	12/05/2014	04/07/2014	8w
73	Test existing piles	07/07/2014	01/08/2014	4w
74	Probing to new basement area	07/07/2014	01/08/2014	4w
75	Site D enabled	04/08/2014	04/08/2014	
	Site C			
76	Demolitions Complete and Site C enabled	17/03/2014	17/03/2014	
77	Piling & Site Works	17/03/2014	25/07/2014	18w



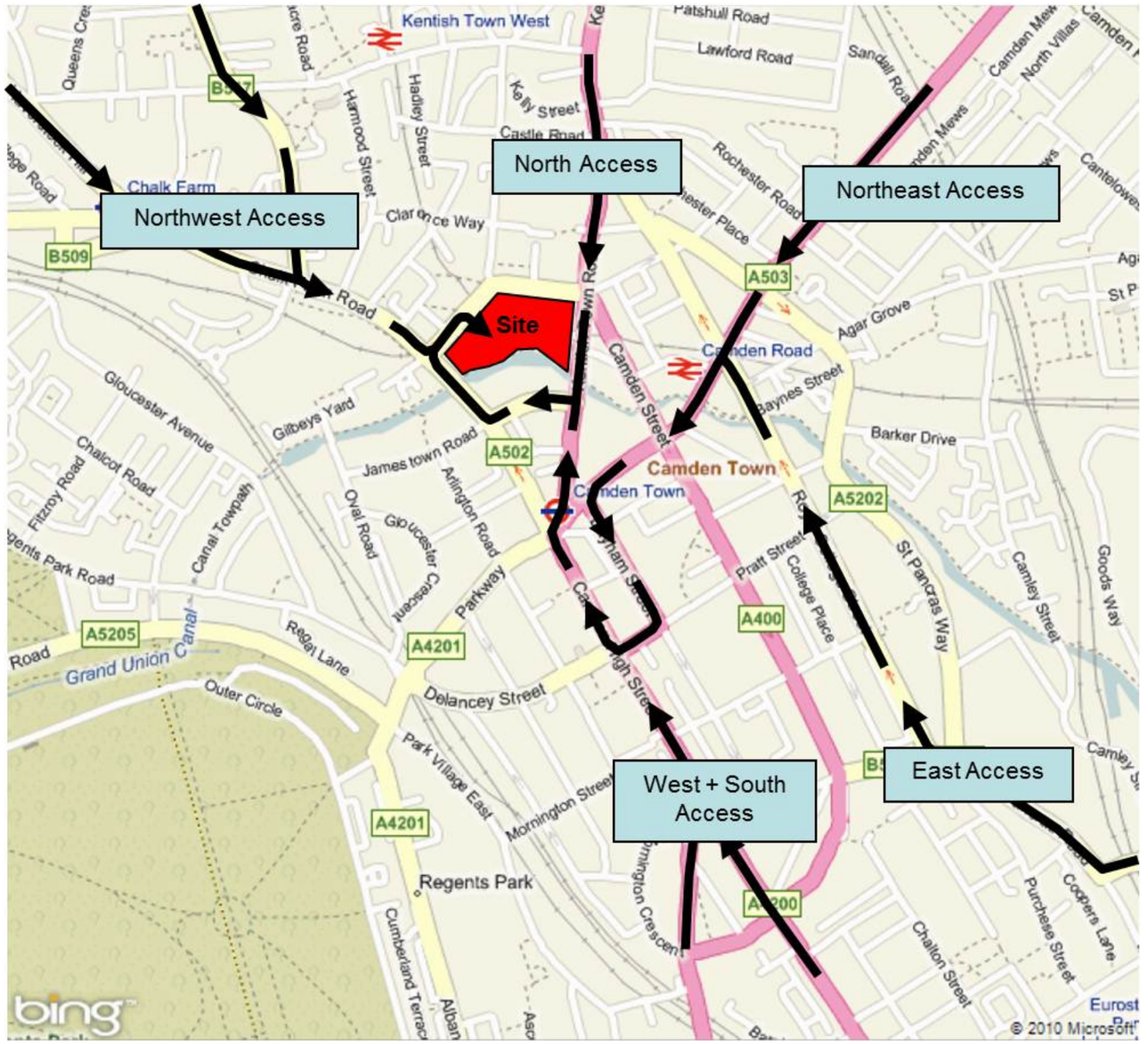
Project title: Camden Lock Village	Dated: 08/09/2010	Drawn by:	Programme No: CAMLK/Strat/01 (1of2)
Programme title: Base Draft Programme New Proposal	Revision comment: New Proposal		
Client: Stanley Sidings limited & chelsfield	Notes: Building A Double Level Basement		
	Sheet 1 of 2	Revision: H	Revision Date: 15/08/2012

Line	Name	Start	Finish	Duration
78	Excavate to reduce levels/pile probing	17/03/2014	11/04/2014	4w
79	Install piling mat	31/03/2014	02/05/2014	4w
80	Install guide trench	14/04/2014	16/05/2014	4w
81	Install Secant piling (inc guide trench) (approx 250m)	05/05/2014	27/06/2014	8w
82	Install main building piling (inc plunge columns)	16/06/2014	25/07/2014	6w
83	**Basement Construction - Top Down**	**28/07/2014**	**03/04/2015**	**34w**
84	Construct Ground Floor Slab	28/07/2014	05/09/2014	6w
85	Form access through from Castlehaven Road to Site A	08/09/2014	06/10/2014	4w
86	Set up moling exercise	08/09/2014	19/09/2014	2w
87	Excavate to Basement 1	22/09/2014	21/11/2014	9w
88	Form basement level 1 Slab	10/11/2014	19/12/2014	6w
89	Excavate to Basement 2	05/01/2015	06/03/2015	9w
90	Form basement level 2 Slab	23/02/2015	03/04/2015	6w
91	Clear Moling Operation and start Castlehaven block superstructure	09/03/2015	23/03/2015	2w
92	**Site C - Building C2 (Triangle Building)**	**08/09/2014**	**08/07/2016**	**90w**
93	**Superstructure**	**08/09/2014**	**20/03/2015**	**26w**
94	**Envelope**	**01/12/2014**	**19/06/2015**	**26w**
95	**Shell & Core**	**23/02/2015**	**28/08/2015**	**26w**
96	**Workspace Fit Outs**	**08/06/2015**	**23/10/2015**	**20w**
97	**Apart Hotel Room Fit Outs**	**08/06/2015**	**26/02/2016**	**36w**
98	Staircase/Circulation Space Finishes	23/11/2015	27/05/2016	24w
99	Ground Floor - Reception and lobby	01/02/2016	27/05/2016	16w
100	Commission/Handover	04/01/2016	08/07/2016	26w
101	Complete Building C2 (Triangle Building)	08/07/2016	08/07/2016	
102	**Site C - Building C1 (Castlehaven Terrace)**	**23/03/2015**	**12/08/2016**	**69w**
103	**Superstructure**	**23/03/2015**	**03/07/2015**	**14w**
104	**Envelope**	**08/06/2015**	**25/09/2015**	**16w**
105	**Shell & Core**	**13/04/2015**	**20/11/2015**	**32w**
106	**Retail Space**	**28/09/2015**	**18/12/2015**	**12w**
107	**Residential Fit outs**	**28/09/2015**	**08/07/2016**	**38w**
108	Staircase/Circulation Space Finishes	07/03/2016	12/08/2016	22w
109	Ground Floor - Reception and lobby	06/06/2016	12/08/2016	10w
110	Commission/Handover	21/03/2016	12/08/2016	20w
111	Complete Building C1 (Castlehaven Terrace)	12/08/2016	12/08/2016	
	Market Site - Site A			
112	**Site A - Buildings A1 & A2 (Market Building)**	**07/04/2014**	**04/03/2016**	**94w**
113	**Site A Substructure**	**07/04/2014**	**29/05/2015**	**56w**
114	**Superstructure**	**04/05/2015**	**04/09/2015**	**18w**
115	**Envelope**	**10/08/2015**	**05/02/2016**	**24w**
116	**Site A Insitu Slabs & Steps**	**13/07/2015**	**30/10/2015**	**16w**
117	Site A Roof structures and finishes	10/08/2015	04/12/2015	17w
118	Ground Floor underslab services	04/05/2015	28/06/2015	8w
119	M&E installations	05/10/2015	05/02/2016	16w
120	Floor/wall finishes	02/11/2015	04/03/2016	16w
121	Buildings A1 & A2 available for fit out	07/03/2016	07/03/2016	
122	**Site A Chalk Farm Road Buildings**	**01/06/2015**	**22/01/2016**	**32w**
123	Structural works to Chalk Farm Road Buildings	01/06/2015	21/08/2015	12w
124	Walls/Roofing	27/07/2015	16/10/2015	12w
125	M&E installations	24/08/2015	13/11/2015	12w
126	Floor/wall finishes	21/09/2015	22/01/2016	16w
127	Chalk Farm Road Buildings available for fit out	25/01/2016	25/01/2016	
128	Site A Retail Fit Out	07/03/2016	29/07/2016	20w
	Site B			
129	Site Clear	02/06/2014	02/06/2014	
130	Form access road and piling mat	02/06/2014	11/07/2014	6w
131	Piling/foundations	30/06/2014	12/09/2014	11w
132	Ground Floor Slabs	11/08/2014	31/10/2014	12w
133	**Site B - Building B**	**08/09/2014**	**27/04/2016**	**79w 2.5d**
134	**Superstructure**	**08/09/2014**	**11/03/2015**	**24w 2.5d**
135	**Envelope**	**07/01/2015**	**17/06/2015**	**22w**
136	**Shell & Core**	**07/01/2015**	**16/09/2015**	**35w**
137	**Residential Fit outs (79 units)**	**03/06/2015**	**23/03/2016**	**40w**
138	Staircase/Circulation Space Finishes	18/11/2015	13/04/2016	18w
139	Ground Floor - Reception and lobby	27/01/2016	13/04/2016	10w
140	Commission/Handover	18/11/2015	27/04/2016	20w
141	Complete Site B - Building B	27/04/2016	27/04/2016	
142	**Site B - School**	**03/11/2014**	**13/04/2016**	**69w 2.5d**
143	**Superstructure**	**03/11/2014**	**04/03/2015**	**15w 2.5d**
144	**Envelope**	**11/02/2015**	**10/06/2015**	**16w**
145	**Shell & Core**	**04/03/2015**	**26/08/2015**	**24w**
146	School Fit Out & Services	06/05/2015	02/12/2015	30w
147	Staircase/Circulation Space Finishes	04/11/2015	10/02/2016	12w
148	Ground Floor - Reception and lobby	02/12/2015	10/02/2016	8w
149	Commission/Handover	02/12/2015	13/04/2016	16w
150	Complete Site B - School	13/04/2016	13/04/2016	
151	Complete Building B and School	27/04/2016	27/04/2016	
	Site D			
152	**Site D - Building D**	**04/08/2014**	**18/03/2016**	**80w**
153	Site Clear	04/08/2014	04/08/2014	
154	Piling to form extended basement	29/09/2014	24/10/2014	4w
155	Excavate basement	27/10/2014	21/11/2014	4w
156	Works to existing foundations	27/10/2014	05/12/2014	6w
157	Basement Construction to GF	10/11/2014	30/01/2015	10w
158	Construct Ground Floor Slab	05/01/2015	13/02/2015	6w
159	**Superstructure**	**02/02/2015**	**15/05/2015**	**14w**
160	**Envelope**	**30/03/2015**	**24/07/2015**	**16w**
161	**Shell & Core**	**04/05/2015**	**02/10/2015**	**22w**
162	**Retail Space**	**27/07/2015**	**16/10/2015**	**12w**
163	**Residential Fit outs (30 units + 1 Penthouses)**	**27/07/2015**	**19/02/2016**	**28w**
164	Staircase/Circulation Space Finishes	14/12/2015	18/03/2016	12w
165	Ground Floor - Reception and lobby	11/01/2016	18/03/2016	10w
166	Commission/Handover	19/10/2015	18/03/2016	20w
167	Complete Site D - Building D	18/03/2016	18/03/2016	



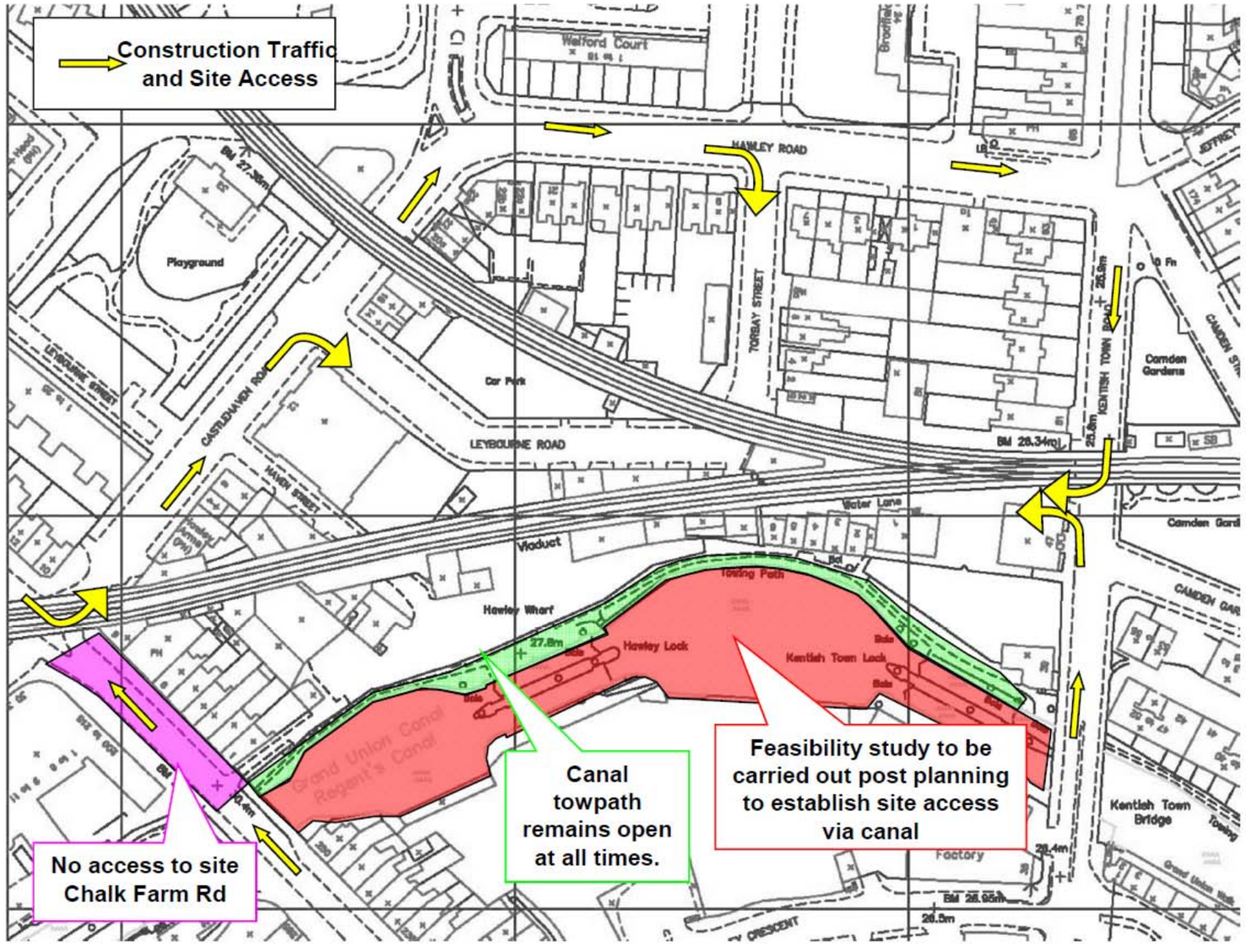
Project title: Camden Lock Village	Dated: 08/09/2010	Drawn by	Programme No: CAMLK/Strat/01 (2of2)
Programme title: Base Draft Programme New Proposal	Revision comment: New Proposal		
Client: Stanley Sidings limited & chelsfield	Notes: Building A Double Level Basement		
	Sheet 2 of 2	Revision: H	Revision Date: 15/08/2012

APPENDIX B: VEHICLE ROUTES

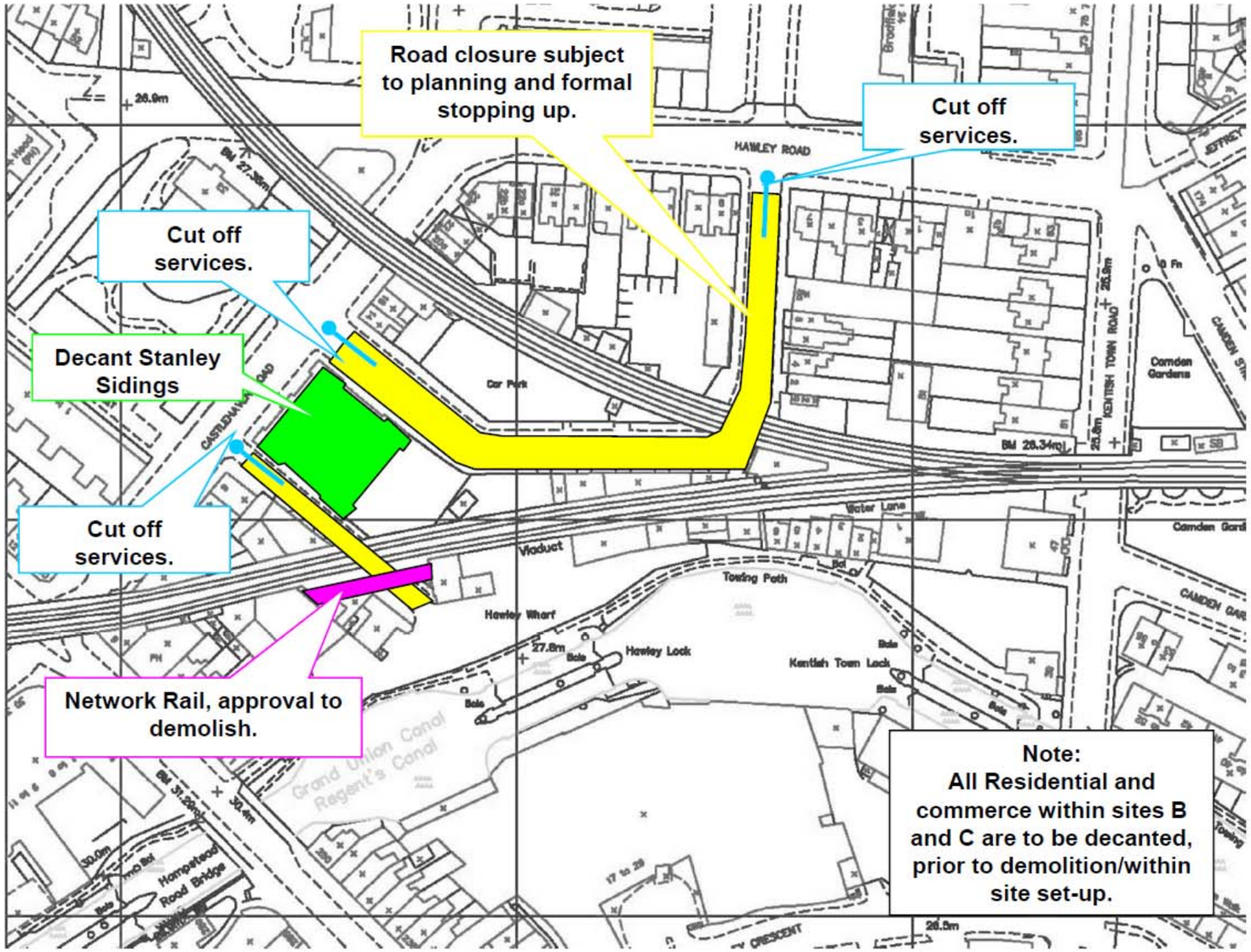


APPENDIX C: PHASING DRAWINGS

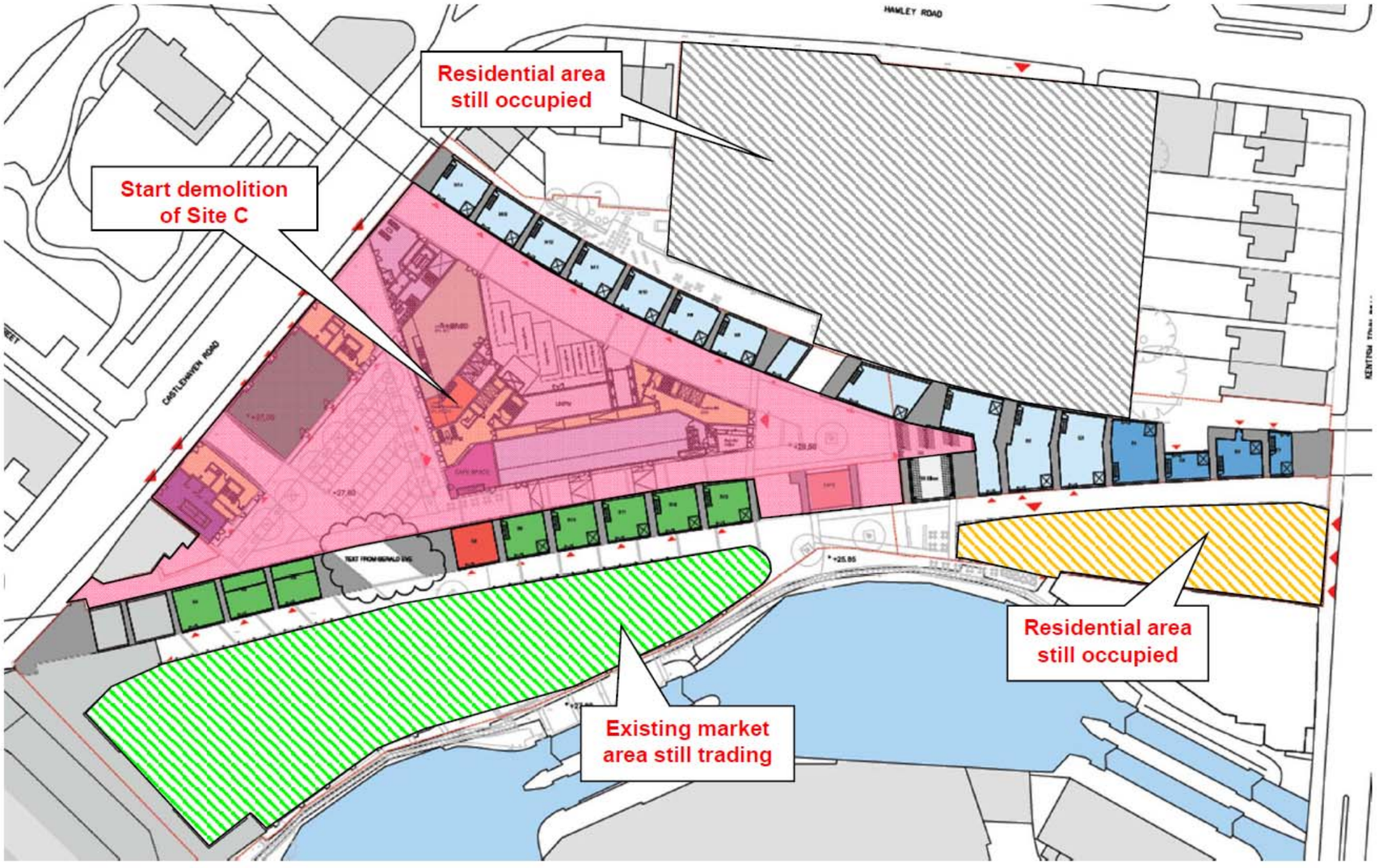
Construction Traffic and Site Access



Services, approvals and closures

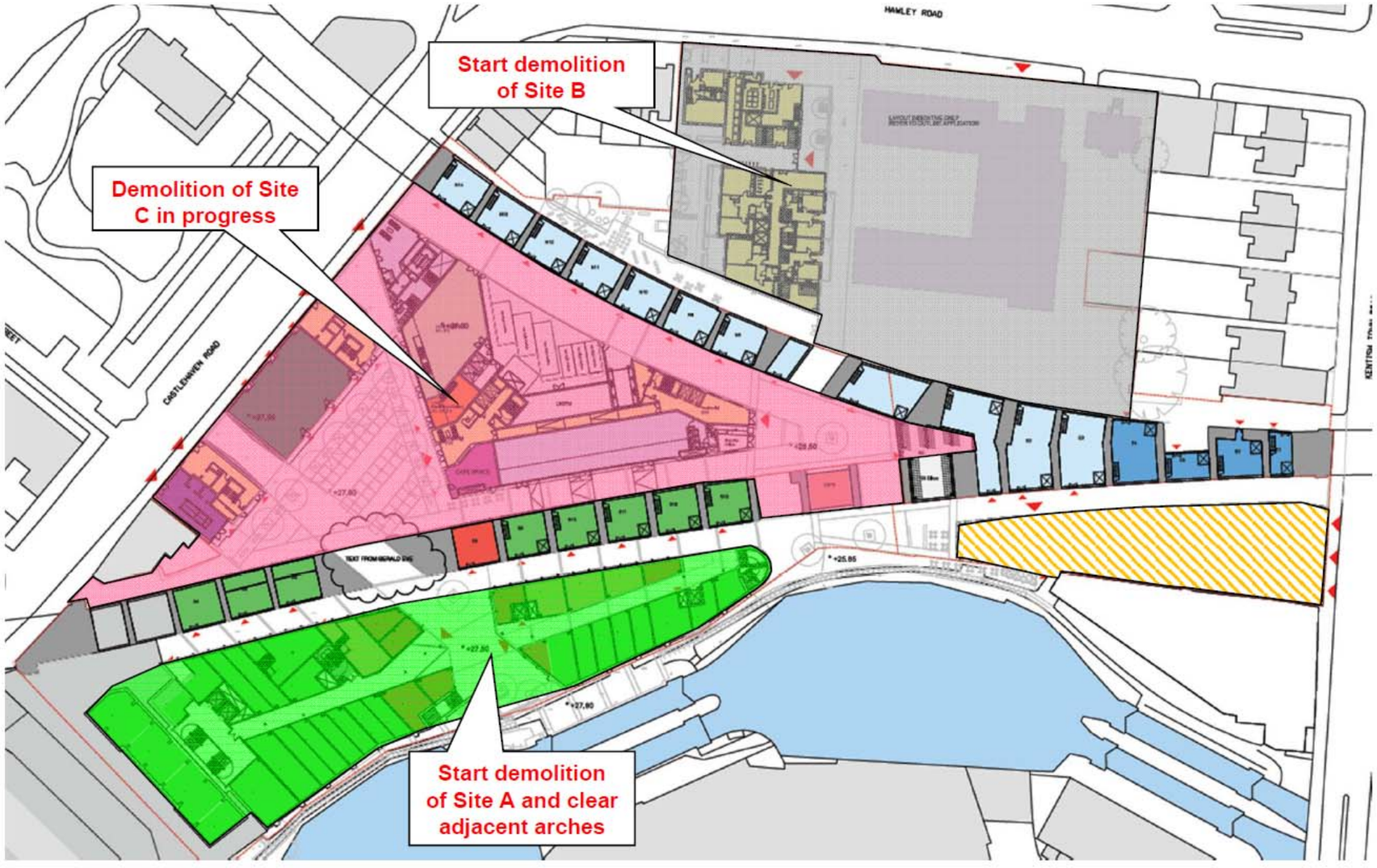


Stage 1 – Demolition of Site A and Site B



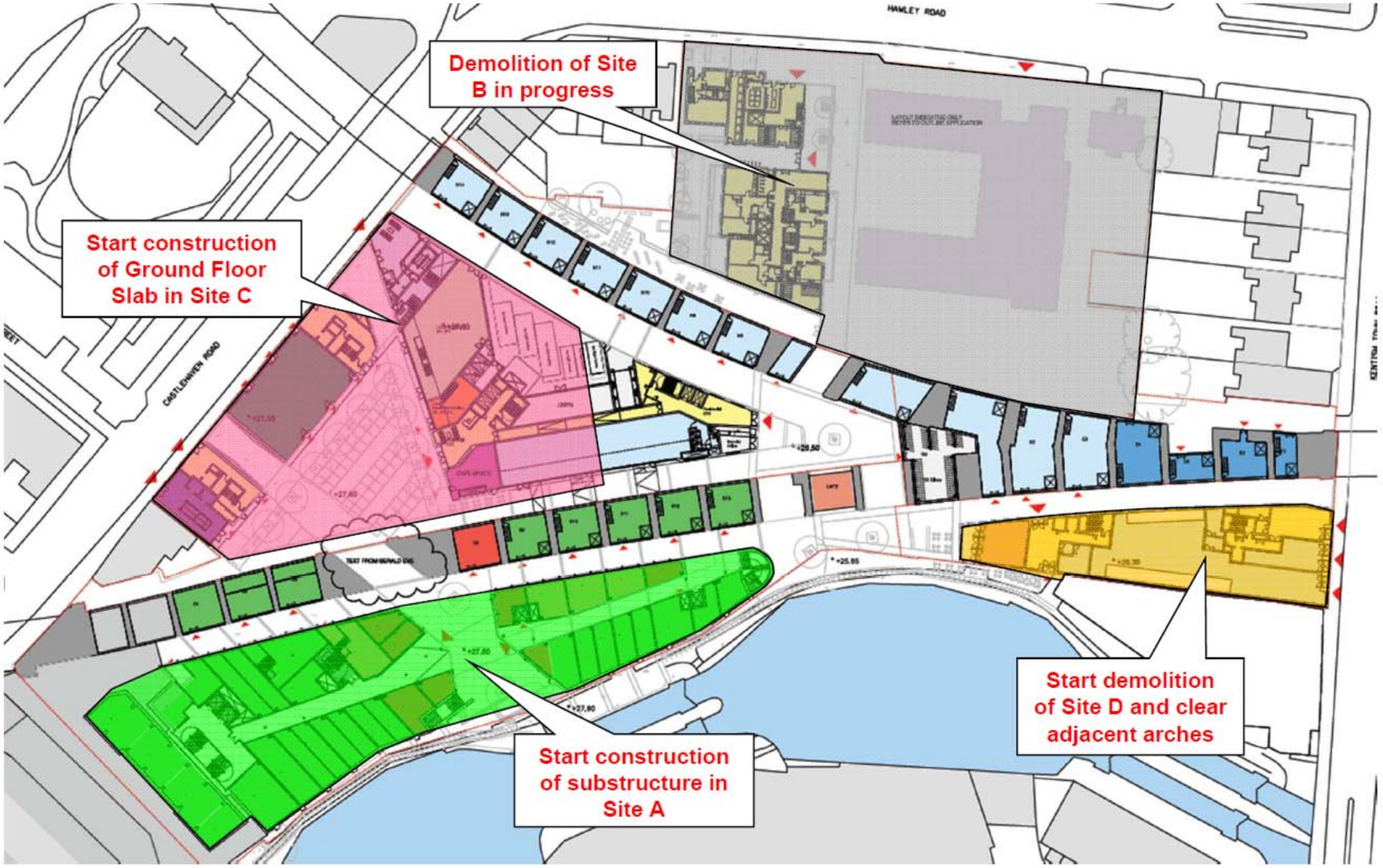
Oct 2013 – Jan 2014

Stage 2 – Demolition of Site A and Site B



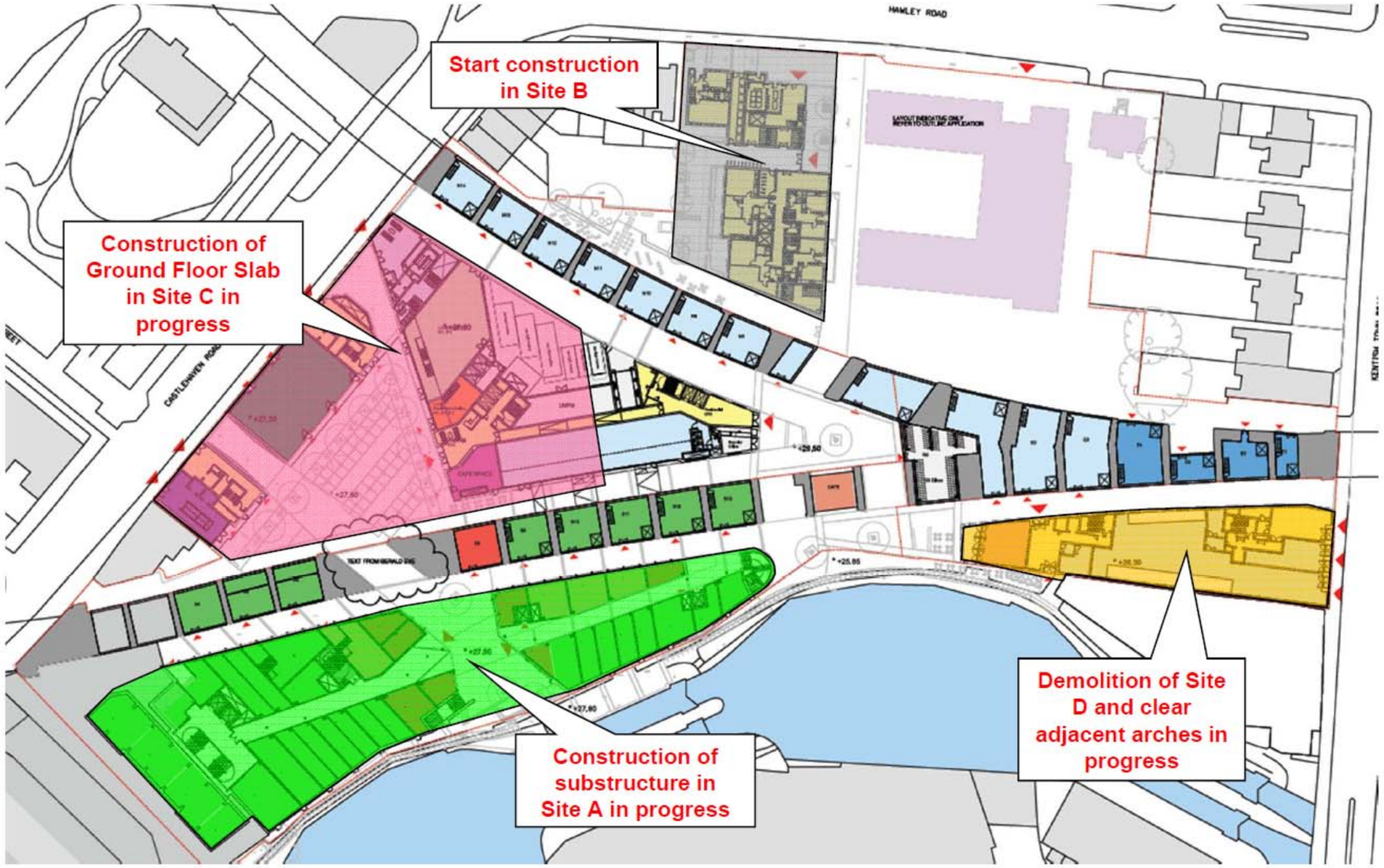
Jan 2014 – Mar 2014

Stage 3 – Ground floor slab construction in Site C, Substructure to Site A & Demolition of Site D



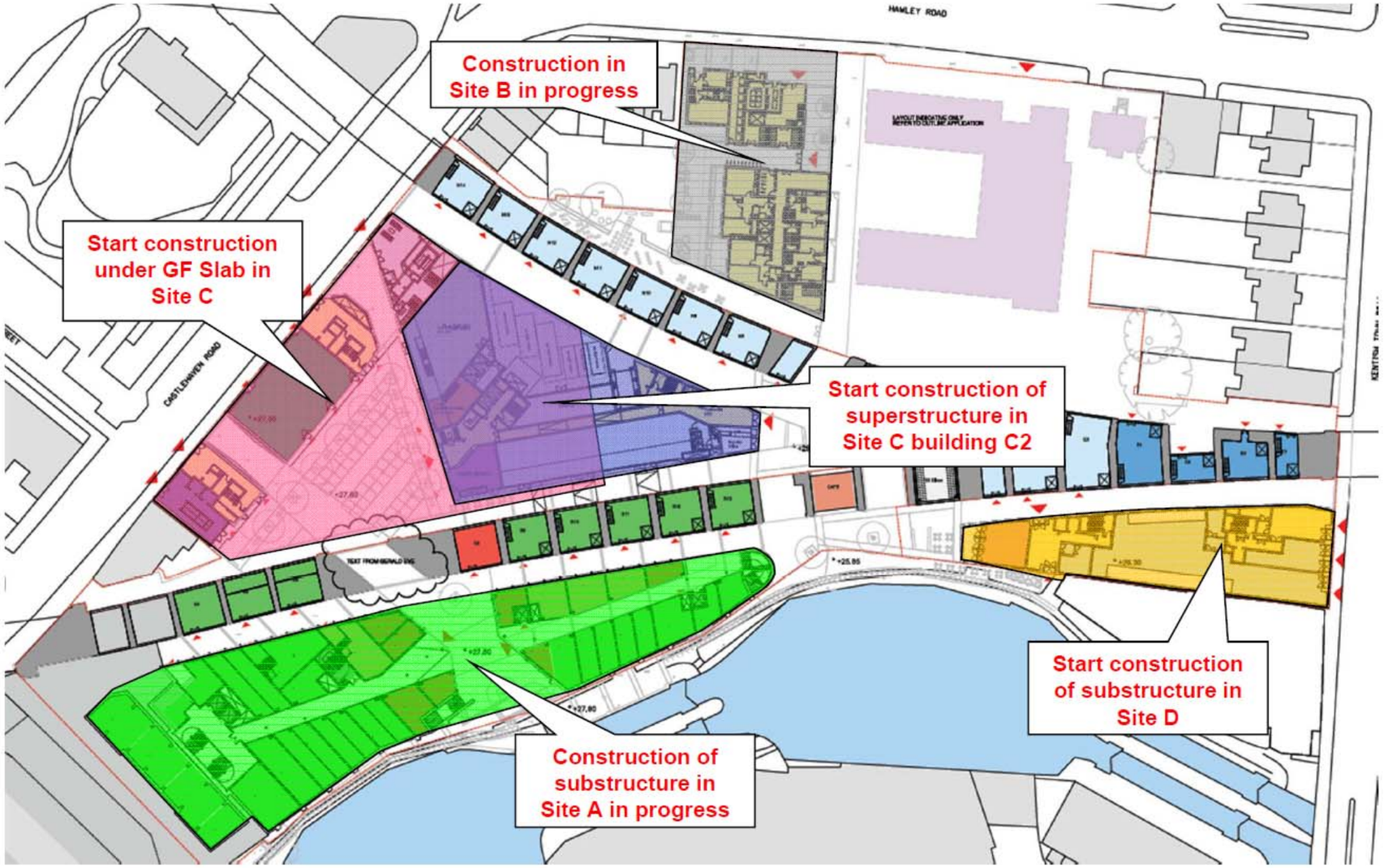
Mar 2014 – May 2014

Stage 4 – Construction of Site B building & Construction of Site A buildings



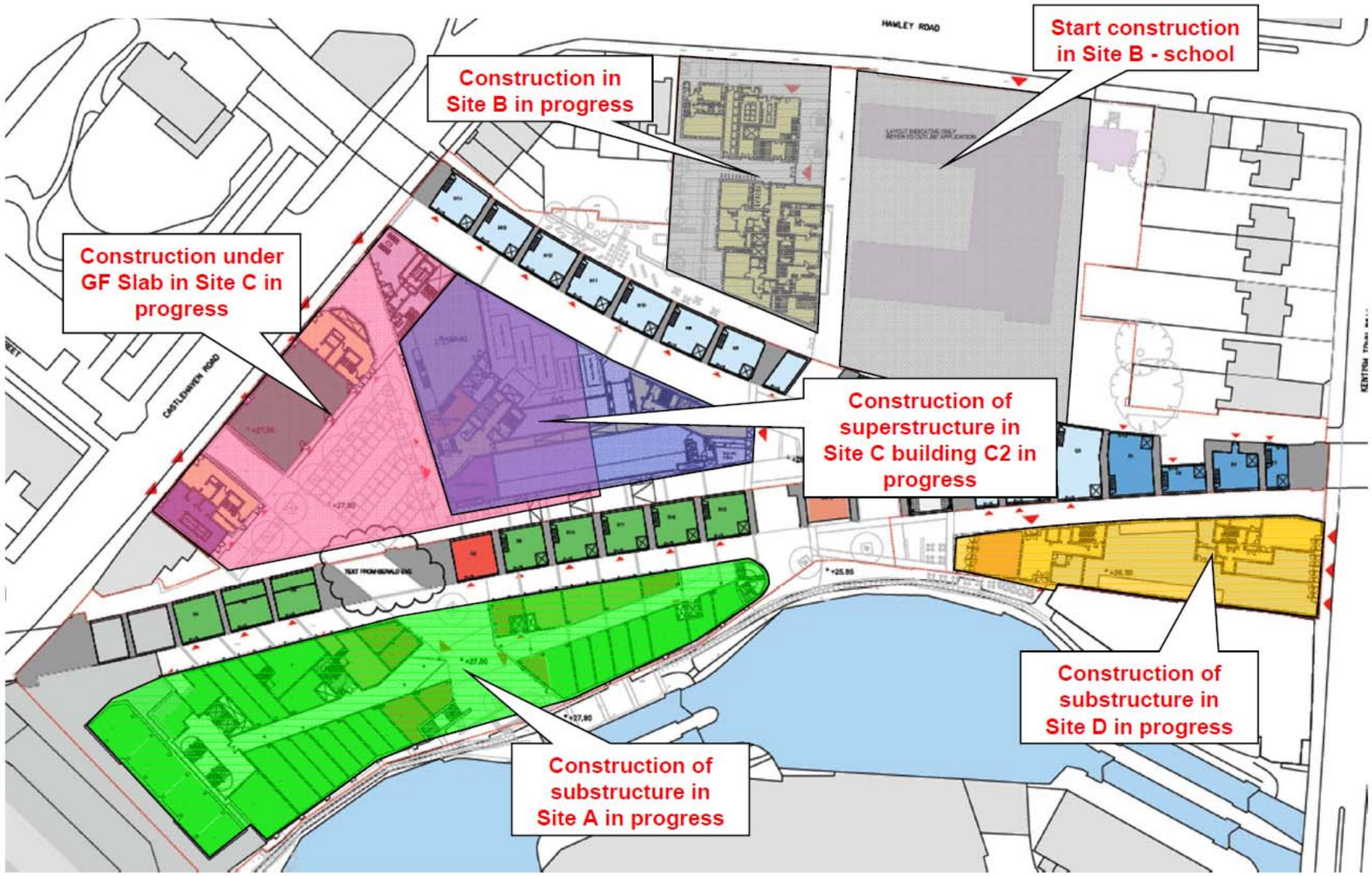
May 2014 – Jul 2014

Stage 5 – Construct substructure under GF in Site C, Construction of Site C building C2 & Construction of Site D building



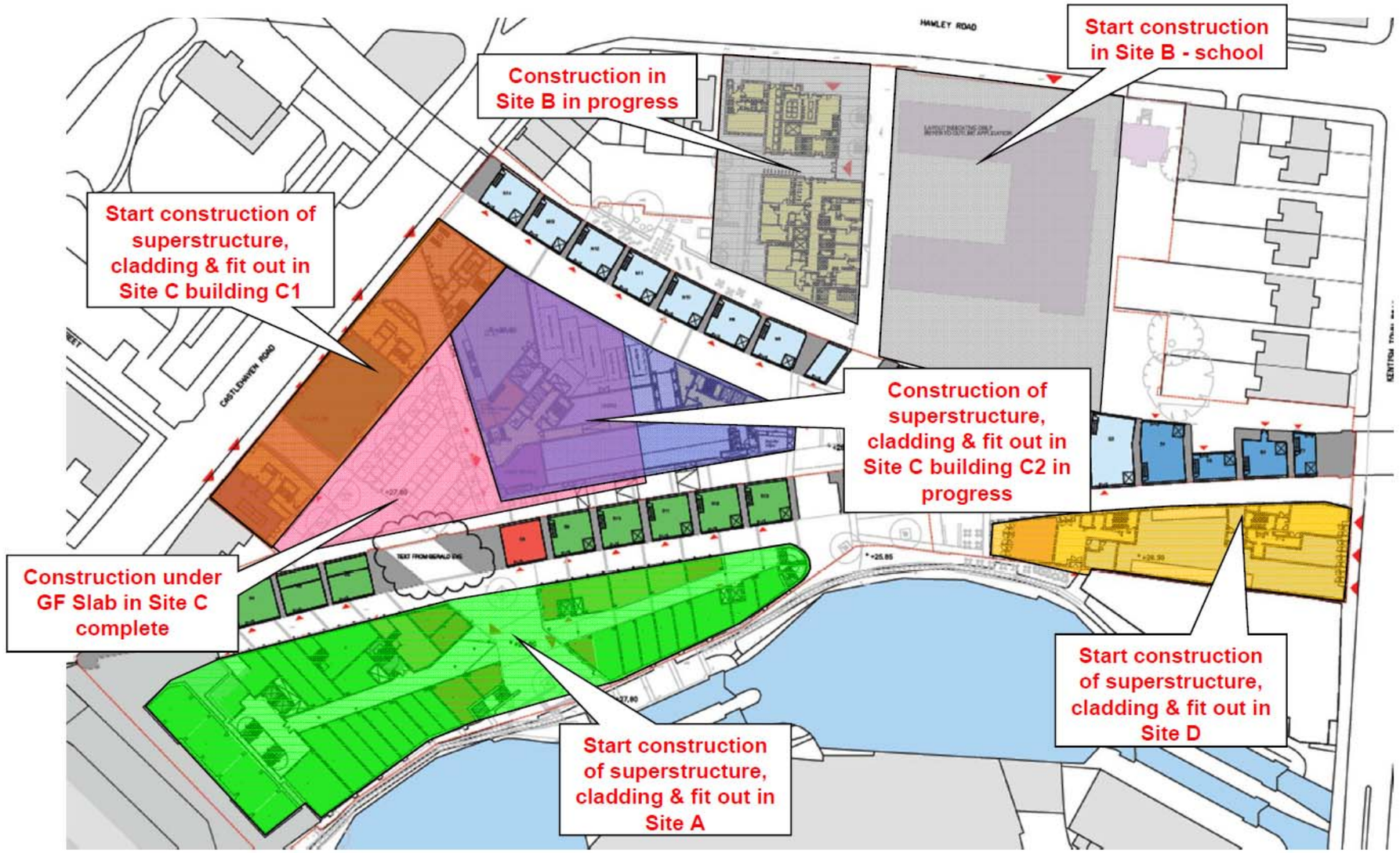
Jul 2014 – Oct 2014

Stage 6 – Construction of Site B school



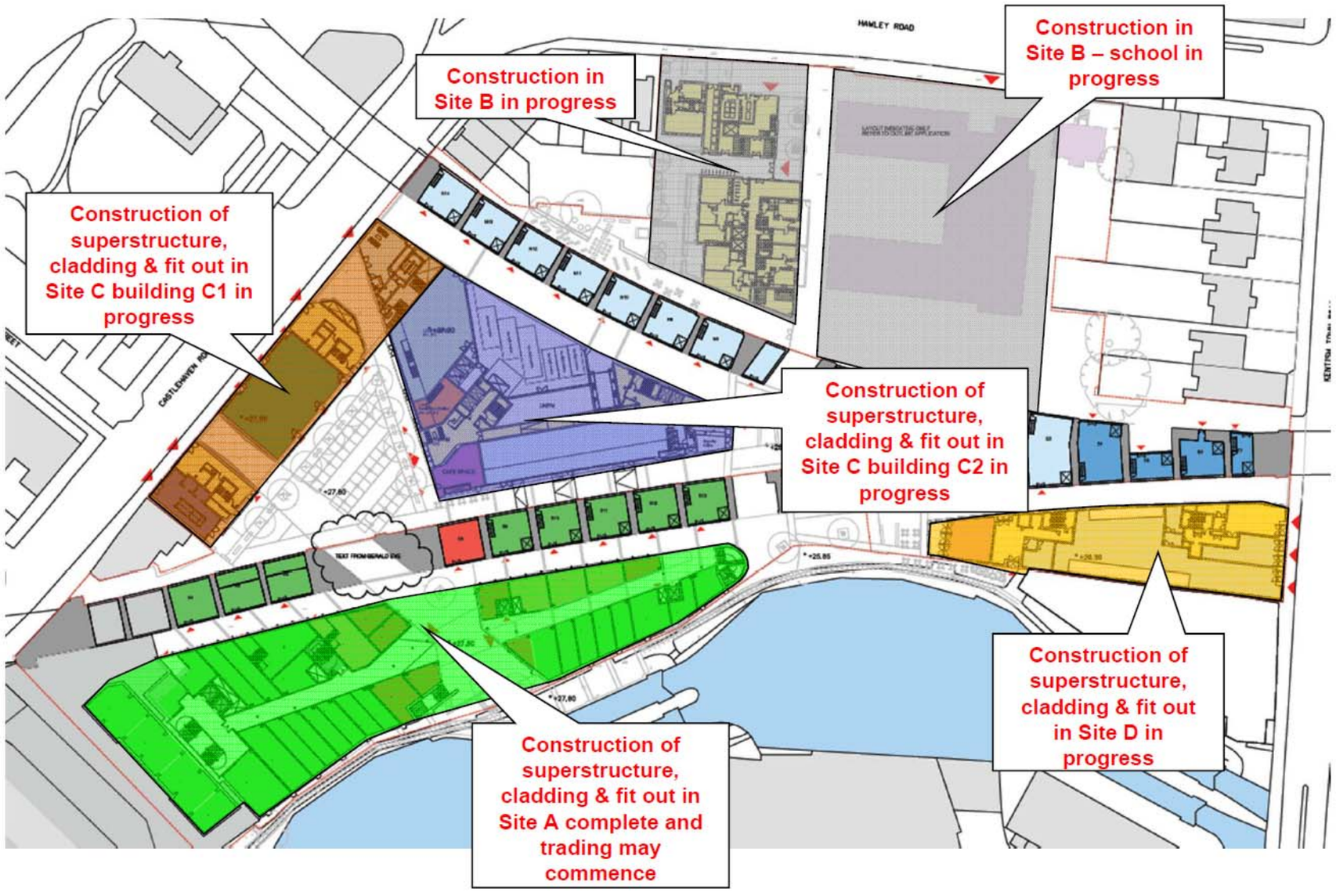
Oct 2014 – Mar 2015

Stage 7 – Construction of Site C building C1



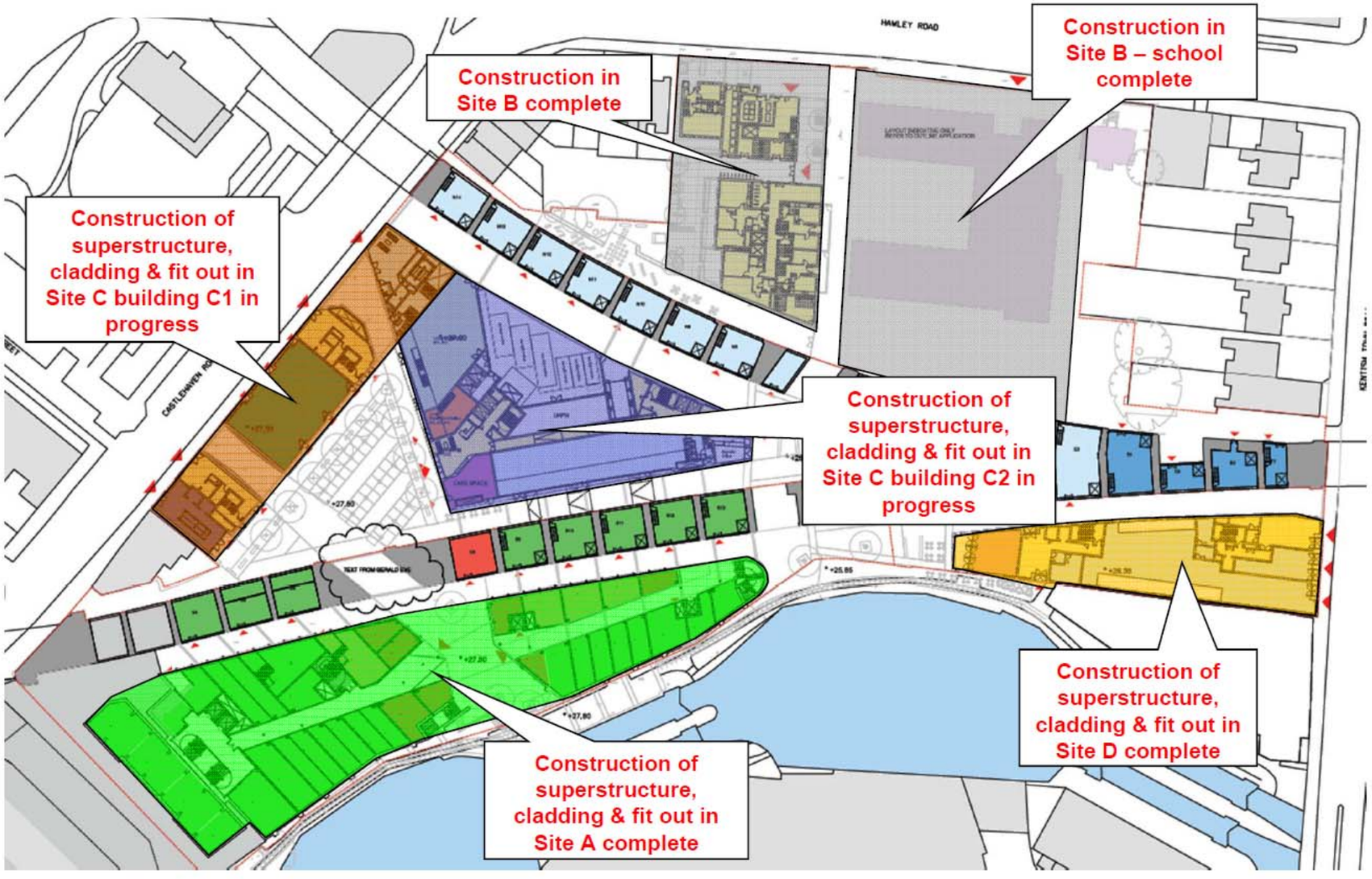
Mar 2015 – Mar 2016

Stage 8 – Site A complete



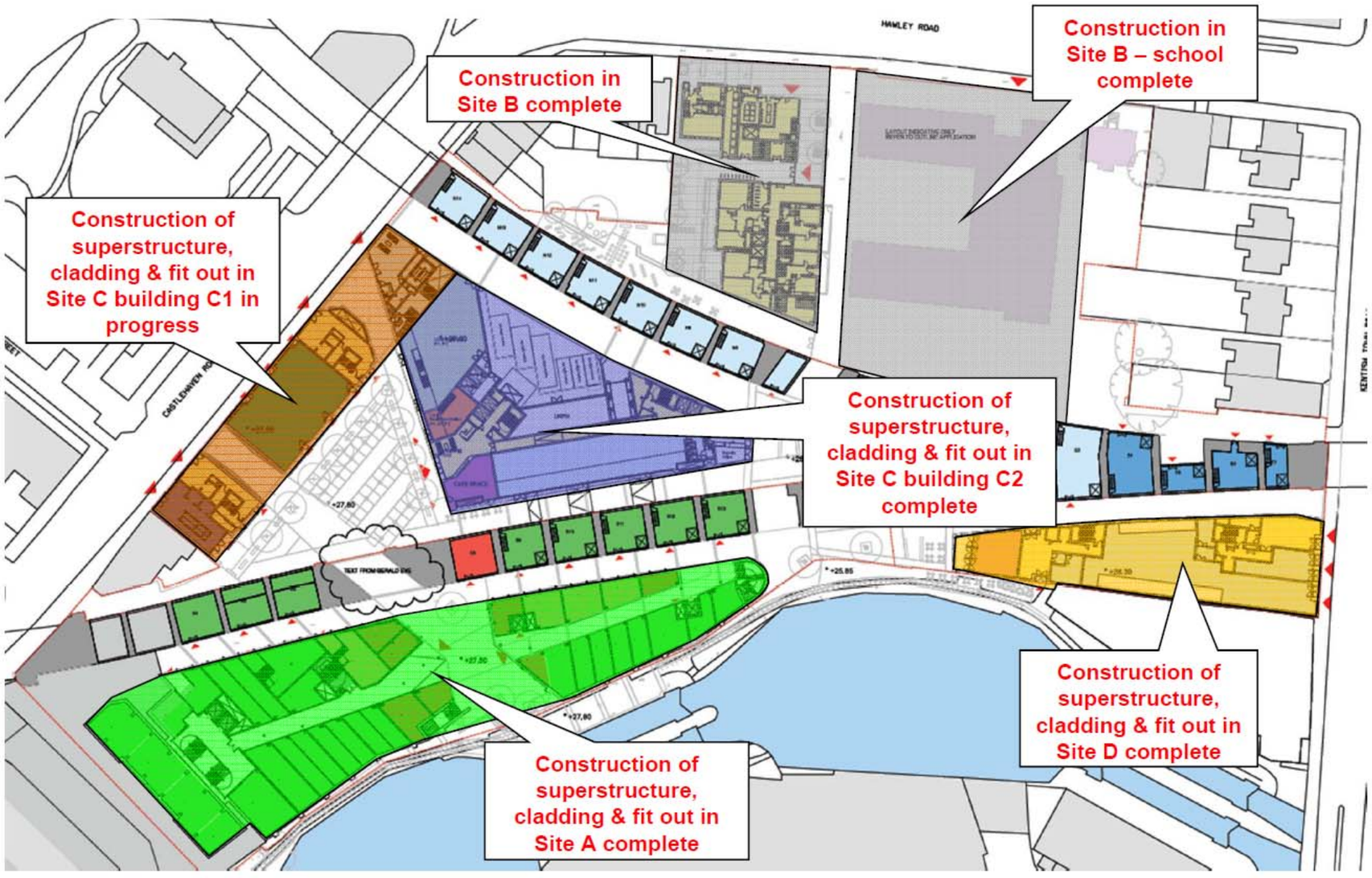
Mar 2016 – Apr 2016

Stage 9 – Site B and Site D complete



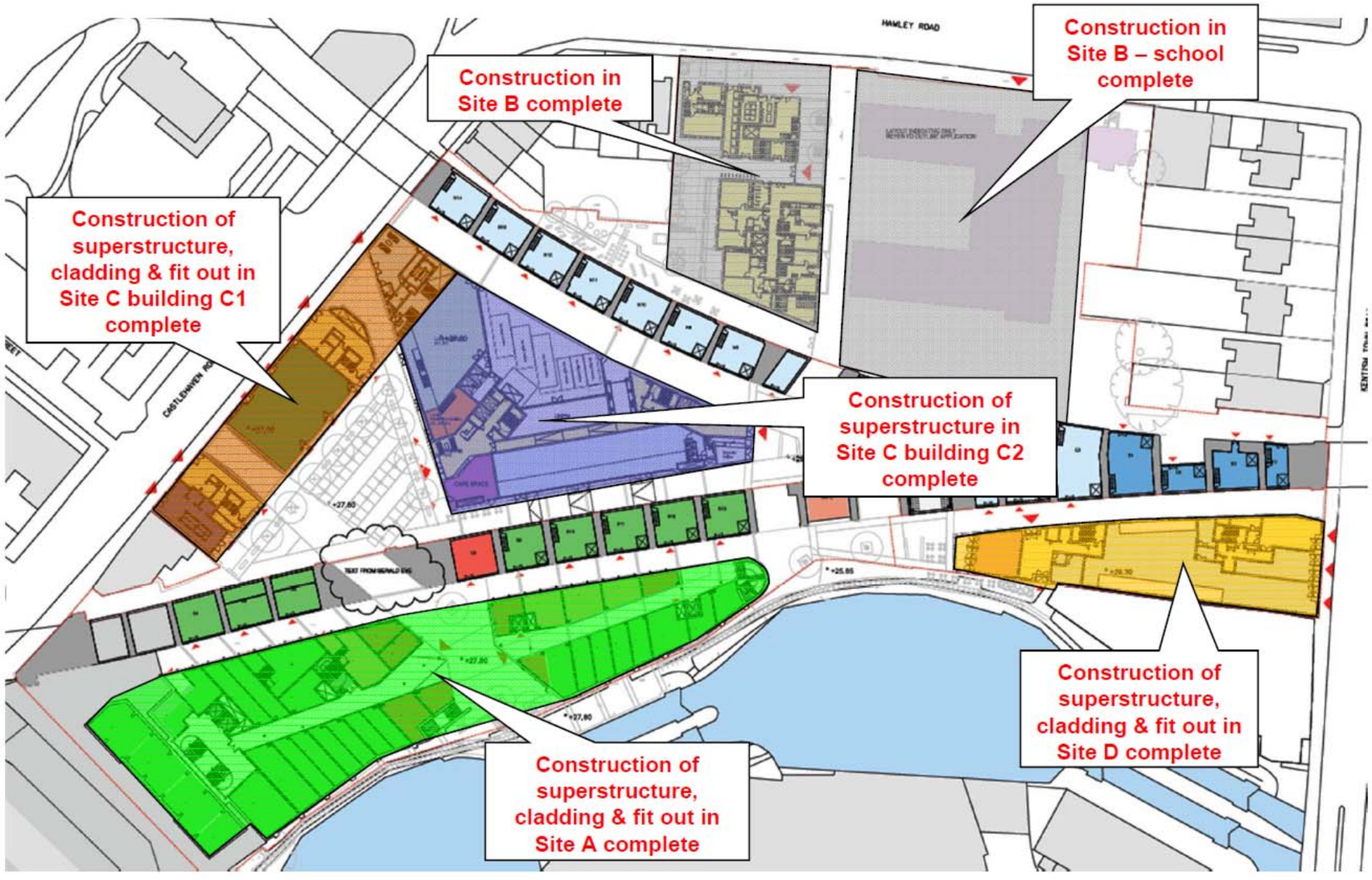
Apr 2016 – Jul 2016

Stage 10 – Site C building C2 complete



Jul 2016 – Aug 2016

Stage 11 – Site C building C1 complete



Completion 12th Aug 2016

[i] London Borough of Camden (2008). Guide for Contractors Working in Camden, February 2008.

[ii] British Waterways (2010). Code of Practice for Works Affecting British Waterways, 2010